ЗАПИСКИ

ИМПЕРАТОРСКОЙ АКАДЕМІИ НАУКЪ

по

ФИЗИКО-МАТЕМАТИЧЕСКОМУ ОТДѢЛЕНІЮ.

ТОМЪ XIII.

(СЪ 22 ТАБЛИЦАМИ).

MÉMOIRES

DE

L'ACADÉMIE IMPÉRIALE DES SCIENCES

DE

ST.-PÉTERSBOURG.

CLASSE DES SCIENCES PHYSIQUES ET MATHÉMATIQUES.

VIII[e] SÉRIE.

TOME XIII.

(AVEC 22 PLANCHES).

С.-ПЕТЕРБУРГЪ. 1903. ST.-PÉTERSBOURG.

Продается у коммиссіонеровъ Императорской Академіи Наукъ:

И. И. Глазунова, М. Эггерса и Комп. и **К. Л. Риккера** въ С.-Петербургѣ,
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Цѣна: 16 руб. = Prix: 40 Mrk.

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Напечатано по распоряженію Императорской Академіи Наукъ.
С.-Петербургъ, Мартъ 1903 г.
Непремѣнный секретарь, Академикъ *Н. Дубровинъ*.

ТИПОГРАФІЯ ИМПЕРАТОРСКОЙ АКАДЕМІИ НАУКЪ.
Вас. Остр., 9 лин., № 12.

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CLASSE PHYSICO-MATHÉMATIQUE. Volume XIII. № 1.

POSITIONEN

DER

JUPITERSTRABANTEN

NACH PHOTOGRAPHISCHEN AUFNAHMEN BERECHNET

VON

F. Renz.

II. TEIL.

OPPOSITIONEN 1896—1898.

(Vorgelegt am 4. October 1900).

С.-ПЕТЕРБУРГЪ. 1902. ST.-PÉTERSBOURG.

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Цѣна: 4 руб. 40 коп. — Prix: 11 Mark.

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Непремѣнный секретарь, Академикъ *Н. Дубровинъ.*

Типографія Императорской Академіи Наукъ (Вас. Остр., 9 л., № 12).

VORWORT.

Der vorliegende zweite Band der Jupiterspositionen berechnet nach photographischen Aufnahmen umfasst die Oppositionen 1896—1898. Während mir bei Bearbeitung des ersten Teils nur Helsingforser Clichés zu Gebote standen, ist in den Jahren 1896 und 1897 sowol von Herrn Professor Donner, als auch von Herrn Kostinsky in Pulkowa und endlich im Jahre 1898 nur am letzteren Orte eine so grosse Anzahl von Aufnahmen des Jupitersystems gemacht worden, dass das in diesen Oppositionen gesammelte Material das früher publicierte an Umfang bedeutend übertrifft.

Die Helsingforser Aufnahmen sind genau nach dem im ersten Bande beschriebenen Schema angeordnet, während Herr Kostinsky jede Platte nur an einem Abend exponierte und zunächst mit längeren oder kürzeren Zwischenzeiten auf jedes Cliché, westlich und östlich vom Centrum, je eine aus vier bis acht Einzelaufnahmen bestehende Reihe brachte, von 1897 ab jedoch auf meinen Vorschlag stets sechs Aufnahmen machte, die symmetrisch (zu je drei) gegen den Pointierungsstern auf dem durch den Mittelpunkt der Platte gehenden Meridian vertheilt sind. Diese Gruppierung bietet den Vorzug einer gewissen Vereinfachung der Rechnung. Dank der Benutzung von Diaphragmen zeigen die Jupitersbilder auf den Pulkowaer Platten schärfer begrenzte Ränder, als auf den Helsingforser Negativen, dagegen ist der vierte und schwächste Trabant auf ersteren bisweilen unterexponiert.

Herr Professor Donner und Herr Kostinsky haben ihren Aufnahmen folgende Daten beigefügt:

Opposition 1896.

I. Helsingforser Clichés.

№ der Platte.	Reihe.	Datum.	Barometer.	Thermometer a. Tubus.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Helsingforser Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Bemerkungen.
28	A	1895 Nov. 27	762.9 mm	— 6.8° R.	— 7.7° R.	—	5^h 17^m 50^s	10^s	NW	Praesepe.
						a	21 27	8		Luft 1 (ruhig und durchsichtig).
						b	21 54	8		
						c	22 18	8		
						d	22 43	8		
						e	23 8	8		
	B	1895 Nov. 28	766.0	— 5.4	— 6.3	—	5 58 34	20	SW	Praesepe.
						a	6 0 49	8		Luft 1.
						b	1 17	8		
						c	1 40	8		
						d	2 10	8		
						e	2 32	8		
	C*	1895 Dec. 27	769.1	—10.0	—10.9	—	3 0 31	10	SO	Praesepe.
						a	3 2 57	15		L. 3 (etw. unruh. u. nicht ganz scharfe Bild.) St. Wind v. NO.
						b	3 44	15		Während der zweiten Exposition schwankt der Tubus etwas.
						c	4 41	15		
						d	5 25	15		
						e	6 1	15		
	D	1896 Jan. 11	760.0	— 5.0	— 6.3	—	7 35 37	10	NO	Praesepe.
						a	7 38 29	8		Luft 1—3. Leichter Eisnebel.
						b	39 37	8		
						c	40 24	8		
						d	41 11	8		
						e	42 7	8		
29	A	1896 Jan. 15	744.7	— 6.2	— 7.4	—	7 48 7	25	NW	Praesepe.
						a	7 50 45	20		Luft 1.
						b	51 22	20		
						c	51 59	20		
						d	52 36	20		
						e	53 12	20		
	B	1896 Jan. 17	753.2	— 2.1	— 2.7	—	6 34 34	25	SW	Praesepe.
						a	6 36 12	20		Durch Wolken. Luft 1.
						b	36 50	20		
						c	37 36	20		
						d	38 16	20		
						e	38 56	20		
	C	1896 Jan. 20	765.9	— 4.9	— 5.7	—	8 43 16	25	SO	Praesepe.
						a	8 45 37	20		Luft 1.
						b	46 25	20		
						c	47 6	20		
						d	47 47	20		
						e	48 25	20		

№ der Platte.	Reihe.	Datum.	Barometer	Thermometer a. Tubus.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Helsingforser Sternzeit	Expositions-dauer.	Lage gegen das Centrum.	Bemerkungen.
	D	1896 Jan. 23	753.2 mm	— 2.3° R.	— 3.1° R.	—	6h 37m 24s	25s	NO	Praesepe.
						a	6 39 10	20		Luft 1.
						b	39 54	20		
						c	40 35	20		
						d	41 12	20		
						e	41 55	20		
30	A	1896 Jan 26	773.1	— 8.3	— 9.3	—	6 50 44	30	NW	Praesepe.
						a	6 53 19	30		Luft 3.
						b	54 6	30		
						c	54 53	30		
						d	55 39	30		
						e	56 25	30		
	B	1896 Jan. 30	743.5	+ 1.5	+ 0.6	a	9 14 43	20	SW	Luft 1—2 (durchsichtig, etwas unruhig).
						b	15 21	20		
						c	15 58	20		
						d	16 40	20		
						e	17 16	20		
						—	9 19 0	20		Praesepe.
	C	1896 Febr. 1	767.4	— 5.8	— 6.9	—	8 59 20	20	SO	Praesepe.
						a	9 1 17	20		Luft 1.
						b	1 56	20		
						c	2 34	20		
						d	3 12	20		
						e	3 49	20		
	D	1896 Febr. 10	745.6	— 0.2	— 0.9	—	8 32 59	25	NO	Praesepe.
						a	8 35 2	20		Luft 1.
						b	35 44	20		
						c	36 22	20		
						d	36 59	20		
						e	37 37	20		
31	A	1896 Febr. 11	745.0	— 1.4	— 2.2	—	8 19 20	25	NW	Praesepe.
						a	8 22 44	20		Wolken ziehen vorüber.
						b	23 22	20		
						c	27 2	20		
						d	27 38	20		
						e	28 13	20		
	B	1896 Febr. 14	759.5	—10.1	—11.2	—	6 43 27	25	SW	Praesepe.
						a	6 45 39	20		Luft 3—1.
						b	46 16	20		
						c	46 51	20		
						d	47 33	20		
						e	48 6	20		
	C	1896 Febr. 17	762.9	— 3.1	— 4.3	—	9 56 20	25	SO	Praesepe.
						a	9 50 39	20		Luft 1.
						b	51 17	20		
						c	51 53	20		
						d	52 32	20		
						e	53 15	20		
	D	1896 Febr. 18	768.0	— 3.5	— 4.5	—	8 35 9	25	NO	Praesepe.
						a	8 37 10	20		Luft 1. Durch dünne Wolken.

№ der Platte	Reihe	Datum	Barometer	Thermometer a. Tubus	Thermometer äusseres	Bezeichn. der Aufnahme	Mitte der Exposition. Helsingforser Sternzeit.	Expositionsdauer	Lage gegen das Centrum	Bemerkungen
31	D	1896 Febr. 18	mm 768.0	— 3°.5 R.	— 4°.5 R.	*b*	8^h 37^m 53^s	20^s	NO	
						c	39 25	20		
						d	40 8	20		
						e	40 59	30		
32	A	1896 März 9	761.4	— 2.8	— 3.7	*a*	8 39 21	20	NW	Luft 3. Neblig.
						b	39 59	20		
						c	40 36	20		
						d	41 13	20		
						e	41 51	20		
						—	*8 44 14*	30		Praesepe.
	B	1896 März 14	755.3	— 5.0	— 5.8	*a*	10 19 58	20	SW	Luft 3. Neblig. Schnee zu erwarten.
						b	20 41	20		
						c	21 20	20		
						d	21 59	20		
						e	22 45	20		
						—	*10 25 33*	25		Praesepe.
	C	1896 März 16	759.8	— 2.7	— 3.5	*a*	9 50 46	20	SO	Luft 3.
						b	51 27	20		
						c	52 9	20		
						d	52 52	20		
						e	53 37	20		
						—	*9 55 11*	25		Praesepe.
	D	1896 März 31	759.5	— 3.5	— 4.6	*a*	10 20 17	20	NO	Luft beinahe 1.
						b	20 55	20		
						c	21 37	20		
						d	22 21	20		
						e	23 0	20		
						—	*10 26 0*	30		Praesepe.
33	A	1896 April 1	754.9	— 2.6	— 3.3	—	*11 11 19*	30	NW	Praesepe.
						a	11 16 30	20		Luft 3.
						b	17 4	20		
						c	17 37	20		
						d	18 13	20		
						e	18 48	20		
	B	1896 April 7	760.7	+ 1.5	+ 0.8	*a*	9 45 13	20	SW	Luft 2 (durchsichtig, aber etwas unruhig).
						b	46 3	20		
						c	46 41	20		
						d	47 18	20		
						e	47 59	20		
						—	*9 49 53*	30		Praesepe.

II. Pulkowaer Clichés.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer		Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
					inneres.	äusseres.						
34*	A	9	1895 Oct. 11	1/2 587.3	+ 7°.0 R.	+ 8°.8 C.	—	$4^h\ 7^m\ 11^s$	20^s		0	Bild.3–4. [Undurchs.
							a		15	O[1])		Luft. Leicht. Wolken.
							b		10			DieAufn.folg.d.Reihe
							c	$4^h\ 34^m.2$	10		0	nach von S nach N.
							d		20			*f*=47.8.
							e		5			
	B						*f*		10	W		
							g		20			
							h	$4^h\ 49^m.2$	20		3	Bilder 4.
							i		30			
							k		40			
35*	A	18	1895 Nov. 25	590.4	— 0.3	— 0.5	*a*		15			Die Aufnahmen sind
							b	$6^h\ 57^m$	5			in Æ angeordnet.
							c		20			
							d		20			*f*=46.9.
							e	$7^h\ 15^m\ 10^s$	20			DieAufn.verl.v.N n.S.
							f	18 10	20			Wind.
							g	20 35	10			
							h	22 15	10			
							i	24 2	5			
36	A	27	1895 Dec. 27	598.4	—12.0	—16.4	*a*	7 0 36	20	O	2	
							*b**	2 38	15			
							c	4 1	10			N nach S.
							d	5 36	10			
							e	6 46	10			
							*f**	8 9	5			*f*=46.5
	B						*g*	7 23 36	20	W	4	Bilder 3—4.
							h	25 23	15			
							i	26 39?	5?(10?)			S nach N.
							k	28 31	10			
							*l**	30 1	10			
							*m**	31 14	5			
							—	7 40.0	3^m		4	Praesepe.
37	A	28	1896 Jan. 1	—	—	—12.0	—	6 33 22	1^m		0	Praesepe.
							a	6 48 10	25^s		3	Mondsch. Undurchs.
							b	50 12	20			Bilder 2. [Luft.
							c	52 4	15			*f*=46.4.
							d	54 17	10			N nach S.
							e	55 47	10			
							f	57 44	15			
38	A	32	1896 Jan. 20	594.4	— 6.2	— 9.4	—	6 18 7	3^m		2	
							a	6 28 17	20^s		2	Bilder 3–4, unruhig.
							b	29 59	15			*f*=46.6
							c	39 29	15			
							d	41 32	10			
							e	42 32	10			
							f	43 44	15			

1) Zwischen den Lagen *O* und *W* blieb die Cassette immer unberührt am Instrument.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
39*	A	33	1896 Jan. 26	1/2 —	—	—14.0° C.	—	7h 17m 28s	3m		3	Bilder 4.
							a	7 28 53	10s		3	
							b	30 35	15			
							c	31 53	10			
							d	32 53	10			
							e	34 6	5			
40		36	1896 Jan. 27	—	—	—15.0	—	5 54 3	2m		2	Praesepe. Leichte
	A						*a*	6 2 45	15s	O	2	Wolken.
							b	3 48	10			
							c	4 48	10			N nach S.
							d	5 55	15			
							*e**	6 53	20			*f*=46.3? Bilder 2.
	B						*f*	6 10 13	20	W	2	
							g	11 48	10			
							h	12 43	10			S nach N.
							i	13 45	15			
							*k**	17 3	3m			
41.		38	1896 Febr. 1	597.3	— 6.5 R.	— 9.5	—	7 58 55	3m		3	Praesepe
	A						*a**	8 4 32	15s	O	3	Mondschein.
							b	6 0	10			
							c	6 52	15			N nach S.
							d	8 0	10			
							e	8 45	10			*f*=46.5.
	B						*f*	8 12 13	5	W	3	Bilder 4.
							g	13 11	8			
							h	13 58	5			S nach N.
							i	14 40	10			
							*k**	15 40	10			
42		39	1896 Febr. 3	587.4	— 2.5	— 4.0	—	8 18 4	4m		4	Praesepe.
	A						*a*	8 25 29	10s	O	4	Starker Wind.
							b	26 29	10			N nach S.
							c	27 29	10			
							d	28 26	15			*f*=47.0
							*e**	? ?	15			Bilder 2—3.
	B						*f*	8 33 39	10	W	4	
							*g**	34 37	5			
							h	35 19	10			S nach N.
							i	36 6	15			
							k	37 6	15			
43	A	42	1896 Febr. 4	594.4	— 7.5	—11.0	*a*	7 33 31	15		3	Auf die Platte fiel [Licht.
							b	34 34	10			N nach S.
							c	35 34	10			*f*=46.5.
							d	36 34	10			Bilder 3.
							e	37 37	5			
							—	7 44 9	3m		3	Praesepe.
44	A	45	1896 Febr. 6	590.2	— 1.3	— 1.0	*a*	7 9 34	10s	O	2	Undurchsicht. Luft.
							b	11 34	10			
							c	12 49	10			N nach S.
							d	13 52	5			
							*e**	14 57	5			
							—	7 23 39	2m			Praesepe.
	B						*f**	7 35 37	5s	W		*f*=47.1.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
44	B	45	1896 Febr. 6	1/2 590.2	— 1°.3 R.	— 1°.0 C.	*g*	7^h 37^m 5	8^s	W	2	Bilder 2.
							h	38 55	8			N nach S.
							i	40 4	10			
							k	41 14	10			
45	A	48	1896 Febr. 7	589.6	—11.2	—12.5	*a*	9 29 54	10	O	3	Recht durchsichtige
							b	31 14	10			Luft.
							c	32 34	10			N nach S.
							d	33 31	15			
							*e**	34 17	5_m			
							—	*9 40 9*	3_s			*f*=46.4.
	B						*f*	9 46 44	10^s	W		Bilder 1—2.
							g	48 11	15			
							h	49 4	10			N nach S.
							i	49 54	10			
							*k**	50 55	8			
46	A	51	1896 Febr. 19	603.1	— 5.8	— 8.8	*a*	8 55 21	15	O	3	
							b	56 39	10			
							c	57 29	10			N nach S.
							d	58 14	10			
							*e**	59 12	5_m			
							—	*9 4 54*	3_s			Praesepe. *f*=46.7.
	B						*f**	9 19 42	5^s	W		Bilder 2.
							g	20 44	10			N nach S.
							h	21 39	10			
							i	22 49	10			
							k	24 6	15			
47	A	54	1896 Febr. 22	—	—	—12.0	*a*	7 39 51	10	O	2	Mondschein.
							b	41 2	8			
							c	41 52	8			N nach S.
							d	42 34	5			
							*e**	43 34	5_m			
							—	*7 50 6*	3_s			Praesepe. *f*=46.4
	B						*f*	7 58 41	10^s	W		Bilder 3—4.
							g	59 51	10			
							h	8 0 52	8			N nach S.
							i	1 52	8			
							*k**	2 54	8			
48	A	55	1896 Febr. 23	610.6	—10.8	—14.0	*a*	7 5 12	15	O	3	3 Trab. sichtb.; um
							b	6 45	10			$7^h 20^m$ erschien der 4te
							*c**	7 45	10			Bilder 4. [am Westr.
							d	8 52	15			N nach S.
							e	10 25	10^m			
							—	*7 18 30*	5_s			Praesepe.
	B						*f*	9 33 12	15^s	W		*f*=46.4.
							g	34 35	10			Leichte Wolk. ziehen
							h	35 25	10			ü.d.Himmel. B.3.N—S.
							i	36 25	10			
							*k**	37 26	8			
49	A	58	1896 Febr. 24	610.4	— 8.1	—11.0	*a*	7 12 27	15	W	3	Um $7^h 21^m$ Eintritt des
							b	13 50	10			ersten Trab. in d. Jupi-
							c	15 12	15			N—S. [tersch. am Ostr.
							d	17 11	10			Bilder 2—3.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
49	A	58	1896 Febr. 24	1/2 610.4	− 8.1° R.	− 11.0° C.	e*	7^h 18^m 27^s	15^s	W	3	
							f*	20 30	10			
							—	7 30 5	3^m			Praesepe.
	B						g*	9 23 0	10^s	O	3	f=46.4.
							h	24 5	10			Ders. Trab. tritt aus
							i	25 0	10			am Westr. um $9^h 35^m$.
							k	25 57	15			Auf einig. Aufn. ist er
							l	26 57	15			hart am Rande d. Plan.
							m*	42 25	10			S n. N. [deutl. sichtb.
							n*	43 27	15			Bilder 3.
							o*	44 27 ?	15 ?			Eine Aufnahme ist verschoben.
50	A	59	1896 Febr. 25	610.3	− 6.0	− 8.0	a*	8 38 42	15	O	3	Mond sehr nahe.
							b	40 10	10			
							c	41 0	10			
							d	41 50	10			N nach S.
							e	42 50	10			
							f*	44 20	30			
							—	8 49 35	3^m			Praesepe.
	B						g	9 5 30	10^s	W		f=46.7.
							h	6 30	10			Bilder 2.
							i	7 10	10			N nach S.
							k	8 12	15			
							l*	9 15	20			
51	A	63	1896 Febr. 26	606.6	− 7.5	—	a	8 35 46	15	O	3	Mond sehr nahe.
							b	36 54	10			
							c	37 44	10			N nach S.
							d	38 44	10			
							e*	39 35	8			f=46.7.
							—	8 47 39	2^m			Praesepe.
	B						f	9 52 46	15^s	W		f=46.7.
							g	53 34	10			N nach S.
							h	54 34	10			
							i	55 34	10			
							k*	56 35	8			
52[a]	A	66	1896 März 8	593.0	− 3.9	− 3	a	8 13 14	15	O	3	Bilder 4.
							b	14 32	10			
							c*	15 22	10			N nach S.
							d	16 12	10			
							e	17 13	8			
							—	8 31 37	3^m			Praesepe.
	B						f	9 38 57	20^s	W		f=47.0.
							g	40 9	15			Bilder 3.
							h	41 7	10			N nach S.
							i	42 2	10			
							k*	43 2	10			
52[b]	A	70	1896 März 9	596.6	− 4.7	—	a	10 12 45	20	O	2	Bilder 3.
							b	14 7	15			
							c*	15 20	10			N nach S.
							d	16 20	10			
							e	17 40	10			
							—	10 25 5	3^m			Praesepe. Bild. 3–4.
							f	10 32 5	20	W		f=47.0.
							g*	33 27	15			Bilder 2—3.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
52b	B	70	1896 März 9	½ 596.6	— 4.7° R.	—	h	$10^h\ 34^m\ 27^s$	15	W	2	N nach S.
							i	35 30	10			
							k	36 40	10			
53	A	72	1896 März 11	593.4	— 4.6	— 8° C.	a	9 25 10	20	O	3	Bilder 3.
							b*	27 22	15			
							c	28 45	10			
							d	30 5	10			
							e	31 15	10			
							—	9 37 55	$3^m\ 30^s$			Praesepe. Bilder 2—3.
	B						f	9 46 20	20^s	W		f=46.9.
							h	47 42	15			N nach S.
							h	49 2	15			
							i	50 5	10			
							k*	51 25	10			
54	A	75	1896 März 16	596.4	— 5.0	—	a	9 31 50	20	O	3	Bilder 4—5.
							b	32 52	15			Windig.
							c	33 54	16			N nach S.
							d*	35 2	15			
							e	36 10	20			
							—	9 42 30	1^m			Praesepe.
	B						f	9 47 10	20^s	W		f=46.7
							g	48 7	15			Bilder 3—4.
							h	49 5	20			N nach S.
							i	49 55	10			
							k*	50 55	10			
55	A	76	1896 März 24	592.4	0.0	—	a	9 49 54	15	O	3	Mond sehr nahe. Cirruswolken.
							b	51 12	20			Bilder 2.
							c	52 29	15			
							d	53 34	15			
							—	10 5 2	2^m			Praesepe.
	B						e	10 11 17	20^s	W		f=47.2.
							f	12 14	15			Bilder 2.
							g	13 9	15			
							h	14 12	10			
56	A	77	1896 März 29	—	—	— 8.0	a*	?	20	O	3	Bilder 4—5.
							b	10 1 49	15			
							c	3 9	15			
							d	4 9	15			N nach S.
							e*	5 19	25			
							f	6 24	15			
							—	10 11 32	$3^m\ 30^s$			Praesepe.
	B						g	10 18 10	25^s	W		f=46.7
							h	19 9	15			Bilder 4.
							i*	20 9	15			N nach S.
							k	21 27	20			
							l	22 22	10			
57	A	79	1896 März 30	596.9	— 7.0	—	a	10 19 33	20	O	2	Bilder 3.
							b*	20 55	15			
							c	22 30	15			N nach S.
							d	23 28	10			
							e	24 18	10			
							—	10 28 23	2^m			Praesepe. Bilder 2—3.

№ der Platte	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
57	B	79	1896 März 30	½ 596.9	— 7°.0 R.	—	*f**	$10^h\ 35^m\ 13^s$	20^s	W	2	*f*=46.6
							g	36 30	15			
							h	37 30	15			S nach N.
							i	38 18	10			
							k	39 28	10			
58	A	81	1896 März 31	594.1	— 5.0	— 7°.0 C.	*a*	10 9 24	20	O	3	Undurchsicht. Luft.
							b	10 46	15			Bilder 2—3.
							c	11 36	15			N nach S.
							d	12 31	15			
							*e**	13 19	10			
							—	*10 18 54*	3^m			Praesepe. Bild. 2–3.
	B						*f*	10 24 24	20^s	W		*f*=46.65
							g	25 36	15			N nach S.
							h	26 31	15			
							i	27 29	10			
							*k**	28 44	20			
59	A	83	1896 April 8	595.4	0.0	+ 1.5	*a*	10 40 43	25	O	2	Bilder 3.
							b	42 20	20			
							c	43 30	20			N nach S.
							d	44 52	15			
							*e**	45 55	10			
							—	*10 55 30*	3^m			Praesepe. Bild. 3–4.
	B						*f**	10 2 38	25^s	W		*f*=47.4.
							g	3 50	20			Bilder 4.
							h	4 52	15			N nach S.
							i	5 52	15			
							k	6 52	15			
60	A	86	1896 April 10	593.9	+ 0.5	+ 0.8	*a*	11 44 59	20	O	3	Bilder 4.
							b	46 19	20			
							c	48 21	15			
							d	50 1	15			N nach S.
							*e**	51 34	10			
							—	*11 57 9*	3^m			Praesepe. Bilder 4.
	B						*f*	12 4 57	25^s	W		Bilder 3. *f*=47.4.
							g	6 29	20			
							h	7 59	20			S nach N.
							i	9 1	15			
							*k**	10 16	15			
61	A	87	1896 April 14	597.2	+ 3.1	+ 4.5	*a*	11 7 13	25	O	3	Bilder 3.
							b	8 10	20			Uudurchsicht. Luft.
							c	8 50	20			
							*d**	9 37	15			
							e	10 12	15			*f*=47.5.
							—	*11 16 0*	$3^m\ 30^s$			Praesepe. Bilder 4.
	B						*f*	11 21 38	15^s	W		Bilder 3—4.
							*g**	22 15	20			Durch Wolken.
							h	23 3	25			
							i	23 48	25			
							k	24 45	30			
62	A	90	1896 April 19	—	—	+ 4.0	*a*	11 30 30	20	O	3	Mondsch. Undurchs.
							b	31 7	15			Bilder 4. [Luft.
							c	31 37	15			N nach S.

№ der Platte.	Reihe.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Diaphragma.	Bemerkungen.
62	A	90	1896 April 19	—	—	+ 4°.0 C.	*d*	$11^h\ 32^m\ 5^s$	10^s	O	3	
							*e**	32 25	10			
							—	*11 38 30*	3^m			Praesepe.
	B						*f**	11 43 35	10^s	W		Bilder 4. f=47.4.
							g	44 5	10			Die Corr. des Chron. ist
							h	44 37	15			unbekannt; jedenfalls
							i	45 12	15			überst. sie nicht $\pm 5^s$.
							k	45 50	20			S nach N.

Opposition 1897.

I. Helsingforser Clichés.

№ der Platte.	Reihe.	Datum.	Barometer.	Thermometer a. Tubus.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Schluss der Exposition. Helsingforser Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Bemerkungen.
63	A	1897 März 22	mm 759.1	— 5°.5 R.	— 7°.7 R.	*a*	$12^h\ 49^m\ 48^s$	10^s	NW	Luft 1.
						b	50 22	10		
						c	50 48	10		
						d	51 11	10		
						e	51 35	10		
						—	*12 55 27*	10		D. M. +26°2343
	B	1897 März 26	752.2	— 3.3	— 4.7	*a*	10 39 21	10	SW	Luft 2.
						b	39 56	10		
						c	40 25	10		
						d	40 50	10		
						e	41 17	10		
						—	*10 44 56*	10		D. M. +26°2343.
	C	1897 März 28	745.3	— 1.45	— 2.8	*a*	11 20 35	10	SO	
						b	21 38	10		
						c	22 24.5	10		
						d	23 13	10		
						e	23 58	10		
						—	*11 27 5*	10		D. M. +26°2343.
	D	1897 März 30	733.5	— 0.7	— 1.8	*a*	11 5 7	10	NO	
						b	5 39	10		
						c	6 17	10		
						d	7 16	15		
						e	7 52	10		Windstoss bei der letzten
						—	*11 15 37*	40		D. M. +26°2343. [Exposit.
64	A	1897 April 15	763.5	+ 2.5	+ 1.2	*a*	13 36 30	12	NW	Luft 3—4.
						b	37 10	12		

№ der Platte.	Reihe.	Datum.	Barometer.	Thermometer a. Tubus.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Schluss der Exposition. Helsingforser Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Bemerkungen.
64	A	1897 April 15	763.5^{mm}	+ 2.5° R.	+ 1.2° R.	c	13^h 37 44^s	12^s	NW	
						d	38 22	12		
						e	38 54	12		
						—	13 41 42	12		D. M. +26°2343.
	B	1897 April 18	717.8	+ 3.5	+ 2.0	a	12 20 20	15	SW	Luft 3.
						b	20 53	15		
						c	21 33	15		
						d	22 2	15		
						e	22 34	15		
						—	12 26 32	15		D. M. +26°2343.
	C	1897 April 23	762.6	+ 4.65	+ 3.3	a	12 15 15	10	SO	
						b	15 45	10		
						c	16 12	10		
						d	16 42	10		
						e	17 6	10		
						—	12 19 4	10		D. M. +26°2343.
	D	1897 April 24	763.5	+ 5.8	+ 4.5	a	12 31 17	10	NO	Luft 3—2.
						b	31 45	10		
						c	32 19	10		
						d	32 48	10		
						e	33 14	10		
						—	12 35 9	10		D. M. +26°2343. Luft 2.
65	A	1897 April 25	766.3	+ 8.4	+ 7.1	a	12 30 46	10	NW	Luft 3—2.
						b	31 9	10		
						c	31 39	10		
						d	32 3	10		
						e	32 29	10		
						—	12 34 7	10		D. M. +26°2343.
	B	1897 April 26	769.2	+ 5.5	+ 4.1	a	12 22 31	10	SW	Luft 2—3.
						b	22 59	10		
						c	23 22	10		
						d	23 47	10		
						e	24 12	10		
						—	12 25 54	10		D. M. +26°2343.
	C	1897 April 28	761.5	+ 6.5	+ 5.0	a	12 31 43	15	SO	Luft 3.
						b	32 22	15		
						c	32 51	15		
						d	33 24	15		
						e	33 56	15		
						—	12 35 57	15		D. M. +26°2343.
	D	1897 Mai 8	763.0	+ 8.4	+ 7.0	a	14 13 9	10	NO	Die Luken waren kurz vorher geöffnet worden.
						b	13 47	10		
						c	14 21	10		
						d	14 47	10		
						e	15 15	10		
						—	14 17 29	10		D. M. +26°2343.
66	A	1897 Mai 15	766.5	+14.6	+ 13.2	a	14 39 46	12	NW	Luft 1—3.
						b	40 23	12		
						c	40 57	12		

№ der Platte.	Reihe.	Datum.	Barometer	Thermometer a. Tubus.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Schluss der Exposition. Helsingforser Sternzeit.	Expositions-dauer.	Lage gegen das Centrum.	Bemerkungen.
66	A	1897 Mai 15	$\overset{mm}{766.5}$	+14.6° R.	+13.2° R.	*d*	$14^h\ 41^m\ 26^s$	12	NW	
						e	41 56	12		
						—	*14 45 27*	12		D. M. +26°2343.
	B	1897 Mai 17	762.4	+10.5	+9.2	*a*	15 31 41	15	SW	Luft 1.
						b	32 17	15		
						c	32 55	15		
						d	33 31	15		
						e	34 11	15		
						—	*15 36 4*	15		D. M. +26°2343.
	C	1897 Mai 18	759.8	+14.6	+13.2	*a*	15 25 5	15	SO	
						b	25 52	15		
						c	26 25	15		
						d	27 4	15		
						e	27 38	15		
						—	*15 29 9*	15		D.M.+26°2343. Bei der erst. Exp. v. D.M.+26°2343 war d. Turmw. im Wege. Diese ist daher zu verwerfen.
						—	*30 46*	15		
	D	1897 Mai 20	760.3	+10.6	+9.2	*a*	15 18 42	15	NO	
						b	19 15	15		
						c	19 45	15		
						d	20 12	15		
						e	20 44	15		
						—	*15 22 47*	15		D. M. +26°2343.

II. Pulkowaer Clichés.

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeich. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma.	Bemerkungen.
67	150	1897 Febr. 5	$\overset{1/2}{585.6}$	−14.0° R.	−19.0°	—	*$8^h\ 23^m\ 24^s$*	3^m	3	Praesepe. Bilder 4—5.
						a	8 34 4	20^s		Bilder 4.
						b	36 32	16		Die Aufn. sind symmetrisch
						c	37 46	16		gegen d. Plattencentr. an-
						d	39 16	16		*f*=46.4. [geordnet.
						e	40 32	16		
						f	41 44	20		
68*	151	1897 Febr. 15	594.4	−12.0	−16.5	*a*	10 38 10	16	3	Bilder 2—3.
						b	39 34	16		
						c	40 57	10		
						—	*10 56 2*	2^m		Praesepe. Mond sehr nahe.
						d	11 0 7	10^s		Bilder 2—3.
						e	1 10	16		*f*=46.4.
						f	2 12	20		

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma.	Bemerkungen.
69	154	1897 März 7	1/2 599.3	— 5°.5 R.	— 6°.0 C.	—	11^h 14^m 45^s	2^m	3	Praesepe.
						a	11 22 55	20^s		Bilder 3. Undurchs. Luft.
						b	24 17	15		
						c	25 7	15		f=46.7.
						d	26 23	16		
						e	27 35	20		
						f	28 57	25		
70	156	1897 März 9	602.4	— 8.0	—10.9	—	8 54 36	2^m	3	Praesepe. Bilder 2.
						a	11 53 46	20^s		Bilder 1—2.
						b	55 8	15		
						c	56 8	15		f=46.7.
						d	57 46	20		
						e	58 44	16		
						f	59 51	10		
71	161	1897 März 10	—	—	—11.0	a	8 40 36	20	3	Bilder 2.
						b	42 4	16		
						c	43 2	16		f=46.5.
						d	44 34	24		
						e	45 48	16		
						f	46 46	10		
						—	8 52 46	2^m		Praesepe. Bilder 2—3.
72	162	1897 März 11	599.8	— 7.0	— 9.0	—	9 30 15	2	3	Praesepe. Bilder 3.
						a	9 37 25	20^s		Bilder 2—3.
						b	38 23	16		
						c	39 21	12		f=46.6.
						d	41 22	14		
						e	42 23	16		
						f*	43 24	18		
73	163	1897 März 11	599.5	— 9.0	—12.0	—	10 8 24	2^m	3	Praesepe. Bilder 3—4.
						a	14 36 29	30^s		Bilder 3.
						b	37 57	26		
						c	39 12	24		f=46.6.
						d	41 5	22		Die Zeit der letzten Aufn. ist
						e	42 14	20		nicht verzeichn; das hier
						f	(43 15?)	18		angegeb. Moment kann um einige Sec. fehlerh. sein.
74	167	1897 März 23	593.4	— 6.7	—	—	9 10 50	2^m	3	Praesepe. Bilder 2—3.
						a	9 28 3	24^s		Bilder 2.
						b	29 30	20		
						c	30 42	16		f=46.75.
						d	32 0	20		
						e	33 1	18		
						f	34 17	14		
75	168	1897 März 23	—	—	— 9.0	—	10 1 50	2^m	3	Praesepe. Bilder 1—2.
						a	12 53 16	28^s		Bilder 3.
						b	54 42	24		
						c	55 50	20		f=46.75.
						d	57 0	20		
						e	58 1	18		
						f	59 28	24		
76	171	1897 März 27	—	—	—	—	9 34 32	1^m	3	Praesepe. Bilder 3.
						a	9 39 14	24^s		Bilder 2—3. Nebel.

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer		Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma	Bemerkungen.
				inneres.	äusseres.					
76	171	1897 März 27	1/2 —	—	—	*b*	9^h 40^m 7^s	20^s	3	
						c	41 42	20		*f*=47.0.
						d	42 54	16		
						e	43 51	22		
						f	44 53	18		
77	173	1897 März 27				—	*10 39 47*	1^m 30^s	3	Praesepe. Bilder 2. *f*=47.0.
		1897 März 31	—	—	0.0 C.	*a*	13 38 48	20^s		Bilder 3. Windig.
						b	39 57	18		*f*=47.3.
						c	40 56	16		Praesepe u. ♃ sind an versch.
						d	42 6	16		Tagen aufg. worden. In d.
						e	43 5	14		Zwischenz. war die Casset.
						f	44 2	12		abgenom., doch blieb die
										Platte unberührt.
78	175	1897 April 2	582.9	+ 1.0 R.	—	—	*10 12 58*	2^m	3	Praesepe. Bilder 2.
						a	10 35 7	18^s		Bilder 1—2.
						b	36 6	16		*f*=47.3.
						c	37 5	14		
						d	38 7	14		
						e	39 2	12		
						f	40 3	10		
79	177	1897 April 6	599.4	+ 2.0	—	—	*10 18 10*	2^m	4	Praesepe.
						a	10 24 40	20^s		Bilder 3.
						b	25 41	18		
						c	26 28	16		*f*=47.4.
						d	27 28	16		
						e	28 19	18		
						f	29 17	14		
80	179	1897 April 7	602.4	+ 1.0	—	*a*	10 39 2	20	4	Bilder 3.
						b	39 59	18		
						c	40 49	18		*f*=47.2.
						d	41 48	16		
						e	42 28	16		
						f	43 23	14		
						—	*10 52 20*	2^m		Praesepe. Bilder 3—4.
81	182	1897 April 9	—	—	+ 4.0	—	*10 21 43*	2	3	Praesepe. Bilder 4.
						a	10 27 42	18^s		
						b	28 45	16		Bilder 4. Windig.
						c	29 41	16		*f*=47.5.
						d	30 46	14		
						e	31 40	14		
						f	32 37	12		
82	185	1897 April 10	—	—	—	—	*10 44 49*	2^m	3	Praesepe. Bilder 3.
						a	10 51 28	18^s		Bilder 2—3.
						b	52 27	16		*f*=47.5?
						c	53 26	14		
						d	54 23	12		
						e	55 13	12		
						f	56 4	10		
83	188	1897 April 13	—	—	—	—	*11 10 28*	2^m	3	Praesepe.
						a	11 17 18	20^s		Bilder 3. Mond nahe.
						b	18 27	18		

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma.	Bemerkungen.
83	188	1897 April 13	1/2 —	—	—	*c*	$11^h\ 19^m\ 22^s$	18^s	3	*f*=47.4.
						d	20 24	16		
						e	21 18	16		
						f	22 15	14		
84	190	1897 April 15	—	—	+ 6.0° C.	—	*11 8 4*	2^m	3	Praesepe.
						a	11 15 24	20^s		Bilder 3.
						b	16 25	18		
						c	17 26	16		*f*=47.5.
						d	18 36	16		
						e	20 7	14		
						f	21 8	12		
85	191	1897 April 23	596.2	+ 1.8° R.	+ 3.0	—	*12 15 44*	2^m	3	Praesepe. Bilder 3—4.
						a	12 25 9	20^s		Bilder 3.
						b	26 33	18		
						c	27 32	16		*f*=47.4.
						d	28 43	16		
						e	29 51	14		
						f	30 48	12		

Opposition 1898.

Pulkowaer Clichés.

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma.	Bemerkungen.
86	267	1898 März 16	1/2 595.4	—12.0° R.	—15° C.?	*a*	$12^h\ 1^m\ 48^s$	24^s	3	Bilder 2—3.
						b	3 20	20		
						c	4 50	20		*f*=46.3.
						d	6 50	20		
						e	8 10	20		
						f	9 28	24		
						—	*12 19 30*	1^m		Coma Berenicis. Bilder 3.
87	270	1898 März 25	—	—	— 8.0	*a*	13 14 51	20^s	3	Bilder 2—3.
						b	16 10	14		
						c	17 9	16		
						d	18 23	16		*f*=46.7
						e	19 22	18		
						f	20 21	20		
						—	*13 28* —	30		Coma Berenicis. Bilder 2—3.
88	271	1898 März 26	603.7	— 8.5	—12.0	*a*	11 44 41	20	3	Bilder 2.
						b	45 55	18		

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositionsdauer.	Diaphragma.	Bemerkungen.
88	271	1898 März 26	½ 603.7	— 8.5° R.	—12.0° C.	c	11h 47m 22s	18s	3	
						d	48 42	18		f=46.4.
						e	49 58	18		
						f	51 11	20		
						—	*11 56 51*	40		Coma Berenicis. Bilder 2.
89	272	1898 März 27	—	—	— 9.0	a	12 31 53	20	3	Bilder 3.
						b	33 2	18		
						c	34 6	18		f=46.5.
						d	35 10	18		
						e	36 12	18		
						f	37 23	20		
						—	*12 41 3*	40		Coma Berenicis. Bilder 3.
90	273	1898 April 11	587.6	— 1.1	— 1.6	a	11 19 9	20	3	Bilder 2—3.
						b	20 26	18		Der Schatten eines Trabant.
						c	21 28	18		ist am NW-Rande der Ju-
						d	22 50	18		f=47.2. [pitersch. sichtb.
						e	24 8	18		
						f	25 19	20		
						—	*11 34 —*	30		Coma Berenicis. Bilder 2.
91	274	1898 April 14	605.0	— 3.2	— 5.0	a	12 1 49	20	3	Bilder 2.
						b	2 58	18		Um 11h 59m tritt ein Trab. am
						c	4 0?	18?		SW-Rande aus; auf der
						d	5 23	18		Scheibe ist sein Schatten
						e	6 50	18		f=46.9. [sichtbar.
						f	8 9	20		
						—	*12 15 19*	40		Coma Berenicis. Bilder 2.
92	276	1897 April 23	603.6	+ 1.0	—	a	13 46 39	20	3	Bilder 2.
						b	48 9	20		
						c	49 9	20		
						d	50 19	20		f=47.3.
						e	51 49	20		
						f	53 9	20		
						—	*13 57 44*	30		Coma Berenicis. Bilder 2.
93	277	1898 April 24	602.5	+ 2.0	+ 3.0	a	12 55 19	18	3	Bilder 3—4.
						b	56 29	18		
						c	57 23	18		f=47.4.
						d	58 25	18		Die Bilder verschlechtern
						e	59 31	18		sich schnell.
						f	13 0 39	18		
						—	*13 7 30*	40		Coma Berenicis. Bilder 4—5.
94	281	1898 April 25	598.6	—	+ 5	a	12 41 52	20	3	Bilder 3.
						b	43 10	20		Der Chron. war nicht mit der
						c	44 14 ?	20		Normaluhr vergl. worden;
						d	45 20	20		seine Corr. ist = 0 angen.
						e	46 30	20		f=47.5.
						f	47 50	20		
						—	*12 52 —*	40		Coma Berenicis.
95	283	1898 April 28	597.8	+ 2.3	+ 1.5	a	12 15 54	20	3	Bilder 3.
						b	17 3	18		
						c	18 6	16		

№ der Platte.	Pulk. lauf. №	Datum.	Barometer.	Thermometer inneres.	Thermometer äusseres.	Bezeichn. der Aufnahme.	Mitte der Exposition. Pulkowaer Sternzeit.	Expositions-dauer.	Diaphragma.	Bemerkungen.
95	283	1898 April 28	½ 597.8	+ 2°.3 R.	+ 1°.5 C.	d	$12^h\ 19^m\ 6^s$	16^s	3	f=47.4.
						e	20 13	18		
						f	21 24	20		
						—	12 27 14	40		Coma Berenicis. Bilder 3—4.
96	284	1898 April 29	599.5	+ 0.5	+ 0.5	a	13 32 16	20	3	Bilder 3—4.
						b	33 36	20		
						c	34 56	20		
						d	36 6	20		f=47.3.
						e	37 16	20		
						f	38 36	20		
						—	13 42 46	40		Coma Berenicis. Bilder 4.
97	285	1898 Mai 1	598.6	+ 4.0	+ 5.5	a	13 11 11	21	3	Bilder 2.
						b	12 26	20		
						c	13 40	20		
						d	15 16	20		f=47.5.
						e	16 40	20		
						f	17 50	20		
						—	13 24 20	40		Coma Berenicis. Bilder 2.
98	287	1898 Mai 2	598.4	+ 4.0	+ 4.5	a	14 5 10	20	3	Mondschein.
						b	6 16	20		Bilder 3.
						c	7 12	20		
						d	8 22 ?	20		f=47.5.
						e	9 22	20		Der Chron. war nicht vergl.
						f	10 16	20		worden; Corr. =0 angen.
						—	14 17 15	30		Coma Berenicis. Bilder 3.
99	288	1898 Mai 16	—	—	+ 9.0	a	15 3 42	24	3	Bilder 3—4.
						b	4 42	24		Leichte Wolken.
						c	5 42	24		f=47.7.
						d	6 42	24		
						e	7 36	24		
						f	8 48	24		
						—	15 16 30	1^m		Coma Berenicis. Bilder 3.
100	289	1898 Mai 19	600.8	+ 7.8	+10.0	a	14 10 30	20^s	3	Bilder 3—4.
						b	12 11	22		Wind. Der Himmelsgrund ist
						c	13 12	24		sehr hell.
						d	14 22	24		f=47.7.
						e	15 31	22		
						f	16 30	20		
						—	14 22 20	40		Coma Berenicis. Bilder 3.

In obiger Zusammenstellung sind die besten Bilder mit 1, die schlechtesten mit 5 bezeichnet. *f* ist die Focaleinstellung.

Die von Herrn Kostinsky benutzten Diaphragmen haben nachstehende freie Öffnungen:

$$0 = 294^{mm}, \quad 1 = 272^{mm}, \quad 2 = 235^{mm}, \quad 3 = 210^{mm}, \quad 4 = 193^{mm}.$$

Um die Arbeit nicht übermässig anwachsen zu lassen, wurden auf den Pulkowaer Clichés des Jahres 1896 nur vier Bilder aus jeder Reihe gemessen; die ausgeschlossenen sind durch Sternchen bezeichnet. Ferner konnten nicht verwandt werden:

Platte 28 Reihe *C*, weil die Anhaltsterne unterexponiert und alle Jupitersaufnahmen in Æ verlängert sind,
» 34 wegen Beschädigung der Platte,
» 35 wegen Mangels an geeigneten Anhaltsternen,
» 39 weil sie beim Einsetzen in den Rahmen zerbrach,
» 68 weil sie durch den Mond geschwärzt ist.

Der Bearbeitung unterlagen somit 70 Platten mit 121 Reihen oder 592 Einzelaufnahmen.

Alle Messungen sind in der früheren Weise an dem der Kaiserlichen Akademie der Wissenschaften gehörigen Repsold'schen Apparat ausgeführt worden mit Anbringung der im Jahre 1897 durch eine eingehende Untersuchung ermittelten Instrumentalcorrectionen. Die damals gefundenen Fehlerwerte wurden bis zum Schluss der Messungen als constant angenommen; eine im Sommer dieses Jahres zur Controlle vorgenommene Bestimmung der Abweichung der Schlittenführung von der Geraden, bei der ich am leichtesten eine Veränderung vermutete, gab innerhalb der Grenzen der wahrscheinlichen Fehler dieselben numerischen Beträge, wie die frühere. Der Bequemlichkeit der Rechnung wegen suchte ich das Objectiv des Mikroskops vor Inangriffnahme der Arbeit derart einzustellen, dass zwei Schraubengänge möglichst nahe einem Scalenteil entsprächen. Das gelang fast vollständig, wie aus folgender Zusammenstellung ersichtlich:

	1 Scalenteil=Schraubenrev.	Temp.	Platte.		1 Scalenteil=Schraubenrev.	Temp.	Platte
1897 Oct. 2	2ᴿ0011	—	36	1897 Nov. 15	2ᴿ0004	+14.4 R.	44
5	2.0010	+13.2 R.	37	19	2.0001	+15.4	45
12	2.0007	+14.6	38	Dec. 9	2.0008	+12.0	46
16	2.0011	—	40	24	2.0004	+14.0	47
20	2.0011	+16.0	41	28	2.0006	+14.0	48
Nov. 4	2.0012	+15.6	43	1898 Febr. 14	2.0003	+13.0	49
9	2.0006	—	42	19	2.0003	+14.6	50

	1 Scalenteil=Schraubenrev.	Temp.	Platte.		1 Scalenteil=Schraubenrev.	Temp.	Platte.
1898 Febr. 26	1ʳ.9999	+14.5 R.	51	1898 Dec. —	1ʳ.9993	+14.6 R.	32
März 3	2.0010	—	52^a	1899 Jan. 26	1.9999	+15.1	33
—	2.0008	+15.3	54	Febr. 6	1.9989	+14.3	67—70
—	2.0006	+15.6	52^b	14	1.9998	+15.0	71, 72
26	2.0006	+16.9	53	—	1.9992	+17.5	73—75
April 1	2.0003	+12.9	55	März 18	1.9996	+15.0	76—78
4	2.0008	+14.6	56	April 1	1.9995	+14.6	79—81
8	2.0008	+15.0	57	22	1.9994	+15.5	82, 63, 83
27	2.0008	+13.6	58	Juli 24	1.9995	+19.4	64
Mai 10	2.0005	+15.0	59	—	2.0001	+14.5	65
14	2.0009	+14.3	60	—	2.0003	+16.2	84, 85
Juni —	2.0006	+14.2	61, 62	—	1.9995	+14.5	66
25	2.0003	+17.5	28	—	1.9995	+14.4	86—88
Juli 2	2.0002	+17.8	29*A*	Oct. 7	1.9997	+14.0	89—91
Sept. 7	2.0009	+15.5	29*B*, *C*, *D*	28	1.9997	+14.1	92—96
26	2.0006	+12.8	30	Nov. 15	2.0003	+14.1	97—100
Oct. —	2.0000	+14.3	31				

Im Laufe der Zeit ist eine unbedeutende Abnahme des Verhältnisses $\frac{\text{Schraubenrev.}}{\text{Scalenwert}}$ bemerkbar; eine Abhängigkeit von der Temperatur lässt sich wegen ihrer geringen Schwankungen nicht nachweisen.

Die Berechnung der Messungen wurde nach den im ersten Bande Seite 19—21 gegebenen Formeln[1]) ausgeführt, auf die ich auch wegen der Bedeutung der im weiteren Text vorkommenden Buchstaben und Bezeichnungen verweise.

Zur Bestimmung der Plattenconstanten (des Scalenwerts f_α, f_δ und des Winkels i_α, i_δ, den der Meridian des Centrums resp. die Tangente an den Parallel mit der Schlittenführung des Apparats bilden) ist auf den Helsingforser Negativen von 1896 und den Pulkowaer von 1896 und 1897 kurz vor oder gleich nach den Jupitersaufnahmen die Praesepe photographiert worden, während der Sternhaufen in der Coma Berenicis zu dem gleichen Zwecke von Prof. Donner während der Opposition 1897 und von Herrn Kostinsky im Jahre 1898 benutzt wurde. Die Positionen der Anhaltsterne in der Praesepe entnahm ich den Göttinger Astronomischen Mitteilungen, Teil IV, mit Berücksichtigung der von Prof. Schur aus der Vergleichung seiner Messungen mit den Bonner abgeleiteten Eigenbewegungen. Während

1) Durch ein Versehen bei der Abschrift des Manuskripts ist in der Refractionscorrection dx das K in die Klammer gesetzt, die Formeln auf Seite 21 müssen demnach lauten:

$$dx = K\left[\frac{cotg^2 n}{\sin^2(N+\delta_0)} + 1\right] x + K\,\frac{cotg n \cos(N+2\delta_0)}{\cos\delta\,\sin^2(N+\delta_0)}\,.\,y \text{ und } f'_\alpha = f_\alpha + K\left(\frac{cotg^2 n}{\sin^2(N+\delta_0)} + 1\right)$$

ich mit diesen Rechnungen beschäftigt war, veröffentlichte Herr F. Schlesinger die Resultate seiner Bearbeitung der Rutherfurd'schen Aufnahmen der Praesepe[1]). Wenngleich die photographischen Positionen die Heliometermessungen in Göttingen unzweifelhaft an Genauigkeit übertreffen, schien es mir doch nicht zweckmässig, erstere meinen Reductionen zu Grunde zu legen, da ihre Epoche über zwanzig Jahr zurückliegt. Nachstehend sind die Positionen der zur Verwendung kommenden Sterne nach Schur und Schlesinger (E. B. nach Schur) nebeneinandergestellt:

Bezeichn. des Sterns. № n. Schur.	—	α 1896.0. Göttinger Heliometer.		Ruth.	δ 1896.0 Göttinger Heliometer.			Ruth.
2	*N*	$8^h\ 31^m$	$38^s.307$	$38^s.309$	+20°	5′	42″.23	41″.79
4	*R*	31	49.118	49.100	+19	37	47.23	46.50
15	*Z*	33	44.169	44.177	+20	8	41.34	40.82
17	*U*	33	52.752	52.736	+19	54	26.49	25.79 [2])
20	*Y*	33	59.820	59.818	+19	54	29.73	29.09
23	*X*	34	12.612	12.618	+20	20	18.43	17.64 [3])
26	*V*	34	22.667	22.653	+19	42	59.57	58.88
27	*S*	34	23.934	23.928	+20	2	15.39	14.52
29	W	34	27.467	27.503	+20	32	59.22	58.49
31	*T′*	34	29.137	29.136	+19	54	45.48	44.68
34	*M*	34	45.012	45.008	+20	5	15.61	14.67
37	*T*	34	58.414	58.418	+19	56	56.56	55.88
40	*Q*	35	21.247	21.241	+19	37	49.60	49.03

Die fast auf demselben Parallele sich befindenden Sternpaare *M*, *N* und *Q*, *R* dienten zur Ableitung des Scalenwerts in Æ und des Winkels i in Declination, während *V* und *W*, da sie nahezu in der Richtung des Meridians liegen, sich zur Ermittelung des Scalenwerts in Declination und des Winkels i_α eignen. Auf allen Helsingforser Clichés von 1896 und den Pulkowaer von 1897 bezeichnet der Stern *S* den Mittelpunkt der Platte; während der Opposition 1896 dagegen hatte Herr Kostinsky den Stern des Centrums häufig gewechselt, so dass nach einander *M*, *S*, *T*, *T′*, *Z*, *U*, *X*, *Y* diesen Platz einnehmen. Die beiden Sternbögen *M N* und *Q R* geben einen um 0.00021 von einander abweichenden Scalenwert. Bei Benutzung der Schlesinger'schen photographischen Positionen wird dieser Unterschied auf 0.00011 herabgesetzt, die Mittel aus beiden Systemen stimmen dagegen bis auf wenige Einheiten der fünften Stelle überein. Eine starke Differenz (0.00023) ergiebt sich für den Winkel i_α, jenachdem man ihn aus den Göttinger oder den photographischen Sternörtern ableitet, doch

1) The Praesepe Group; Measurement and reduction of the Rutherfurd photographs by Frank Schlesinger, New-York 1898.

2) Ruth. + 10′.

3) Ruth. — 10′ zu corrigieren.

ist dieser Unterschied von geringerer Bedeutung, da i_α mit einem Factor multipliciert wird, der im Maximum 0.5 des Coefficienten von f_α beträgt. f_δ (Gött.) — f_δ (Ruth.) finde ich $= +0.00001$; i_δ (Gött.) — i_δ (Ruth) $= +0.00006$.

Zur Berechnung der mit dem Sternhaufen Comae Berenicis versehenen Platten wurden zunächst die Heliometermessungen von Chase am Yale Observatory [1]) verwandt, welche für 1897.0 folgende Positionen der Anhaltsterne geben:

№ Yale.	Bezeichn. des Sterns.	α 1897.0.	δ 1897.0.
3	*O*	$12^h\ 13^m\ 50^s.463$	$+26°\ 34'\ 49''.59$
5	*F*	15 7.611	+26 34 22.44
d	*J*	17 19.727	+26 25 3.30
18	*I*	18 53.329	+26 25 20.35
19	*K*	19 8.742	+26 40 10.70
20	*L*	19 16.676	+26 9 12.84
24	*H*	22 29.317	+26 28 56.17

Den Mittelpunkt der Platte markiert bei Prof. Donner der Stern *I*, bei Herrn Kostinsky *J*. Den Scalenwert in Æ und den Winkel i_δ geben auf den Helsingforser Clichés die Sternbögen *IF* und *JH*, auf den Pulkowaer der Bogen *O J*; f_δ und i_α wurden gefunden aus dem Sternpaar *K L*. Zwischen dem aus den beiden Sternbögen ermittelten Scalenwert in Æ zeigte sich eine so beträchtliche Abweichung (0.0006), dass ich mich genötigt sah, die Rectascensionsunterschiede der Sterne *O*, *I*, *F*, *J*, *H* am hiesigen Passageninstrumente von neuem zu bestimmen. Als Mittel aus sechs Abenden erhielt ich:

	Δα 1897.0 Pulk.	Δα 1897.0 Yale.
$O - I =$	$-75'\ 43''.39$	$42''.99$
$F - I =$	$-56\ 27.06$	25.77
$J - I =$	$-23\ 24.24$	24.03
$H - I =$	$+53\ 59.70$	59.83

Die in Pulkowa beobachteten Δα ergeben nur einen Unterschied $f_\alpha\ (FI) - f_\alpha\ (HJ) = -0.00002$. Demnach muss der Stern *F* eine jährliche relative Eigenbewegung von etwa $-0''.15$ besitzen oder aber die am Yale-Heliometer bestimmte Position um beiläufig 1″ fehlerhaft sein [2]).

1) Transactions of the Astronomical Observatory of Yale University, Vol. I. Part V. 1896.

2) Durch die während des Druckes dieser Abhandlung erschienene Broschüre von Walter Kretz: The positions and proper motions of the principal stars in the cluster of Coma Berenicis, New-York 1900, wird das Vorhandensein einer E. B. von obigem Betrage bei Stern *F* bestätigt, während die andern hier benutzten Sterne nur eine dem ganzen System zukommende Fortrückung aufweisen. Berücksichtigt man diese E. B. bei Berechnung der Rectascensionsdifferenz *F—I*, so erhält man für die Helsingforser Aufnahmen des Jahres 1897 einen um 0.00006 kleineren Scalenwert f_α.

Der Scalenwert berechnet sich für die Helsingforser Platten, wie folgt:

Platte.	1896. Scalenwert (Æ).	Temp.	Platte.	1897. Scalenwert (Æ).	Temp.
28*A*	0.99808	— 6°.8 R.	63*A*	0.99796	— 5°.5 R.
B	0.99804	— 5.4	*B*	0.99794	— 3.3
D	0.99787	— 5.0	*C*	0.99773	— 1.45
29*A*	0.99817	— 6.2	*D*	0.99777	— 0.7
B	0.99796	— 2.1	64*A*	0.99778	+ 2.5
C	0.99796	— 4.9	*B*	0.99776	+ 3.5
D	0.99800	— 2.3	*C*	0.99777	+ 4.65
30*A*	0.99795	— 8.3	*D*	0.99779	+ 5.8
B	0.99789	+ 1.5	65*A*	0.99773	+ 8.4
C	0.99797	— 5.8	*B*	0.99770	+ 5.5
D	0.99796	— 0.2	*C*	0.99767	+ 6.5
31*A*	0.99784	— 1.4	*D*	0.99766	+ 8.4
B	0.99787	—10.1	66*A*	0.99777	+14.6
C	0.99784	— 3.1	*B*	0.99767	+10.5
D	0.99788	— 3.5	*C*	0.99774	+14.6
32*A*	0.99796	— 2.8	*D*	0.99765	+10.6
B	0.99813	— 5.0	Mittel:	0.99776	
C	0.99805	— 2.7			
D	0.99802	— 3.5			
33*A*	0.99795	— 2.6			
B	0.99800	+ 1.5			
Mittel:	0.99797				

Eine Abhängigkeit des f von der Temperatur ist nicht nachweisbar. Eigentümlich ist die stetige Abnahme des Scalenwerts am Helsingforser photographischen Fernrohr, die noch deutlicher in die Augen fällt, wenn man die entsprechenden Beträge für die früheren Oppositionen danebenstellt.

Es war:

f_α 1891 $= 0.99808$ $\qquad$ f_α 1894/5 $= 0.99801$

1892/3 $= 0.98807$ $\qquad$ 1896 $= 0.99797$

1893/4 $= 0.99802$ $\qquad$ 1897 $= 0.99776$

Wie H. Prof. Donner mir mitteilt, ist gleichzeitig eine fortschreitende Änderung der Focallänge an seinem Instrumente constatiert worden, woraus sich schliessen lässt, dass die Krümmung der Linse mit der Zeit abnimmt.

Der Scalenwert der Pulkowaer Platten ist unzweifelhaft eine Function der Temperatur (resp. der Focaleinstellung).

Es wurde gefunden:

Platte.	f_α beobachtet.	f_α berechnet.	Δ	Focus.	Temp.
36	0.99298	0.99295	+0.00003	46.5	—12°0 R.
37	0.99294	0.99298	— 4	46.4	—
38	0.99287	0.99292	— 5	46.6	— 6.2
40	0.99296	0.99301	— 5	46.3 (?)	—
41	0.99290	0.99295	— 5	46.5	— 6.5
42	0.99278	0.99280	— 2	47.0	— 2.5
43	0.99293	0.99295	— 2	46.5	— 7.5
44	0.99276	0.99277	— 1	47.1	— 1.3
45	0.99297	0.99298	— 1	46.4	—11.2
46	0.99296	0.99289	+ 7	46.7	— 5.8
47	0.99288	0.99298	— 10	46.4	—
48	0.99305	0.99298	+ 7	46.4	—10.8
49	0.99301	0.99298	+ 3	46.4	— 8.1
50	0.99286	0.99289	— 3	46.7	— 6.0
51	[0.99294]	0.99289	— 5	46.7	— 7.5
52^a	0.99280	0.99280	0	47.0	— 3.9
52^b	0.99281	0.99280	+ 1	47.0	— 4.7
53	0.99291	0.99283	+ 8	46.9	— 4.6
54	0.99289	0.99289	0	46.7	— 5.0
55	0.99273	0.99274	— 1	47.2	0.0
56	0.99298	0.99289	+ 9	46.7	—
57	0.99297	0.99292	+ 5	46.6	— 7.0
58	0.99292	0.98290	+ 2	46.65	— 5.0
59	0.99257	0.99268	— 11	47.4	0.0
60	0.99274	0.99268	+ 6	47.4	+ 0.5
61	0.99259	0.99265	— 6	47.5	+ 3.1
62	0.99264	0.99270	— 6	47.4	—
1896 Mittel:	0.99286			46.78	

Platte.	f_α beobachtet.	f_α berechnet.	Δ	Focus.	Temp.
67	0.99291	0.99299	—0.00008	46.4	—14°0 R.
69	0.99287	0.99299	— 12	46.4	— 5.5
70	0.99296	0.99290	+ 6	46.7	— 8.0
71	0.99299	0.99296	+ 3	46.5	—
72	0.99289	0.99293	— 4	46.6	— 7.0
73	0.99288	0.99293	— 5	46.6	— 9.0
74	0.99296	0.99288	+ 8	46.75	— 6.7
75	0.99296	0.99288	+ 8	46.75	—
76	0.99288	0.99281	+ 7	47.0	—
77	0.99281	0.99281	0	47.0	—
78	0.99264	0.99272	— 8	47.3	+ 1.0
79	0.99277	0.99269	+ 8	47.4	+ 2.0
80	0.99270	0.99275	— 5	47.2	+ 1.0
81	0.99266	0.99266	0	47.5	—
82	0.99265	0.99266	— 1	47.5?	—
83	0.99265	9.99269	— 4	47.4	—
84	0.99265	0.99266	— 1	47.5	—
85	0.99270	0.99269	+ 1	47.4	+ 1.8
1897 Mittel:	0.99281			47.00	
86	0.99290	0.99288	+0.00002	46.3	—12°0 R.
87	0.99282	0.99276	+ 6	46.7	—
88	0.99289	0.99285	+ 4	46.4	— 8.5
89	0.99276	0.99281	— 5	46.5	—
90	0.99258	0.99261	— 3	47.2	— 1.1
91	0.99270	0.99269	+ 1	46.9	— 3.2
92	0.99256	0.99258	— 2	47.3	+ 1.0
93	0.99251	0.00254	— 3	47.4	+ 2.0
94	0.99249	0.99252	— 3	47.5	—
95	0.99254	0.99254	0	47.4	+ 2.3
96	0.99258	0.99258	0	47.3	+ 0.5
97	0.99251	0.99252	— 1	47.5	+ 4.0
98	0.99251	0.99252	— 1	47.5	+ 4.0
99	0.99240	0.99246	— 6	47.7	—
100	0.99248	0.99246	+ 2	47.7	+ 7.8
1898 Mittel:	0.99261			47.15	

Die merkliche Abweichung des Scalenwerts von der Einheit beim Pulkowaer photographischen Fernrohr hat den Übelstand im Gefolge, dass in den Correctionsgrössen der Reductionsformeln x und y teilweise durch $f_\alpha x$ und $f_\delta y$ ersetzt werden müssen.

Sucht man f_α durch die Formel $0.99286+0.00003\times(46.78-F)$ für 1896 und 1897 und durch $0.99267+0.00003\times(47.00-F)$ für 1898 darzustellen, so bleiben die unter Δ gegebenen Differenzen zwischen Beobachtung und Rechnung übrig. Die Abnahme des f_α in der letzten Opposition liegt wol kaum am Instrumente, wie in Helsingfors, vielmehr vermute ich, dass sie auf systematischen Fehlern in der Distanz der Anhaltsterne beruht. Überhaupt würde die photographische Ortsbestimmung bei der vorliegenden Arbeit noch bedeutend mehr zu leisten imstande sein, wenn nicht die ungenügende Genauigkeit der Positionen der Anhaltsterne ihr eine Grenze setzte.

Als Unterschied $f_\alpha-f_\delta$ ergiebt sich:

Helsingfors	1896:	+0.00003
	1897:	+0.00021
Pulkowa	1896:	+0.00002
	1897:	+0.00005
	1898:	−0.00004

Eigenthümlich ist die grosse Abweichung für Helsingfors 1897, die sich nicht durch Fehler in den Positionen der Anhaltsterne erklären lässt, da im Jahre 1898 in Pulkowa dieselben Sterne benutzt worden sind[1]).

Dem Einfluss der Phase auf photographierte Planetenscheiben wurde eine besondere Untersuchung gewidmet. Nach einer von Herrn Kostinsky gelegentlich mit verschiedenen Expositionszeiten gemachten Aufnahme der Venus glaubte ich schliessen zu müssen, dass die theoretisch berechnete Phase in der Photographie keine Giltigkeit habe, dass vielmehr an der Lichtgrenze eine andere Irradiation wirke, als am voll beleuchteten Rande. Bezeichnen wir den Aequatorial- und Polardurchmesser des Jupiter, ihren Zuwachs infolge der Irradiation und den Abstand des Jupiter von der Erde zur Zeit der Opposition und Quadratur mit a und b, resp. a' und b', z und z', ρ und ρ', und die Phase mit p, so muss, wenn z und z' in allen Radien denselben Betrag hat, die Relation bestehen:

$$a-b=\frac{\rho'}{\rho}(a'-b'+p) \text{ oder } p=\frac{\rho}{\rho'}(a-b)-(a'-b').$$

Aus vielfachen Messungen[2]) leidlich gut begrenzter Jupitersbilder, die in der Nähe

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1) Durch Einführung der nach Seite XXII Anm. 2 dem Stern F zukommenden E. B. wird dieser Wert auf +0.00015 herabgesetzt.

2) Unter Annahme eines Polardurchmessers $=182\overset{''}{.}20$ für die Entfernung 1 folgt aus diesen Messungen eine Abplattung $=\frac{1}{12.85}$, die aber jedenfalls zu stark ist, da der Aequatorialdurchmesser des Jupiter auf den Platten häufig durch Unregelmässigkeiten im Gange des Uhrwerks vergrössert erscheint.

der Opposition und zur Zeit der maximalen Phase aufgenommen waren, wurde der Wert von **p** empirisch gefunden:

Platte.	Phase gem.	Phase nach Marth.	Δ
56	0″19	0″32	+0″13
57	0.42	0.32	—0.10
58	0.43	0.33	—0.10
59	0.18	0.35	+0.17
60	0.46	0.35	—0.11
61	0.43	0.35	—0.08
62	0.39	0.35	—0.04
Mittel:	0″36 ±0″03	0″34	

Die Übereinstimmung mit der Ephemeride von Marth ist bei der Schwierigkeit der Messungen fast als vollständig zu betrachten, folglich kann die theoretisch berechnete Phase ohne Bedenken auf photographische Aufnahmen der Planetenscheiben angewandt werden. Für die x und y wurde die Phasencorrection mit Vernachlässigung der Abplattung ermittelt nach den Formeln:

$$\text{Corr. in } x_{(t-♃)} = -\tfrac{p}{2} \sin {}^2Q$$
$$\text{» » } y_{(t-♃)} = -\tfrac{p}{2} \cos {}^2Q,$$

wo Q den Positionswinkel der grössten Phase am Planetenumfang bedeutet.

Um aller möglichen Fehlerquellen zu gedenken, muss ich erwähnen, dass ich weder aus Helsingfors noch von Herrn Kostinsky bestimmte numerische Daten über die Aufstellungsfehler der Astrographen erhalten habe, sondern nur die Versicherung, dass dieselben, soweit als tunlich, beseitigt waren. Da der Unterschied des Stundenwinkels zwischen dem Jupiter und den Anhaltsternen, wenigstens während der letzten drei Oppositionen, zwei Stunden nicht überstieg und die Declinationen klein waren, können die Instrumentalcorrectionen wol ohne Bedenken unberücksichtigt bleiben.

Die in nachstehender Übersicht enthaltenen Beträge der wahrscheinlichen Fehler der Messungen wurden aus der Abweichung der Einzelpositionen von dem arithmetischen Mittel eines Abends abgeleitet. Um die Bewegung der Trabanten nicht in Rechnung ziehen zu müssen, wurden nur diejenigen dazu benutzt, die in der Nähe der Elongation standen.

Wahrscheinliche Fehler der Messungen.

Opposition.	in Æ				in Decl.				Mittl. Decl. des Jupiter.
	Trabant — Jupiter		Trabant — Trabant		Trabant — Jupiter		Trabant — Trabant		
	Einzel-differenz.	Mittel.	Einzel-differenz.	Mittel.	Einzel-differenz.	Mittel.	Einzel-differenz.	Mittel.	
	I. Helsingforser Platten.								
1896	± 0.″134	± 0.″060	± 0.″119	± 0.″053	± 0.″130	± 0.″058	± 0.″118	± 0.″053	+ 20°
1897	± 0.178	± 0.080	± 0.092	± 0.041	± 0.174	± 0.078	± 0.072	± 0.032	+ 11
	II. Pulkowaer Platten.								
1896	± 0.″118	± 0.″059	± 0.″081	± 0.″040	± 0.″100	± 0.″050	± 0.″076	± 0.″038	+ 20
1897	± 0.122	± 0.050	± 0.067	± 0.027	± 0.097	± 0.040	± 0.082	± 0.033	+ 11
1898	± 0.134	± 0.055	± 0.084	± 0.034	± 0.116	± 0.047	± 0.088	± 0.036	0

Die Zusammenstellung der Messungen ist im Allgemeinen ebenso angeordnet, wie im ersten Bande, nur sind die Colonnen $x\,0°$, $x\,180°$ und $y\,90°$, $y\,270°$ fortgelassen, da sich keine systematischen Unterschiede zwischen den Messungen der Aufnahmen a, b, c und d, e, f gezeigt haben, und ist unter der Überschrift Trabant — Jupiterscentrum noch die mit Ph. bezeichnete Correction wegen Phase hinzugekommen.

In die am Schluss gegebenen definitiven Positionen der Trabanten sind die wegen Phase corrigierten Oerter aus den früheren Oppositionen mit aufgenommen.

Wie bei der Bearbeitung des ersten Bandes, so hat sich auch jetzt wieder meine Schwester in dankenswerter Weise an den Controllrechnungen beteiligt.

F. Renz.

Pulkowa, September 1900.

ZUSAMMENSTELLUNG DER MESSUNGEN.

A. OPPOSITION 1896.

I. HELSINGFORSER CLICHÉS.

28 A. 1895. November 27.

Æ

Object.	Scalenablesung. P -Kr. 0°	t+k	P.-Kr.180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit. der Aufnahmen.	Helsingforser Sternzeit. Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**66.5109**		**61.8762**							
S	66.5100	+ 9	61.8753	+ 9	0	0.0000				4
M	71.4553	+14	56.9208	+10	0	+ 4.9501				3—4
N	27.5600	+23	100.8240	+ 4	+18	—38.9466				5
Q	80.0165	+19	48.3692	+19	— 3	+13.5060		5^h 17^m 50^s		4—5
R	29.9852	+29	98.3912	+ 8	+21	—36.5172				4—5 ellipt.
V	66.2000	+18	62.1725	+15	0	— 0.3034				3
W	67.3490	+20	61.0342	+26	0	+ 0.8398				4—5 unterexp.
♃ a_w	55.5105	+ 2	72.8900	+16		—11.0078				
a_c	55.9165	+ 2	72.4850	+14		—10.6022	—10.6035	5 21 27		4—5*)
a_o	56.3120	+ 2	72.0770	+14		—10.2004				
♃ b_w	55.4900	+ 2	72.9130	+15		—11.0295				
b_c	55.8970	+ 2	72.5020	+15		—10.6205	—10.6250	21 54		4—5
b_o	56.2915	+ 2	72.1055	+13		—10.2249				
♃ c_w	55.5155	+ 1	72.8825	+14		—11.0015				
c_c	55.9155	+ 1	72.4895	+12		—10.6049	—10.6038	22 18	5^h 22^m 18^s	3—4
c_o	56.3140	+ 1	72.0880	+12		—10.2049				
♃ d_w	55.4965	+ 1	72.9055	+14		—11.0225				
d_c	55.9045	+ 1	72.5010	+14		—10.6162	—10.6190	22 43		3—4
d_o	56.2990	+ 1	72.1000	+12		—10.2184				
♃ e_w	55.4820	0	72.9185	+13		—11.0362				
e_c	55.8905	0	72.5170	+13		—10.6312	—10.6329	23 8		3—4
e_o	56.2935	0	72.1200	+11		—10.2312				

Object.	P -Kr. 0°	t+k	P.-Kr.180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	56.9070	+12	71.4670	+15		— 9.5975	+1.0060						3—4
b	56.8865	+12	71.4840	+14		— 9.6162	+1.0088						2—3
c	56.9080	+11	71.4685	+13		— 9.5977	+1.0061	+1.0068	+1'0053	+0'0004	+0'0025	**+1'0082**	2—3
d	56.8910	+10	71.4820	+13		— 9.6130	+1.0060						2
e	56.8770	+10	71.4940	+12		— 9.6260	+1.0069						2—3
II a	57.8480	+ 8	70.5315	+15		— 8.6594	+1.9441						3
b	57.8260	+ 8	70.5475	+14		— 8.6784	+1.9466						2—3
c	57.8470	+ 7	70.5290	+13		— 8.6586	+1.9452	+1.9451	+1.9421	+0.0008	+0.0025	**+1.9454**	2—3
d	57.8310	+ 6	70.5440	+13		— 8.6742	+1.9448						2—3
e	57.8170	+ 6	70.5580	+12		— 8.6882	+1.9447						3
III a	60.6970	+13	67.6740	+20		— 5.8062	+4.7973						2—3
b	60.6790	+12	67.6950	+19		— 5.8257	+4.7993						2—3
c	60.6985	+11	67.6750	+19		— 5.8060	+4.7978	+4.7967	+4.7894	+0.0020	+0.0025	**+4.7939**	2—3
d	60.6780	+11	67.6930	+18		— 5.8252	+4.7938						2
e	60.6660	+11	67.7060	+18		— 5.8377	+4.7952						2
IV a	47.1590	+12	81.2180	+19		—19.3470	—8.7435						3—4
b	47.1400	+11	81.2380	+18		—19.3665	—8.7415						3
c	47.1570	+11	81.2185	+17		—19.3482	—8.7444	—8.7446	—8.7313	—0.0036	+0.0025	**—8.7324**	3
d	47.1375	+11	81.2390	+16		—19.3682	—8.7492						3
e	47.1300	+10	81.2500	+15		—19.3774	—8.7445						3

Scheinbare Ædiff: M— Centrum = + 5'2688 $f^\circ_\alpha = 0.99847$ $-i^\circ_\alpha = -0.00029$

N— » = —41.4028

Q— » = +14.3257 f_α = **0.99808** $-i_\alpha$ = **—0.00015**   ∢ i_α = + 0'5

R— » = —38.7017   *Refr.* = — 18

V— » = — 0.3175 $Tx_♃$ = — 103

W— » = + 0.8843 f'_α = **0.99848** J_α = **—0.00136**

$\alpha_♃ = 8^h\ 46^m.9$

*) Alle Jupitersbilder sind von einer grossen Aureole umgeben, so dass die Ränder schwer erkennbar sind.

1895. November 27.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 64.6466	$\frac{mm}{10000}$	mm 63.7437	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
66.1012	+10	62.2878	+10	0	+ 1.4552		0.0000	+ 1.4552	
69.1060	+15	59.2802	+13	0	+ 4.4616		— 0.0013	+ 4.4603	
69.6310	+31	58.7613	+26	— 2	+ 4.9834		— 0.0806	+ 4.9028	
41.6575	+29	86.7335	+ 1	+ 4	—22.9876		— 0.0094	—22.9970	
41.6533	+35	86.7243	+12	+13	—22.9845		— 0.0690	—23.0535	
46.8183	+ 8	81.5663	+ 2	+ 2	—17.8250		0.0000	—17.8250	
96.8808	0	51.5113	+12	— 8	+32.2319		0.0000	+32.2319	
73.7990	+15	54.6120	+ 2		+ 9.1427				
73.4205	+16	54.9845	+ 2		+ 8.7672	+ 8.7660			
73.0380	+16	55.3600	+ 2		+ 8.3882				
72.3380	+14	56.0700	+ 2		+ 7.6832				
71.9610	+14	56.4500	+ 2		+ 7.3046	+ 7.3052			
71.5765	+14	56.8170	+12		+ 6.9279				
70.8190	+15	57.5905	+ 8		+ 6.1632				
70.4370	+19	57.9635	+ 8		+ 5.7858	+ 5.7875			
70.0685	+19	58.3395	+ 8		+ 5.4136				
69.5040	+16	58.9035	+13		+ 4.8490				
69.1330	+16	59.2740	+13		+ 4.4782	+ 4.4807			
68.7650	+16	59.6320	+17		+ 4.1150				
67.9720	+21	60.4330	+13		+ 3.3184				
67.6095	+21	60.7950	+13		+ 2.9562	+ 2.9487			
67.2210	+11	61.1750	+13		+ 2.5714				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta\,(y_t - y_♃)$	$J_\delta\,(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
73.1285	+16	55.2585	+ 1		+ 8.4843	—0.2817						
71.6670	+14	56.7165	+11		+ 7.0240	—0.2812						
70.1525	+19	58.2290	+ 7		+ 5.5109	—0.2766	—0.2780	—0.2776	—0.0003	+0.0010	—0.0002	**—0.2771**
68.8510	+16	59.5340	+16		+ 4.2070	—0.2737						
67.3145	+11	61.0680	+12		+ 2.6718	—0.2769						
72.7990	+15	55.5860	0		+ 8.1558	—0.6102						
71.3410	+14	57.0395	+10		+ 6.6995	—0.6057						
69.8230	+18	58.5620	+11		+ 5.1794	—0.6081	—0.6074	—0.6066	—0.0005	+0.0018	—0.0002	**—0.6055**
68.5190	+15	59.8680	+15		+ 3.8740	—0.6067						
66.9840	+10	61.3960	+11		+ 2.3425	—0.6062						
71.9170	+12	56.4655	— 1		+ 7.2748	—1.4912						
70.4570	+17	57.9230	+ 5		+ 5.8162	—1.4890						
68.9370	+14	59.4420	+10		+ 4.2962	—1.4913	—1.4899	—1.4880	—0.0013	+0.0039	—0.0002	**—1.4856**
67.6315	+19	60.7490	+10		+ 2.9902	—1.4905						
66.1035	+11	62.2785	+ 9		+ 1.4612	—1.4875						
76.0750	+13	52.3150	+18		+11.4282	+2.6622						
74.6200	+16	53.7735	+10		+ 9.9720	+2.6668						
73.1010	+19	55.2920	+ 6		+ 8.4536	+2.6661	+2.6671	+2.6637	+0.0024	—0.0127	+0.0002	**+2.6532**
71.7980	+17	56.5910	+16		+ 7.1520	+2.6713						
70.2640	+22	58.1260	+12		+ 5.6180	+2.6693						

Scheinbare Decldiff: M— Centrum = + 3'.0030 $f^\circ_\delta = 0.99866$ $i^\circ_\delta = -0.00024$

N— » = + 3.4488

Q— » = —24.4283 f_δ = **0.99799** i_δ = **+0.00003** $\measuredangle\, i_\delta = +\ 0'.1$

R— » = —24.4657

V— » = —19.2618 f'_δ = **0.99872** J_δ = **—0.00028**

W— » = +30.7278

$\delta_♃ = +18^\circ\ 27'.8$

28 B. 1895. November 28.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit. der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	66.6168		61.7609							
S	66.6160	+ 8	62.7600	+ 9	0	0.0000				2—3
M	71.5688	+12	56.8095	+ 9	0	+ 4.9518				2—3
N	27.6683	+22	101.7063	+ 3	+17	−38.9443				3—4
Q	80.1360	+20	48.2482	+28	− 3	+13.5152		5^h 58^m 34^s		3—4
R	30.0937	+30	98.2802	+ 9	+20	−36.5182				3
V	66.3150	+19	62.6595	+15	0	− 0.3000				3
W	67.4545	+20	60.9255	+26	0	+ 0.8362				3—4
♃ a_w	56.4710	+ 9	71.9265	+12		−10.1558				
a_c	56.8885	+ 9	71.5165	+12		− 9.7421	− 9.7450	6 0 49		4—5
a_o	57.2890	+ 9	71.1070	+13		− 9.3372				
♃ b_w	56.4760	+ 9	71.9200	+12		−10.1501				
b_c	56.8700	+ 9	71.5320	+12		− 9.7591	− 9.7616	1 17		3—4
b_o	57.2530	+ 9	71.1480	+13		− 9.3756				
♃ c_w	56.4830	+ 9	71.9135	+12		−10.1434				
c_c	56.8710	+ 9	71.5320	+12		− 9.7586	− 9.7552	1 40	6^h 1^m 42^s	3—4
c_o	57.2625	+ 9	71.1335	+13		− 9.3636				
♃ d_w	56.4810	+10	71.9215	+13		−10.1484				
d_c	56.8865	+10	71.5120	+13		− 9.7408	− 9.7435	2 10		5
d_o	57.2850	+10	71.1115	+14		− 9.3414				
♃ e_w	56.4590	+10	71.9450	+14		−10.1712				
e_c	56.8520	+10	71.5525	+14		− 9.7784	− 9.7753	2 32		4
e_o	57.2460	+10	71.1420	+15		− 9.3762				

Starke Aureole um den Jupiter.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	55.1115	− 1	73.2645	+13		−11.5052	−1.7602						2—3
b	55.0945	− 1	73.2885	+14		−11.5257	−1.7641						2
c	55.1095	− 1	73.2755	+14		−11.5117	−1.7565	−1.7614	−1'.7586	−0'.0006	+0'.0025	−1'.7567	2—3
d	55.1085	0	73.2770	+14		−11.5129	−1.7694						3
e	55.0865	0	73.2930	+15		−11.5320	−1.7567						2—3
II a	59.4235	+10	68.9500	+14		− 7.1914	+2.5536						2
b	59.3990	+10	68.9755	+14		− 7.2164	+2.5452						1—2
c	59.4135	+11	68.9640	+15		− 7.2034	+2.5518	+2.5474	+2.5433	+0.0010	+0.0025	+2.5468	2—3
d	59.4120	+11	68.9630	+15		− 7.2036	+2.5399						3
e	59.3870	+12	68.9885	+16		− 7.2289	+2.5464						2—3
III a	60.7885	+10	67.5850	+19		− 5.8266	+3.9184						2—3
b	60.7610	+10	67.6130	+19		− 5.8544	+3.9072						2—3 Platte zer
c	60.7775	+11	67.6020	+20		− 5.8406	+3.9146	+3.9112	+3.9050	+0.0014	+0.0025	+3.9089	2—3
d	60.7780	+11	67.6000	+20		− 5.8394	+3.9041						3
e	60.7530	+13	67.6230	+21		− 5.8634	+3.9119						2
IV a	48.5500	+11	79.8300	+ 8	+ 2	−18.0674	−8.3224						3
b	48.5315	+13	79.8510	+ 8	+ 2	−18.0872	−8.3256						2—3
c	48.5415	+13	79.8405	+ 9	+ 2	−18.0770	−8.3218	−8.3246	−8.3113	−0.0029	+0.0025	−8.3117	2—3
d	48.5430	+13	79.8445	+ 9	+ 2	−18.0783	−8.3348						3—4
e	48.5255	+14	79.8575	+ 9	+ 2	−18.0935	−8.3182						2—3

Scheinbare Ædiff: M— Centrum = + 5'.2688
N— » = −41.4028
Q— » = +14.3257
R— » = −38.7017
V— » = − 0.3175
W— » = + 0.8843

$f^\circ_\alpha = 0.99838$ $-i^\circ_\alpha = -0.00015$
$f_\alpha = 0.99804$ $-i_\alpha = -0.00006$ $\measuredangle\, i_\alpha = +\, 0'.2$
Refr. = − 12
$Tx_♃$ = − 95
$f'_\alpha = 0.99840$ $J_\alpha = -0.00113$

$\alpha_♃ = 8^h\ 46^m.8$

1895. November 28.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.6466		**63.7437**							
64.6450	+16	63.7428	+ 9	0	0.0000		0.0000	0.0000	
67.6475	+20	68.7298	+13	0	+ 3.0078		− 0.0013	+ 3.0065	
68.1712	+33	60.2130	+30	− 2	+ 3.5276		− 0.0806	+ 3.4470	
40.1945	+31	88.1940	− 1	+ 5	−24.4491		− 0.0094	−24.4585	
40.1977	+38	88.1765	+10	+14	−24.4380		− 0.0690	−24.5070	
45.3530	+18	83.0232	+ 3	+ 2	−19.2856		0.0000	−19.2856	
95.4195	− 2	32.9695	+20	− 7	+30.7718		0.0000	+30.7718	
63.3950	+12	65.0200	+18		− 1.2642				
63.0270	+12	65.3830	+18		− 1.6298	− 1.6348			
62.6390	+12	65.7565	+18		− 2.0105				
61.8645	+12	66.5350	+10		− 2.7866				
61.5030	+12	66.9040	+10		− 3.1518	− 3.1498			
61.1390	+13	67.2485	+10		− 3.5110				
60.4220	+17	67.9845	+20		− 4.2328				
60.0600	+17	68.3495	+20		− 4.5964	− 4.5957			
59.6930	+17	68.7060	+15		− 4.9578				
58.9775	+13	69.4260	+18		− 5.6760				
58.6000	+13	69.8100	+18		− 6.0567	− 6.0580			
58.2080	+ 8	70.1860	+18		− 6.4414				
57.5060	+12	70.8940	+14		− 7.1456				
57.1520	+12	71.2590	+14		− 7.5050	− 7.5110			
56.7690	+12	71.6310	+13		− 7.8825				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
63.5650	+11	64.8210	+19		− 1.0798	+0.5550						
62.0540	+12	66.3340	+13		− 2.5915	+0.5583						
60.6050	+13	67.7815	+21		− 4.0401	+0.5556	+0.5544	+0′.5337	+0′.0004	−0′.0018	−0′.0002	**+0′.5521**
59.1360	+13	69.2510	+16		− 5.5091	+0.5489						
57.6880	+ 8	70.6985	+15		− 6.9570	+0.5540						
62.1620	+10	66.2140	+11		− 2.4775	−0.8427						
60.6540	+11	67.7310	+19		− 3.9904	−0.8406						
59.2035	+11	69.1850	+14		− 5.4424	−0.8467	−0.8438	−0.8427	−0.0006	+0.0021	−0.0002	**−0.8414**
57.7350	+ 6	70.6440	+13		− 6.9063	−0.8483						
56.2910	0	72.0900	+12		− 8.3516	−0.8406						
61.7370	+10	66.6400	+ 8		− 2.9028	−1.2680						
60.2290	+15	68.1460	+18		− 4.4101	−1.2603						
58.7760	+11	69.6020	+16		− 5.8647	−1.2690	−1.2653	−1.2637	−0.0008	+0.0029	−0.0002	**−1.2618**
57.3140	+10	71.0635	+12		− 7.3263	−1.2683						
55.8700	0	72.5095	+13		− 8.7718	−1.2608						
65.5880	+15	62.7955	+16	0	+ 0.9448	+2.5796						
64.0740	+13	64.3100	+15	0	− 0.5696	+2.5802						
62.6260	+14	65.7600	+17	0	− 2.0186	+2.5771	+2.5771	+2.5738	+0.0017	−0.0113	−0.0002	**+2.5640**
61.1595	+15	67.2320	+15	+ 1	− 3.4876	+2.5704						
59.7125	+19	68.6750	+20	+ 1	− 4.9327	+2.5783						

Scheinbare Decldiff:

M—Centrum $= +\ 3'.0030$ $\qquad f^\circ_\delta = 0.99865$ $\qquad i^\circ\delta = -0.00018$

N— » $= +\ 3.4488$

Q— » $= -24.4283$ $\qquad f_\delta = \mathbf{0.99807}$ $\qquad i_\delta = \mathbf{+0.00001}$ $\qquad \sphericalangle\ i_\delta = 0'.0$

R— » $= -24.4657$

V— » $= -19.2618$ $\qquad f'_\delta = \mathbf{0.99873}$ $\qquad J_\delta = \mathbf{-0.00020}$

W— » $= +30.7278$

$\delta_♃ = +18^\circ\ 28'.1$

1896. Januar 11.

ÆR

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**66.6078**		**61.7865**							
S	66.6070	+ 8	61.7855	+10	0	0.0000				3 unterexp.
M	71.5585	+11	56.8265	+ 9	0	+ 4.9554				2—3
N	27.6458	+22	100.7390	+ 3	+18	—38.9545				Schimmer
Q	80.1318	+21	48.2612	+30	— 3	+13.5259		$7^h\ 35^m\ 37^s$		Schwacher Schi…
R	30.0805	+31	98.3070	+11	+20	—36.5209				3—4
V	66.3128	+21	62.0775	+16	0	— 0.2928				2—3
W	Nicht si	chtb	ar.							
♃ a_w	75.4992	+ 7	52.9140	+ 7		+ 8.8820				
a_c	75.9160	+ 7	52.4740	+11		+ 9.3102	+ 9.3088	7 38 29		2—3
a_o	76.3445	+ 7	52.0545	+11		+ 9.7342				
♃ b_w	75.4755	+ 7	52.9320	+ 7		+ 8.8611				
b_c	75.9060	+ 7	52.4970	+11		+ 9.2936	+ 9.2942	39 37		2 vielleicht … verlängert in…
b_o	76.3400	+ 7	52.0625	+11		+ 9.7279				
♃ c_w	75.5000	+ 8	52.9155	+ 7		+ 8.8816				
c_c	75.9180	+ 8	52.4755	+11		+ 9.3104	+ 9.3115	40 24	$7^h\ 40^m\ 22^s$	2
c_o	76.3550	+ 8	52.0485	+11		+ 9.7424				
♃ d_w	75.4600	+ 8	52.9470	+ 7		+ 8.8459				
d_c	75.8754	+ 8	52.5125	+ 7		+ 9.2708	+ 9.2696	41 11		2
d_o	76.3045	+ 8	52.0985	+11		+ 9.6922				
♃ e_w	75.4770	+ 9	52.9335	+ 8		+ 8.8612				
e_c	75.8910	+ 9	52.5030	+ 8		+ 9.2834	+ 9.2864	42 7		2
e_o	76.3235	+ 9	52.0725	+12		+ 9.7147				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	74.0065	+12	54.3790	+ 3		+ 7.4036	—1.9052						3
b	73.9885	+13	54.4010	+ 3		+ 7.3836	—1.9106						2—3
c	74.0050	+13	54.3785	+ 3		+ 7.4031	—1.9084	—1.9109	—1.′9074	+0.′0005	+0.′0002	—1.′9067	2—3
d	73.9570	+13	54.4285	+ 3		+ 7.3541	—1.9155						2—3
e	73.9750	+14	54.4110	+ 4		+ 7.3718	—1.9146						2—3
II a	72.4800	+11	55.9105	— 1		+ 5.8747	—3.4341						3
b	72.4685	+12	55.9210	— 1		+ 5.8636	—3.4306						2—3
c	72.4800	+12	55.9065	— 1		+ 5.8768	—3.4347	—3.4338	—3.4275	+0.0009	+0.0002	—3.4264	3
d	72.4385	+12	55.9510	0		+ 5.8337	—3.4359						2—3
e	72.4575	+13	55.9320	0		+ 5.8528	—3.4336						3
III	Geht du	rch	die Jupiters	sche	ibe.								
IV a	79.2455	+ 6	49.1445	+14		+12.6394	+3.3306						3
b	79.2280	+ 6	49.1625	+13		+12.6218	+3.3276						3—4
c	79.2450	+ 7	49.1410	+13		+12.6410	+3.3295	+3.3275	+3.3214	—0.0009	+0.0002	+3.3207	2—3
d	79.2030	+ 7	49.1895	+13		+12.5958	+3.3262						3
e	79.2160	+ 7	49.1740	+14		+12.6100	+3.3236						2—3

Scheinbare ÆRdiff: M—Centrum $= +\ 5.'2695$ $f^\circ_\alpha = 0.99816$ $-i^\circ_\alpha = +0.00001$

N— » $= -41.4055$

Q— » $= +14.3257$ $f_\alpha = \mathbf{0.99787}$ $-i_\alpha = \mathbf{+0.00003}$ $\measuredangle\ i_\alpha = -0.'1$

R— » $= -38.7047$ $Refr. = -\ 2$

V— » $= -\ 0.3185$ $Tx_♃ = +\ 90$

W— » $= +\ 0.8857$ $f'_\alpha = \mathbf{0.99816}$ $J_\alpha = \mathbf{+0.00091}$

$\alpha_♃ = 8^h\ 33.^m3$

1896. Januar 11.

eihe.

Decl.

P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
64.6466		**63.7437**							
61.7293	+ 9	66.6677	+ 9	0	− 2.9206		0.0000	− 2.9206	
64.9363	+18	63.6555	+11	0	+ 0.0893		− 0.0013	+ 0.0880	
65.2502	+31	63.1382	+25	− 2	+ 0.5996		− 0.0806	+ 0.5190	
37.2820	+29	91.1147	− 2	+ 5	−27.3658		− 0.0094	−27.3752	
37.2740	+35	91.1160	+ 9	+14	−27.3698		− 0.0690	−27.4388	
42.4355	+22	85.9585	− 2	+ 2	−22.2116		0.0000	−22.2116	
Nicht sichtbar.									
63.2440	+14	65.1595	+20		− 1.4095				
63.6430	+13	64.7535	+20		− 1.0070	− 1.0076			
64.0520	+13	64.3620	+12		− 0.6004				
64.6960	+21	63.7110	+12		+ 0.0415				
65.0930	+21	63.2980	+13		+ 0.4464	+ 0.4448			
65.4985	+21	62.9030	+13		+ 0.8466				
66.1770	+15	62.2330	+13		+ 1.5206				
66.5745	+13	61.8205	+13		+ 1.9256	+ 1.9245			
66.9840	+13	61.4265	+13		+ 2.3273				
67.6300	+23	60.7690	+14		+ 2.9795				
68.0300	+23	60.3650	+18		+ 3.3813	+ 3.3793			
68.4320	+21	59.9750	+18		+ 3.7772				
69.0740	+18	59.3280	+14		+ 4.4218				
69.4760	+18	58.9260	+14		+ 4.8238	+ 4.8220			
69.8770	+21	58.5340	+14		+ 5.2204				

Trabant — Jupiterscentrum.

P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.1755	+11	64.2130	+11		− 0.4702	+0.5374						
65.6335	+13	62.7555	+12		+ 0.9876	+0.5428						
67.1135	+11	61.2765	+13		+ 2.4670	+0.5425	+0.5420	+0.5412	+0.0009	+0.0016	0.0000	**+0.5437**
68.5645	+16	59.8250	+17		+ 3.9182	+0.5389						
70.0160	+19	58.3730	+ 8		+ 5.3706	+0.5486						
64.6445	+19	63.7455	+11		− 0.0016	+1.0060						
66.0980	+13	62.2915	+12		+ 1.4518	+1.0070						
67.5810	+21	60.8100	+13		+ 2.9344	+1.0099	+1.0087	+1.0072	+0.0016	+0.0026	0.0000	**+1.0114**
69.0320	+16	59.3550	+13		+ 4.3872	+1.0079						
70.4820	+15	57.9100	+ 8		+ 5.8349	+1.0129						
Geht durch die Jupiterscheibe.												
62.5905	+15	65.7980	+15		− 2.0552	−1.0476						
64.0480	+14	64.3455	+13		− 0.6002	−1.0450						
65.5245	+16	62.8660	+14		+ 0.8779	−1.0466	−1.0452	−1.0436	−0.0015	−0.0038	0.0000	**−1.0489**
66.9780	+14	61.4110	+15		+ 2.3320	−1.0473						
68.4300	+24	59.9625	+19		+ 3.7826	−1.0394						

Scheinbare Decldiff: *M*—Centrum = + 3.0030
N— » = + 3.4500
Q— » = −24.4302
R— » = −24.4660
V— » = −19.2632
W— » = +30.7293

$\delta_♃ = +19°27'.5$

$f^0_\delta = 0.99847$ $i^0_\delta = -0.00046$

f_δ = **0.99797** i_δ = **−0.00040** $\measuredangle\, i_\delta = -1'.4$

f'_δ = **0.99847** J_δ = **−0.00046**

29 A. **1896. Januar 15.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+2\,c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		10000		10000	10000					
	mm	mm	mm	mm	mm	mm	mm			
Ctr.	64.7456		63.6395							
S	66.2942	+11	62.0895	+9	0	+1.5494				2—3
M	71.2385	+13	57.1382	+10	0	+6.4972				2—3
N	27.3407	+24	101.0385	+4	+16	−37.3994				3 ellipt.
Q	79.8150	+19	48.5705	+21	−2	+15.0689		$7^h\ 48^m\ 7^s$		3
R	29.7770	+29	98.5983	+9	+17	−34.9610				2
V	65.9925	+18	62.3827	+15	0	+1.2520				3
W	67.1195	+20	61.2420	+26	0	+2.3754				
♃ a_w	56.1080	+2	72.2820	+13		−8.6406				
a_c	56.5920	+12	71.8160	+13		−8.1656	−8.1622	7 50 45		
a_o	57.0805	+12	71.3350	+14		−7.6804				
♃ b_w	56.1420	+1	72.2690	+12		−8.6171				
b_c	56.6190	+11	71.7780	+12		−8.1326	−8.1324	51 22		4—5
b_o	57.1105	+11	71.2990	+13		−7.6474				
♃ c_w	56.1080	+1	72.2980	+12		−8.6486				
c_c	56.5830	+11	71.8150	+12		−8.1691	−8.1674	51 59	$7^h\ 51^m\ 59^s$	4—5
c_o	57.0720	+11	71.3350	+13		−7.6846				
♃ d_w	56.1540	0	72.2495	+11		−8.6014				
d_c	56.6410	+10	71.7715	+11		−8.1184	−8.1212	52 36		4—5
d_o	57.1135	+10	71.2950	+12		−7.6439				
♃ e_w	56.1050	0	72.2920	+11		−8.6471				
e_c	56.6010	+10	71.8030	+11		−8.1541	−8.1558	53 12		4—5
e_o	57.0860	+10	71.3120	+12		−7.6662				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	55.7365	+2	72.6395	+16		−9.0052	−0.8430						2
b	55.7675	+1	72.6100	+15		−8.9750	−0.8426						2
c	55.7355	+1	72.6425	+14		−9.0072	−0.8398	−0.8375	−0.′8362	−0.′0002	+0.′0001	**−0.′8363**	2
d	55.7875	0	72.5890	+14		−8.9545	−0.8333						2
e	55.7585	0	72.6200	+13		−8.9844	−0.8286						2
II a	53.8485	+6	74.5265	+13		−10.8924	−2.7302						2
b	53.8755	+6	74.5010	+12		−10.8661	−2.7337						2
c	53.8460	+5	74.5300	+11		−10.8954	−2.7280	−2.7282	−2.7239	−0.0007	+0.0001	**−2.7245**	1—2
d	53.8970	+4	74.4805	+11		−10.8452	−2.7240						2
e	53.8040	+4	74.5190	+10		−10.8808	−2.7250						2
III a	58.8490	+13	69.5280	+18		−5.8928	+2.2694						1—2
b	58.8815	+12	69.4985	+17		−5.8618	+2.2706						2
c	58.8455	+12	69.5290	+17		−5.8950	+2.2724	+2.2731	+2.2696	+0.0005	+0.0001	**+2.2702**	2
d	58.8950	+11	69.4820	+16		−5.8468	+2.2744						1—2
e	58.8625	+11	69.5105	+16		−5.8773	+2.2785						1—2
IV a	47.6440	+23	80.7295	+18	+2	−17.0954	−8.9332						2
b	47.6705	+22	80.7005	+17	+2	−17.0676	−8.9352						1—2
c	47.6360	+22	80.7370	+16	+2	−17.1030	−8.9356	−8.9342	−8.9205	−0.0022	+0.0001	**−8.9226**	1—2
d	47.6865	+21	80.6890	+15	+2	−17.0538	−8.9326						1—2
e	47.6485	+21	80.7235	+15	+2	−17.0901	−8.9343						2

Scheinbare Ædiff: M—Centrum = + 5.′2697 $f^\circ_\alpha = 0.99846$ $-i^\circ_\alpha = 0.00000$
N— » = −41.4058
Q— » = +14.3260 f_α = **0.99817** $-i_\alpha$ = **+0.00002** ∢ $i_\alpha = -0.′1$
R— » = −38.7051 *Refr.* = − 2
V— » = − 0.3183 $Tx_♃$ = − 86
W— » = + 0.8858 f'_α = **0.99846** $J\alpha$ = **−0.00086**

$\alpha_♃ = 8^h\ 31.^m2$

1896. Januar 15.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.9190		**65.4657**							
65.8348	+10	62.5515	+10	0	+ 2.9150		— 0.0001	+ 2.9149	
68.8395	+14	59.5435	+17	0	+ 5.9212		— 0.0022	+ 5.9190	Luft 1.
69.3602	+29	59.0250	+26	— 3	+ 6.4408		— 0.0742	+ 6.3666	
41.3830	+31	87.0030	+ 1	+ 4	—21.5348		— 0.0117	—21.5465	
41.3785	+37	86.9938	+12	+10	—21.5320		— 0.0632	—21.5952	
46.5423	+ 8	81.8360	+ 2	+ 2	—16.3730		0.0000	—16.3730	
96.6170	0	31.7713	+20	—10	+33.6942		0.0000	+33.6942	
72.7335	+16	55.6580	+ 1		+ 9.8118				
72.3120	+14	56.1125	+ 1		+ 9.3738	+ 9.3694			
71.8460	+14	56.5490	+ 1		+ 8.9225				
71.2080	+15	57.1955	+11		+ 8.2798				
70.7720	+15	57.6490	+ 7		+ 7.8352	+ 7.8343			
70.3130	+19	58.0850	+ 7		+ 7.3880				
69.7740	+19	58.6400	+12		+ 6.8407				
69.3440	+16	59.0760	+12		+ 6.4076	+ 6.4014			
68.8830	+16	59.5180	+12		+ 5.9560				
68.1180	+21	60.2755	+16		+ 5.1948				
67.6950	+21	60.7150	+12		+ 4.7638	+ 4.7590			
67.2440	+11	61.1540	+12		+ 4.3183				
66.8285	+11	61.5590	+11		+ 3.9081				
66.4010	+13	62.0080	+11		+ 3.4700	+ 3.4657			
65.9460	+13	62.4550	+11		+ 3.0190				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
72.5400	+16	55.8430	+ 2		+ 9.6226	+0.2532						
71.0095	+15	57.3735	+12		+ 8.0915	+0.2572						
69.5730	+19	58.8080	+13		+ 6.6562	+0.2548	+0.2546	+0'.2542	+0'.0001	—0'.0008	0'.0000	**+0'.2535**
67.9250	+21	60.4505	+17		+ 5.0108	+0.2518						
66.6375	+11	61.7410	+12		+ 3.7216	+0.2559						
73.1150	+17	55.2650	+ 3		+10.1990	+0.8296						
71.5830	+15	56.7970	+13		+ 8.6666	+0.8323						
70.1460	+20	58.2320	+ 9		+ 7.2309	+0.8295	+0.8308	+0.8296	+0.0004	—0.0027	0.0000	**+0.8273**
68.5035	+17	59.8735	+18		+ 5.5883	+0.8293						
67.2140	+12	61.1620	+14		+ 4.2992	+0.8335						
71.6770	+13	56.7020	+10		+ 8.7610	—0.6084						
70.1455	+18	58.2340	+ 6		+ 7.2297	—0.6046						
68.7075	+15	59.6705	+15		+ 5.7918	—0.6096	—0.6078	—0.6069	—0.0004	+0.0016	0.0000	**—0.6057**
67.0640	+10	61.3130	+11		+ 4.1488	—0.6102						
65.7760	+12	62.6040	+10		+ 2.8594	—0.6063						
74.7415	+16	53.6355	+10		+11.8266	+2.4572						
73.2120	+19	55.1670	+ 6		+10.2964	+2.4621						
71.7780	+17	56.6030	+16		+ 8.8608	+2.4594	+2.4602	+2.4565	+0.0012	—0.0117	0.0000	**+2.4460**
70.1330	+22	58.2440	+12		+ 7.2182	+2.4592						
68.8430	+19	59.5320	+21		+ 5.9286	+2.4629						

Scheinbare Decldiff: *M*—Centrum = + 3'.0030
N— » = + 3.4500
Q— » = —24.4302
R— » = —24.4660
V— » = —19.2632
W— » = +30.7293

$\delta_♃ = +19°35'.7$

$f^0_\delta = 0.99851$ $i^0_\delta = -0.00014$

$f_\delta = 0.99801$ $i_\delta = -0.00010$ $\angle\, i_\delta = -0'.3$

$f'_\delta = 0.99850$ $J_\delta = -0.00014$

29 B. **1896. Januar 17.**

Æ **86.**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**64.7456**		**63.6403**							
S	64.7440	+16	63.6395	+ 8	0	0.0000				2
M	Durch e	in J	upitersbild	verd	eckt.					
N	25.7943	+25	102.5963	+ 5	+18	—38.9508				3
Q	78.2580	+20	50.1285	+14	— 3	+13.5121		**6^h 34^m 34^s**		2—3
R	28.2192	+33	100.1677	+11	+18	—36.5240				2—3
V	64.4411	+17	63.9405	+14	0	— 0.3022				2
W	65.5852	+22	62.8018	+24	0	+ 0.8390				3
♃ a_w	53.7880	+ 3	74.6090	+10		—10.9635				
a_c	54.2430	+ 3	74.1595	+12		—10.5114	—10.5100	6 36 12		4—5*)
a_o	54.7010	— 1	73.7045	+12		—10.0550				
♃ b_w	53.8015	+ 3	74.5970	+11		—10.9508				
b_c	54.2660	+ 3	74.1400	+13		—10.4902	—10.4948	36 50		4
b_o	54.7170	— 1	73.6970	+13		—10.0434				
♃ c_w	53.7745	+ 3	74.6130	+11		—10.9723				
c_c	54.2515	+ 3	74.1565	+13		—10.5056	—10.5108	37 36	**6^h 37^m 34^s**	4
c_o	54.6965	— 1	73.6990	+13		—10.0546				
♃ d_w	53.8090	+ 4	74.5905	+11		—10.9438				
d_c	54.2700	+ 4	74.1420	+13		—10.4891	—10.4874	38 16		3—4
d_o	54.7230	0	73.6750	+13		—10.0293				
♃ e_w	53.7940	+ 4	74.6030	+12		—10.9576				
e_c	54.2560	+ 4	74.1530	+14		—10.5016	—10.4994	38 56		4
e_o	54.7195	0	73.6910	+14		—10.0391				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	54.7250	— 1	73.6630	+12		—10.0223	+0.4877						2—3 **)
b	54.7350	— 1	73.6500	+13		—10.0108	+0.4840						2
c	54.7340	— 1	73.6520	+13		—10.0124	+0.4984	+0.4913	+0'.4905	+0'.0002	0'.0000	**+0'.4907**	3
d	54.7470	0	73.6400	+13		— 9.9998	+0.4876						2—3
e	54.7490	0	73.6430	+14		—10.0004	+0.4990						2—3
II a	56.1355	— 1	72.2480	+11		— 8.6095	+1.9005						1—2
b	56.1425	— 1	72.2380	+12		— 8.6010	+1.8938						1—2
c	56.1310	— 1	72.2510	+12		— 8.6133	+1.8975	+1.8930	+1.8897	+0.0008	0.0000	**+1.8905**	2
d	56.1400	0	72.2420	+12		— 8.6042	+1.8832						1—2
e	56.1350	0	72.2470	+13		— 8.6093	+1.8901						1—2
III a	58.8950	+10	69.4855	+14		— 5.8481	+4.6619						1—2
b	58.9010	+10	69.4780	+14		— 5.8414	+4.6534						1—2
c	58.8960	+10	69.4810	+15		— 5.8454	+4.6654	+4.6566	+4.6486	+0.0018	0.0000	**+4.6504**	1—2
d	58.9000	+11	69.4785	+15		— 5.8421	+4.6453						1—2
e	58.8995	+11	69.4785	+16		— 5.8424	+4.6570						1—2
IV a	45.0460	+19	83.3415	+ 2		—19.6994	—9.1894						2
b	45.0570	+19	83.3290	+ 2		—19.6876	—9.1928						1
c	45.0520	+18	83.3335	+ 2		—19.6924	—9.1816	—9.1894	—9.1736	—0.0034	0.0000	**—9.1770**	1—2
d	45.0620	+18	83.3255	+ 3		—19.6834	—9.1960						1—2
e	45.0565	+18	83.3265	+ 3		—19.6867	—9.1873						1—2

Scheinbare Ædiff.: M— Centrum = + 5'.2697 $f^o_\alpha = 0.99828$ $-i^o_\alpha = -0.00020$
N— » = —41.4058
Q— » = +14.3260 f_α = **0.99796** $-i_\alpha$ = **—0.00014** ♃ $i_\alpha = +$ 0'.5
R— » = —38.7052 *Refr.* = — 6
V— » = — 0.3183 $Tx_♃$ = — 110
W— » = + 0.8858 f'_α = **0.99828** J_α = **—0.00130**

$\alpha_♃ = 8^h\ 30^m.2$

*) Trabant I stört bei der Einstellung **auf** den Ostrand.
**) ♃ stört.

1896. Januar 17.

Reihe.

Decl.

ct.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
.	**62.9190**		**65.4657**							
	64.3595	+ 8	64.0257	+ 8	0	+ 1.4402		0.0000	+ 1.4402	
	Durch e	in J	upitersbild	verd	eckt.					
	67.8958	+35	60.4918	+26	− 3	+ 4.9755		− 0.0806	+ 4.8949	
	39.9070	+31	88.4825	− 1	+ 4	−23.0124		− 0.0094	−23.0218	
	39.9175	+40	88.4667	+10	+11	−22.9986		− 0.0690	−23.0676	
	45.0720	+18	83.3152	− 5	+ 2	−17.8469		0.0000	−17.8469	
	95.1465	− 2	33.2485	+20	− 8	+32.2204		0.0000	+32.2204	
	64.7460	+20	63.6510	+11		+ 1.8213				
	64.3215	+12	64.0880	+11		+ 1.3902	+ 1.3890			
	63.8870	+12	64.5225	+11		+ 0.9556				
	63.1910	+13	65.2070	+19		+ 0.2650				
	62.7740	+13	65.6410	+13		− 0.1602	− 0.1607			
	62.3400	+13	66.0605	+13		− 0.5869				
	61.7525	+13	66.6520	+11		− 1.1763				
	61.3400	+14	67.0800	+11		− 1.5965	− 1.5976			
	60.9060	+14	67.4930	+11		− 2.0200				
	60.2930	+18	68.1560	+16		− 2.6330				
	59.8750	+18	68.5410	+16		− 3.0596	− 3.0582			
	59.4440	+18	68.9550	+16		− 3.4820				
	58.7545	+14	69.6470	+19		− 4.1732				
	58.3495	+ 9	70.0600	+19		− 4.5824	− 4.5902			
	57.9105	+ 9	70.4860	+19		− 5.0149				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.1840	+11	64.2060	+11		+ 1.2624	−0.1266						
62.6440	+12	65.7490	+13		− 0.2792	−0.1185						
61.2010	+13	67.1890	+11		− 1.7206	−0.1230	−0.1218	−0'.1216	0'.0000	+0'.0005	0'.0000	**−0'.1211**
59.7430	+17	68.6460	+16		− 3.1781	−0.1199						
58.2095	+ 8	70.1770	+19		− 4.7110	−0.1208						
63.7045	+11	64.6790	+18		+ 0.7858	−0.6032						
62.1585	+12	66.2220	+12		− 0.7584	−0.5977						
60.7220	+13	67.6590*	+20		− 2.1955	−0.5979	−0.5973	−0.5964	−0.0002	+0.0019	0.0000	**−0.5947**
59.2655	+13	69.1145	+15		− 3.6512	−0.5930						
57.7325	+ 8	70.6480	+14		− 5.1847	−0.5945						
62.9290	+11	65.4475	+17		+ 0.0138	−1.3752						
61.3830	+12	66.9940	+ 9		− 1.5320	−1.3713						
59.9450	+16	68.4310	+19		− 2.9698	−1.3722	−1.3722	−1.3702	−0.0005	+0.0039	0.0000	**−1.3668**
58.4870	+ 7	69.8915	+17		− 4.4294	−1.3712						
56.9540	+11	71.4235	+13		− 5.9615	−1.3713						
66.9060	+14	61.4820	+19		+ 3.9850	+2.5960						
65.3595	+22	63.0245	+18		+ 2.4410	+2.6017						
63.9255	+14	64.4630	+17		+ 1.0044	+2.6020	+2.6011	+2.5973	+0.0009	−0.0144	0.0000	**+2.5838**
62.4655	+15	65.9210	+19		− 0.4546	+2.6036						
60.9315	+16	67.4545	+17		− 1.9882	+2.6020						

Scheinbare Decldiff: M— Centrum $= + 3'.0032$ $\quad f^\circ_\delta = 0.99852 \quad i^\circ_\delta = -0.00011$

N— » $= + 3.4502$

Q— » $= -24.4305$ $\quad f_\delta = \mathbf{0.99798} \quad i_\delta = \mathbf{+0.00002} \quad ♃\ i_\delta = + 0'.1$

R— » $= -24.4663$

V— » $= -19.2635$ $\quad f'_\delta = \mathbf{0.99852} \quad J_\delta = \mathbf{-0.00010}$

W— » $= +30.7298$

$\delta_{♃} = + 19° \ 39'.8$

29 C. **1896. Januar 20.**

Æ **87.**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		10000		10000	10000					
	mm	mm	mm	mm	mm	mm	mm			
Ctr.	64.7726		63.6132							
S	64.7710	+16	63.6123	+ 9	0	0.0000				2
M	Durch e	in J	upitersbild	verd	eckt.					
N	25.8193	+25	102.5698	+ 5	+18	−38.9522				2—3
Q	78.2935	+21	50.0892	+15	− 5	+13.5222		8^h 43^m 16^s		3
R	28.2487	+34	100.1297	+12	+26	−36.5165				2
V	64.4740	+18	63.9095	+15	0	− 0.2973				1—2
W	65.6050	+22	62.7785	+24	0	+ 0.8334				2—3
♃ a_w	75.6065	+10	52.7885	+10		+10.8293				
a_c	76.0810	+10	52.3210	+14		+11.3001	+11.3040	8 45 37		4—5
a_o	76.5595	+10	51.8345	+14		+11.7826				
♃ b_w	75.6280	+ 8	52.7555	+ 9		+10.8565				
b_c	76.1120	+ 8	52.2930	+13		+11.3296	+11.3274	46 25		4—5
b_o	76.5730	+ 8	51.8210	+13		+11.7960				
♃ c_w	75.5920	+ 8	52.7970	+ 9		+10.8178				
c_c	76.0680	+ 8	52.3210	+13		+11.2886	+11.2943	47 6	8^h 47^m 4^s	4—5
c_o	76.5550	+ 8	51.8420	+13		+11.7766				
♃ d_w	75.6075	+ 7	52.7845	+ 8		+10.8318				
d_c	76.0865	+ 7	52.3060	+12		+11.3103	+11.3084	47 47		4
d_o	76.5600	+ 7	51.8340	+12		+11.7830				
♃ e_w	75.5960	+ 7	52.8035	+ 8		+10.8165				
e_c	76.0575	+ 7	52.3270	+12		+11.2853	+11.2906	48 25		4—5
e_o	76.5560	+ 7	51.8560	+12		+11.7700				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	73.9410	+14	54.4340	+ 6		+ 9.1742	−2.1298						2
b	73.9580	+13	54.4180	+ 5		+ 9.1907	−2.1367						2
c	73.9350	+13	54.4415	+ 5		+ 9.1674	−2.1269	−2.1308	−2′.1270	+0′.0007	0′.0000	−2′.1263	1—2
d	73.9430	+12	54.4310	+ 4		+ 9.1767	−2.1317						2—3
e	73.9300	+12	54.4480	+ 4		+ 9.1617	−2.1289						2
II a	79.4550	+ 9	48.9180	+16		+14.6884	+3.3844						1—2
b	79.4720	+ 8	48.9020	+16		+14.7048	+3.3774						2
c	79.4460	+ 7	48.9270	+15		+14.6793	+3.3850	+3.3806	+3.3747	−0.0012	0.0000	+3.3735	1—2
d	79.4545	+ 7	48.9215	+15		+14.6863	+3.3779						1—2
e	79.4355	+ 6	48.9370	+14		+14.6690	+3.3784						1
III a	70.6200	+13	57.7580	+ 8		+ 5.8516	−5.4524						1
b	70.6380	+13	57.7370	+ 7		+ 5.8711	−5.4563						1
c	70.6130	+12	57.7615	+ 7		+ 5.8463	−5.4480	−5.4531	−5.4435	+0.0019	0.0000	−5.4416	1—2
d	70.6205	+12	57.7525	+ 6		+ 5.8546	−5.4538						1
e	70.6030	+12	57.7730	+ 6		+ 5.8356	−5.4550						1—2
IV a	75.2455	+13	53.1345	+10		+10.4760	−0.8280						2
b	75.2645	+11	53.1170	+ 9		+10.4942	−0.8332						2
c	75.2420	+11	53.1370	+ 9		+10.4729	−0.8214	−0.8271	−0.8257	+0.0004	0.0000	−0.8253	2—3
d	75.2485	+10	53.1290	+ 8		+10.4802	−0.8282						2
e	75.2350	+10	53.1440	+ 8		+10.4659	−0.8247						2

Scheinbare Ædiff: N— Centrum $= -41.4060$ $f^\circ_\alpha = 0.99824$ $+i^\circ_\alpha = +0.00001$

Q— » $= +14.3261$

R— » $= -38.7054$ $f_\alpha = 0.99796$ $-i_\alpha = +0.00001$ $\measuredangle\, i_\alpha =$ 0′.0

V— » $= -\ 0.3183$ $Refr. = +\ 1$

W— » $= +\ 0.8859$ $Tx_♃ = +\ 118$

$f'_\alpha = 0.99824$ $J_\alpha = +0.00120$

$\alpha_♃ = 8^h\ 28^m.5$

1896. Januar 20.

Reihe. Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{n+c+s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.9199		**65.4673**							
62.9190	+ 9	65.4657	+16	0	0.0000		0.0000	0.0000	
Durch e	in J	upitersbild	verd	eckt.					Luft 1.
66.4515	+27	61.9305	+25	— 2	+ 3.5341		— 0.0806	+ 3.4535	
38.4620	+29	89.9275	— 3	+13	—24.4562		— 0.0094	—24.4656	
38.4695	+38	89.9050	+ 8	+24	—24.4402		— 0.0693	—24.5095	
43.6243	+26	84.7550	— 2	+ 2	—19.2900		0.0000	—19.2900	
93.7003	— 3	34.6868	+21	— 8	+30.7784		0.0000	+30.7784	
55.1140	+ 4	73.2900	+18		— 7.8150				
55.5545	+ 4	72.8505	+18		— 7.3750	— 7.3769			
55.9830	+ 4	72.4105	+18		— 6.9408				
56.5600	+14	71.8490	+16		— 6.3709				
57.0050	+14	71.4090	+17		— 5.9284	— 5.9319			
57.4250	+14	70.9650	+17		— 5.4964				
58.0325	+10	70.3630	+21		— 4.8921				
58.4865	+10	69.9170	+21		— 4.4421	— 4.4454			
58.9080	+15	69.4590	+21		— 4.0021				
59.5050	+19	68.8925	+18		— 3.4200				
59.9550	+19	68.4505	+23		— 2.9742	— 2.9747			
60.3880	+19	67.9950	+23		— 2.5300				
60.9310	+15	67.4675	+13		— 1.9944				
61.3785	+15	67.0240	+13		— 1.5490	— 1.5512			
61.8140	+14	66.5820	+13		— 1.1102				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
56.1410	+ 2	72.2395	+14		— 6.7762	+0.6007						
57.5820	+ 8	70.7990	+15		— 5.3352	+0.5967						
59.0695	+13	69.3050	+16		— 3.8442	+0.6012	+0.5968	+0.'5959	+0.'0002	+0.'0023	0.'0000	**+0.'5984**
60.5270	+13	67.8470	+21		— 2.3867	+0.5880						
61.9595	+12	66.4140	+13		— 0.9536	+0.5976						
54.5565	+ 5	73.8195	+17		— 8.3584	—0.9815						
55.9960	+ 5	72.3810	+16		— 6.9194	—0.9875						
57.4870	+15	70.8900	+17		— 5.4279	—0.9825	—0.9865	—0.9850	—0.0003	—0.0046	0.0000	**—0.9899**
58.9440	+16	69.4300	+18		— 3.9694	—0.9947						
60.3760	+20	67.9985	+23		— 2.5377	—0.9865						
57.0860	+10	71.2900	+14		— 5.8285	+1.5484						
58.5230	+11	69.8510	+18		— 3.3906	+1.5413						
60.0140	+15	68.3580	+20		— 2.8986	+1.5468	+1.5433	+1.5410	+0.0005	+0.0049	0.0000	**+1.5464**
61.4735	+11	66.9010	+10		— 1.4400	+1.5347						
62.9070	+10	65.4650	+18		— 0.0059	+1.5453						
55.8830	+ 3	72.4960	+17		— 7.0335	+0.3434						
57.3220	+13	71.0550	+16		— 5.5930	+0.3389						
58.8075	+14	69.5680	+20		— 4.1068	+0.3386	+0.3371	+0.3366	+0.0001	+0.0010	0.0000	**+0.3377**
60.2680	+18	68.1100	+22		— 2.6475	+0.3272						
61.7010	+13	66.6760	+12		— 1.2138	+0.3374						

Scheinbare Decldiff: N—Centrum $= +\ 3.4503$ $\qquad f^\circ_\delta = 0.99850$ $\qquad i^\circ_\delta = -0.00010$

Q— » $= -24.4307$

R— » $= -24.4663$ $\qquad f_\delta = \mathbf{0.99801}$ $\qquad i_\delta = \mathbf{-0.00011}$ $\qquad \measuredangle\, i_\delta = -0.'4$

V— » $= -19.2635$

W— » $= +30.7300$ $\qquad f'_\delta = \mathbf{0.99850}$ $\qquad J_\delta = \mathbf{-0.00009}$

$\delta_♃ = +19°\ 46.'1$

29 D. **1896. Januar 23.**

Æ

88.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	mm **64.7571**		mm **63.6282**							
S	64.7555	+16	63.6273	+ 9	0	0.0000				2
M	69.7055	+16	58.6730	+10	0	+ 4.9521				2
N	25.8045	+25	102.5840	+ 5	+17	−38.9515				3
Q	78.2722	+21	50.1130	+16	− 4	+13.5150		6^h 37^m 24^s		3
R	28.2280	+34	100.1517	+13	+21	−36.5232				2—3 etwas ellipt.
V	64.4505	+19	63.9298	+17	0	− 0.3040				1—2
W	65.6000	+22	62.7858	+23	0	+ 0.8426				2—3
♃ a_w	69.0220	+14	59.3720	+10		+ 4.2608				
a_c	69.4920	+14	58.8990	+10		+ 4.7322	+ 4.7379	6 39 10		4
a_o	69.9835	+17	58.4140	+10		+ 5.2206				
♃ b_w	69.0335	+14	59.3670	+10		+ 4.2690				
b_c	69.5120	+17	58.8820	+10		+ 4.7509	+ 4.7475	39 54		4
b_o	69.9870	+17	58.4135	+10		+ 5.2226				
♃ c_w	69.0620	+15	59.3320	+11		+ 4.3008				
c_c	69.5200	+18	58.8750	+11		+ 4.7584	+ 4.7648	40 35	6^h 40^m 33^s	4
c_o	69.9940	+18	58.3955	+11		+ 5.2352				
♃ d_w	69.0330	+15	59.3710	+11		+ 4.2668				
d_c	69.5090	+18	58.9020	+11		+ 4.7394	+ 4.7380	41 12		4—5
d_o	69.9700	+18	58.4260	+11		+ 5.2079				
♃ e_w	69.0435	+16	59.3480	+12		+ 4.2835				
e_c	69.5175	+19	58.8850	+12		+ 4.7522	+ 4.7550	41 55		4
e_o	69.9890	+19	58.4025	+12		+ 5.2292				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	70.5585	+13	57.8190	+ 5		+ 5.8057	+1.0678						2
b	70.5630	+13	57.8130	+ 5		+ 5.8110	+1.0635						1—2
c	70.5820	+13	57.7950	+ 6		+ 5.8294	+1.0646	+1.0627	+1.′0609	−0.′0001	0.′0000	**+1.′0608**	1—2
d	70.5450	+14	57.8295	+ 6		+ 5.7937	+1.0557						1
e	70.5690	+15	57.8075	+ 7		+ 5.8167	+1.0617						1—2
II a	71.3250	+13	57.0535	+ 9		+ 6.5715	+1.8336						2
b	71.3350	+13	57.0430	+ 9		+ 6.5818	+1.8343						1—2
c	71.3600	+13	57.0195	+10		+ 6.6060	+1.8412	+1.8389	+1.8358	−0.0001	0.0000	**+1.8357**	1—2
d	71.3270	+14	57.0490	+10		+ 6.5748	+1.8368						1
e	71.3560	+15	57.0200	+11		+ 6.6038	+1.8488						1—2
III a	74.4620	+12	53.9170	+ 3		+ 9.7085	+4.9706						2
b	74.4700	+13	53.9090	+ 3		+ 9.7166	+4.9691						2
c	74.4930	+13	53.8855	+ 3		+ 9.7398	+4.9750	+4.9735	+4.9651	−0.0003	0.0000	**+4.9648**	1—2
d	74.4640	+13	53.9145	+ 4		+ 9.7108	+4.9728						2
e	74.4865	+14	53.8890	+ 4		+ 9.7348	+4.9798						2
IV a	77.6950	+ 8	50.6810	+10		+12.9424	+8.2045						2
b	77.7070	+ 8	50.6730	+10		+12.9524	+8.2049						1—2
c	77.7240	+ 9	50.6525	+10		+12.9712	+8.2064	+8.2069	+8.1930	−0.0005	0.0000	**+8.1925**	1—2
d	77.6990	+ 9	50.6800	+10		+12.9449	+8.2069						1—2
e	77.7175	+10	50.6550	+11		+12.9667	+8.2117						1—2

Scheinbare Ædiff: M—Centrum = + 5.′2697 $f^\circ_\alpha = 0.99832$ $-i^\circ_\alpha = -0.00031$

N— » = −41.4062

Q— » = +14.3261 f_α = **0.99800** $-i_\alpha$ = **−0.00025** $\measuredangle\ i_\alpha = +0.'8$

R— » = −38.7056 *Refr.* = − 5

V— » = − 0.3184 $Tx_♃$ = + 50

W— » = + 0.8860 f'_α = **0.99831** $J\alpha$ = **+0.00020**

$\alpha_♃ = 8^h\,26.^m9$

1896. Januar 23.

eihe.

Decl.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	(♃n + ♃c + ♃s)/3	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.9190		**65.4657**							
61.4295	+10	66.9568	+ 8	0	0.4902		0.0000	— 0.4902	
64.4375	+ 9	63.9465	+10	0	+ 1.5188		— 0.0013	+ 1.5175	
64.9630	+33	63.4180	+25	— 1	+ 2.0462		— 0.0806	+ 1.9656	Luft 1.
36.9740	+28	91.4138	— 2	+ 6	—25.9444		— 0.0094	—25.9538	
36.9800	+37	91.3945	+ 9	+16	—25.9309		— 0.0690	—25.9999	
42.1327	+22	86.2457	— 3	+ 2	—20.7817		0.0000	—20.7817	
92.2100	— 6	36.1755	+22	— 7	+29.2885		0.0000	+29.2885	
65.6935	+11	62.8065	+11		+ 2.7668				
66.1460	+11	62.2510	+11		+ 3.2208	+ 3.2178			
66.5995	+11	61.8145	+11		+ 3.6658				
67.1550	+ 9	61.2300	+12		+ 4.2357				
67.6100	+19	60.7960	+12		+ 4.6807	+ 4.6757			
68.0400	+19	60.3660	+12		+ 5.1107				
68.5955	+14	59.7920	+16		+ 5.6750				
69.0480	+14	59.3610	+12		+ 6.1174	+ 6.1128			
69.4760	+14	58.9310	+12		+ 6.5460				
70.1150	+17	58.2780	+ 7		+ 7.1928				
70.5695	+13	57.8410	+ 7		+ 7.6379	+ 7.6318			
70.9900	+13	57.4080	+ 7		+ 8.0646				
71.5800	+12	56.8030	+11		+ 8.6619				
72.0320	+12	56.3800	+ 1		+ 9.0999	+ 9.0996			
72.4710	+12	55.9450	+ 1		+ 9.5369				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
65.8180	+11	62.5605	+11		+ 2.9021	—0.3157						
67.2680	+ 9	61.1100	+12		+ 4.3522	—0.3235						
68.7075	+14	59.6700	+16		+ 5.7920	—0.3208	—0.3194	—0'.3189	—0'.0001	—0'.0006	0'.0000	**—0'.3196**
70.2245	+17	58.1520	+ 7		+ 7.3101	—0.3217						
71.7000	+12	56.6785	+11		+ 8.7842	—0.3154						
65.6510	+11	62.7210	+12		+ 2.7383	—0.4795						
67.1005	+ 9	61.2790	+13		+ 4.1839	—0.4918						
68.5425	+14	59.8350	+17		+ 5.6270	—0.4858	—0.4879	—0.4871	—0.0001	—0.0011	0.0000	**—0.4883**
70.0530	+17	58.3215	+ 8		+ 7.1396	—0.4922						
71.5230	+12	56.8505	+12		+ 8.6096	—0.4900						
64.7660	+24	63.6120	+12		+ 1.8508	—1.3670						
66.2150	+14	62.1610	+13		+ 3.3004	—1.3753						
67.6550	+22	60.7160	+14		+ 4.7432	—1.3696	—1.3720	—1.3699	—0.0004	—0.0038	0.0000	**—1.3741**
69.1710	+17	59.2045	+14		+ 6.2568	—1.3750						
70.6400	+16	57.7340	+ 9		+ 7.7267	—1.3729						
63.9620	+14	64.4200	+13		+ 1.0444	—2.1734						
65.4080	+22	62.9695	+14		+ 2.4930	—2.1827						
66.8555	+14	61.5220	+14		+ 3.9401	—2.1727	—2.1781	—2.1748	—0.0007	—0.0076	0.0000	**—2.1831**
68.3630	+24	60.0150	+19		+ 5.4476	—2.1842						
69.8370	+22	58.5400	+15		+ 6.9222	—2.1774						

Scheinbare Decldiff: *M*—Centrum = + 3'.0022 $f^\circ_\delta = 0.99847$ $i^\circ_\delta = -0.00010$

N— » = + 3.4503

Q— » = —24.4307 $f\delta = \mathbf{0.99793}$ $i_\delta = \mathbf{+0.00003}$ $\measuredangle\ i_\delta = +0'.1$

R— » = —24.4663

V— » = —19.2635 $f'_\delta = \mathbf{0.99846}$ $J_\delta = \mathbf{-0.00008}$

W— » = +30.7300

$\delta_♃ = +19°52'.0$

30 A. **1896. Januar 26.**

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	66.8163		61.5757							
S	66.8155	+8	61.5748	+9	0	0.0000				4
M	71.7643	+12	56.6160	+10	0	+4.9540				4
N	27.8610	+23	100.5285	+4	+17	−38.9514				4—5
Q	80.3362	+19	48.0522	+27	−2	+13.5211		$6^h\ 50^m\ 44^s$		4—5
R	30.2825	+29	98.0920	+8	+18	−36.5222				4
V	66.5095	+16	61.8645	+15	0	−0.2978				4
W	67.6490	+30	60.7370	+26	0	+0.8359				4 unterexp.
♃ a_w	52.3020	+10	76.0885	+10	+1	−14.5134				
a_c	52.8675	+10	75.5315	+10	+1	−13.9522	−13.9472	6 53 19		4
a_o	53.4410	+10	74.9525	+13	+1	−13.3761				
♃ b_w	52.3530	+10	76.0375	+9	+1	−14.4624				
b_c	52.8910	+10	75.5145	+9	+1	−13.9319	−13.9281	54 6		4—5
b_o	53.4270	+10	74.9665	+12	+1	−13.3900				
♃ c_w	52.3730	+10	76.0080	+8	+1	−14.4376				
c_c	52.9185	+10	75.4990	+11	+1	−13.9105	−13.9075	54 53	$6^h\ 54^m\ 52^s$	4
c_o	53.4465	+10	74.9550	+11	+1	−13.3745				
♃ d_w	52.3410	+9	76.0530	+8	+1	−14.4762				
d_c	52.8865	+9	75.5255	+8	+1	−13.9396	−13.9439	55 39		4
d_o	53.4065	+9	74.9980	+11	+1	−13.4160				
♃ e_w	52.3535	+8	76.0470	+7	+1	−14.4667				
e_c	52.8865	+8	75.5190	+7	+1	−13.9364	−13.9278	56 25		4—5
e_o	53.4395	+8	74.9590	+18	+1	−13.3804				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	54.3515	+6	74.0300	+15	+1	−12.4599	+1.4873						3—4
b	54.3595	+6	74.0190	+14	+1	−12.4504	+1.4777						4
c	54.3860	+5	73.9945	+13	+1	−12.4248	+1.4827	+1.4864	+1'.4838	+0'.0006	0'.0000	**+1'.4844**	3—4
d	54.3570	+5	74.0210	+13	+1	−12.4526	+1.4913						3—4
e	54.3755	+4	74.0040	+12	+1	−12.4348	+1.4930						3—4
II a	51.5195	+15	76.8590	+12	+1	−15.2898	−1.3426						4
b	51.5295	+14	76.8460	+11	+1	−15.2783	−1.3502						3—4
c	51.5615	+14	76.8170	+10	+1	−15.2478	−1.3403	−1.3409	−1.3386	−0.0006	0.0000	**−1.3392**	3
d	51.5285	+13	76.8485	+10	+1	−15.2800	−1.3361						3—4
e	51.5470	+12	76.8330	+9	+1	−15.2630	−1.3352						4
III a	49.6435	+9	78.7370	+10	+2	−17.1669	−3.2197						3
b	49.6500	+8	78.7280	+9	+2	−17.1592	−3.2311						3—4
c	49.6765	+8	78.7005	+8	+2	−17.1321	−3.2246	−3.2266	−3.2209	−0.0013	0.0000	**−3.2222**	3
d	49.6385	+7	78.7400	+7	+2	−17.1708	−3.2269						3
e	49.6510	+6	78.7280	+7	+2	−17.1586	−3.2308						3—4
IV a	60.9785	+13	67.3975	+10	0	−5.8296	+8.1176						4
b	60.9865	+12	67.3890	+9	0	−5.8214	+8.1067						3—4
c	61.0125	+12	67.3645	+9	0	−5.7962	+8.1113	+8.1109	+8.0967	+0.0032	0.0000	**+8.0999**	3—4
d	60.9735	+11	67.4040	+8	0	−5.8354	+8.1085						3
e	60.9920	+11	67.3870	+8	0	−5.8176	+8.1102						3—4

Scheinbare Ædiff.: M—Centrum $= +\ 5'.2697$ $\quad f^\circ_\alpha = 0.99826 \quad -i^\circ_\alpha = -0.00004$

N— » $= -41.4063$

Q— » $= +14.3261$ $\quad f_\alpha = \mathbf{0.99795} \quad -i_\alpha = \mathbf{+0.00001} \quad ⊀\ i_\alpha = 0'.0$

R— » $= -38.7058$ $\quad$ *Refr.* $= -\ 4$

V— » $= -\ 0.3184$ $\quad Tx_♃ = -\ 146$

W— » $= +\ 0.8861$ $\quad f'_\alpha = \mathbf{0.99825} \quad J_\alpha = \mathbf{-0.00149}$

$\alpha_♃ = 8^h\ 25^m.2$

1896. Januar 26.

eihe. Decl.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{y_n+y_c+y_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.7700		**65.6200**							
65.6728	+10	62.7218	+10	0	+ 2.9005		0.0000	+ 2.9005	
68.6745	+15	59.7085	+17	0	+ 5.9079		− 0.0013	+ 5.9066	Luft 3.
69.2080	+28	59.1865	+26	− 3	+ 6.4356		− 0.0806	+ 6.3560	
41.2102	+31	87.1770	+ 2	+ 4	−21.5566		− 0.0094	−21.5660	
41.2190	+37	87.1582	+12	+11	−21.5422		− 0.0690	−21.6112	
46.3755	+14	82.0060	+ 2	+ 1	−16.3896		0.0000	−16.3896	
96.4467	+ 1	31.9448	+20	−10	+33.6739		0.0000	+33.6739	
74.3640	+16	54.0350	+ 7	− 1	+11.5898				
73.8480	+16	54.5715	+ 3	− 1	+11.0638	+11.0558			
73.3050	+17	55.1285	+ 3	− 1	+10.5138				
72.7955	+17	55.5900	+ 3	− 1	+10.0284				
72.2915	+15	56.1295	+ 3	− 1	+ 9.5065	+ 9.5153			
71.7880	+15	56.6170	+ 3	− 1	+ 9.0110				
71.3120	+16	57.0905	+13	− 1	+ 8.5358				
70.8275	+16	57.5860	+ 9	− 1	+ 8.0460	+ 8.0456			
70.3305	+16	58.0710	+ 9	− 1	+ 7.5550				
69.8525	+20	58.5440	+14	− 1	+ 7.0794				
69.3505	+17	59.0760	+14	− 1	+ 6.5623	+ 6.5688			
68.8410	+17	59.5620	+14	− 1	+ 6.0646				
68.4105	+22	59.9860	+18	0	+ 5.6374				
67.9050	+22	60.5080	+14	0	+ 5.1239	+ 5.1198			
67.3725	+22	61.0270	+14	0	+ 4.5982				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
73.4125	+17	54.9720	+ 2	− 1	+10.6459	−0.4099						
71.8635	+15	56.5155	+12	− 1	+ 9.0990	−0.4163						
70.3985	+20	57.9800	+ 8	− 1	+ 7.6348	−0.4108	−0.4144	−0′.4138	−0′.0001	+0′.0021	0′.0000	**−0′.4118**
68.9200	+17	59.4620	+13	0	+ 6.1542	−0.4146						
67.4630	+12	60.9140	+13	0	+ 4.6994	−0.4204						
74.2470	+17	54.1400	+ 8	− 1	+11.4788	+0.4230						
72.6975	+18	55.6865	+ 4	− 1	+ 9.9311	+0.4158						
71.2315	+17	57.1475	+14	− 1	+ 8.4670	+0.4214	+0.4166	+0.4160	+0.0001	−0.0020	0.0000	**+0.4141**
69.7500	+21	58.6300	+15	− 1	+ 6.9850	+0.4164						
68.2915	+23	60.0890	+19	− 1	+ 5.5264	+0.4066						
74.6690	+15	53.7195	+ 9	− 2	+11.8998	+0.8440						
73.1230	+18	55.2635	+ 5	− 1	+10.3553	+0.8400						
71.6540	+16	56.7300	+15	− 1	+ 8.8970	+0.8514	+0.8428	+0.8416	+0.0002	−0.0053	0.0000	**+0.8365**
70.1715	+21	58.2070	+11	− 1	+ 7.4076	+0.8388						
68.7240	+18	59.6540	+20	− 1	+ 5.9598	+0.8400						
71.5500	+12	56.8330	+ 9	0	+ 8.7836	−2.2722						
69.9980	+17	58.3800	+ 5	0	+ 7.2346	−2.2807						
68.5315	+14	59.8450	+14	0	+ 5.7682	−2.2774	−2.2797	−2.2765	−0.0005	+0.0085	0.0000	**−2.2685**
67.0540	+ 9	61.3270	+10	0	+ 4.2884	−2.2804						
65.5990	+11	62.7850	+ 9	0	+ 2.8321	−2.2877						

Scheinbare Decldiff: *M*—Centrum = + 3′.0033 $\quad f^{0}_{\delta} = 0.99862 \quad i^{0}_{\delta} = -0.00008$

N— » = + 3.4504

Q— » = −24.4310 $\quad f_{\delta} = \mathbf{0.99810} \quad i_{\delta} = \mathbf{+0.00003} \quad \sphericalangle\, i_{\delta} = +0'.1$

R— » = −24.4666

V— » = −19.2637 $\quad f'_{\delta} = \mathbf{0.99861} \quad J_{\delta} = \mathbf{-0.00006}$

W— » = +30.7305

$\delta_{♃} = +19° \; 58'.1$

30 B. **1896. Januar 30.**

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	66.8628		61.5274							
S	66.8620	+ 8	61.5265	+ 9	0	0.0000				2—3
M	71.8175	+12	56.5730	+ 9	0	+ 4.9547				3
N	27.9035	+22	100.4905	+ 2	+17	—38.9585				3
Q	80.3845	+20	48.0025	+28	— 3	+13.5226		$9^h\ 19^m\ 0^s$		3
R	30.3332	+30	98.0447	+ 9	+19	—36.5205				3
V	66.5623	+17	61.8203	+15	0	— 0.2966				2—3
W	67.6920	+30	60.6925	+25	0	+ 0.8323				3 unterexp.
♃ a_w	55.6530	— 1	72.7350	+13		—11.2094				
a_c	56.1520	— 1	72.2480	+11		—10.7163	—10.7142	$9^h\ 14^m\ 43^s$		3—4
a_o	56.6495	— 1	71.7470	+11		—10.2170				
♃ b_w	55.6630	— 1	72.7340	+14		—11.2040				
b_c	56.1780	— 1	72.2240	+12		—10.6914	—10.6954	15 21		4
b_o	56.6760	— 1	71.7210	+12		—10.1908				
♃ c_w	55.6520	— 1	72.7365	+14		—11.2107				
c_c	56.1620	— 1	72.2435	+12		—10.7091	—10.7090	15 58	$9^h\ 16^m\ 0^s$	3—4
c_o	56.6630	— 1	71.7405	+12		—10.2071				
♃ d_w	55.6570	— 1	72.7435	+14		—11.2117				
d_c	56.1690	— 1	72.2300	+12		—10.6988	—10.7049	16 40		3—4
d_o	56.6655	— 1	71.7370	+12		—10.2041				
♃ e_w	55.6315	0	72.7545	+15		—11.2300				
e_c	56.1465	0	72.2510	+13		—10.7206	—10.7212	17 16		4
e_o	56.6590	0	71.7485	+13		—10.2131				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	57.0955	+ 9	71.2795	+12		— 9.7598	+0.9544						2
b	57.1110	+ 9	71.2640	+12		— 9.7444	+0.9510						2—3
c	57.0975	+ 9	71.2770	+12		— 9.7576	+0.9514	+0.9523	+0.′9506	+0.′0003	0.′0000	**+0.′9509**	2
d	57.0990	+10	71.2755	+12		— 9.7560	+0.9489						2
e	57.0900	+10	71.2855	+12		— 9.7656	+0.9556						2
II a	57.9520	+ 5	70.4225	+16		— 8.9035	+1.8107						2
b	57.9700	+ 5	70.4060	+17		— 8.8863	+1.8091						2—3
c	57.9625	+ 5	70.4110	+17		— 8.8926	+1.8164	+1.8173	+1.8140	+0.0005	0.0000	**+1.8145**	2—3
d	57.9705	+ 6	70.4045	+17		— 8.8852	+1.8197						2—3
e	57.9620	+ 6	70.4070	+18		— 8.8908	+1.8304						2—3
III a	61.0075	+10	67.3665	+ 9		— 5.8472	+4.8670						2
b	61.0315	+10	67.3460	+ 9		— 5.8249	+4.8705						2
c	61.0175	+11	67.3560	+10		— 5.8369	+4.8721	+4.8729	+4.8640	+0.0014	0.0000	**+4.8654**	2
d	61.0220	+11	67.3525	+10		— 5.8329	+4.8720						2
e	61.0180	+12	67.3590	+11		— 5.8382	+4.8830						2
IV a	50.8605	+11	77.5205	+ 8	+ 1	—15.9974	—5.2832						3
b	50.8765	+10	77.5030	+ 8	+ 1	—15.9808	—5.2854						3
c	50.8665	+10	77.5130	+ 9	+ 1	—15.9908	—5.2818	—5.2821	—5.2725	—0.0014	0.0000	**—5.2739**	2—3
d	50.8655	+10	77.5105	+ 9	+ 1	—15.9900	—5.2851						2—3
e	50.8625	+11	77.5195	+ 9	+ 1	—15.9960	—5.2748						3

Scheinbare Æ diff: M—Centrum $= +\ 5.'2697$
N— » $= -41.4066$
Q— » $= +14.3262$
R— » $= -38.7061$
V— » $= -\ 0.3185$
W— » $= +\ 0.8863$

$f^\circ_\alpha = 0.99818$ $\quad -i^\circ_\alpha = +0.00006$

$f_\alpha = \mathbf{0.99789}$ $\quad -i_\alpha = \mathbf{+0.00004}$ $\quad \measuredangle\, i_\alpha = -0.'1$

Refr. $= +\ 2$

$Tx_♃ = -\ 114$

$f'_\alpha = \mathbf{0.99818}$ $\quad J_\alpha = \mathbf{-0.00108}$

$\alpha_♃ = 8^h\ 23.^m0$

1896. Januar 30.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃n+♃c+♃s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.7700		**65.6200**							
64.2277	+ 8	64.1607	+ 9	0	+ 1.4584		0.0000	+ 1.4584	
67.2335	+10	61.1542	+12	0	+ 2.4646		− 0.0013	+ 2.4633	Luft 1—2 (durchsichtig, aber etwas unruhig).
67.7588	+33	60.6255	+25	− 2	+ 4.9918		− 0.0806	+ 4.9112	
39.7650	+32	88.6200	− 1	+12	−22.9996		− 0.0094	−23.0090	
39.7750	+38	88.6055	+ 9	+ 5	−22.9883		− 0.0690	−23.0573	
44.9318	+18	83.4537	− 3	+ 2	−17.8347		0.0000	−17.8347	
95.0140	− 2	33.3835	+20	−10	+32.2382		0.0000	+32.2382	
64.5410	+11	63.8590	+10		+ 1.7660				
64.0870	+11	64.3240	+10		+ 1.3066	+ 1.3004			
63.6005	+11	64.7925	+18		+ 0.8286				
63.0180	+12	65.3790	+12		+ 0.2445				
62.5560	+12	65.8690	+12		− 0.2315	− 0.2280			
62.0730	+12	66.3170	+12		− 0.6970				
61.6085	+13	66.7880	+10		− 1.1646				
61.1535	+13	67.2680	+10		− 1.6321	− 1.6394			
60.6440	+13	67.7365	+20		− 2.1216				
60.1660	+17	68.2260	+20		− 2.6052				
59.6990	+17	68.7120	+15		− 3.0814	− 3.0795			
59.2225	+13	69.1760	+15		− 3.5518				
58.6625	+ 8	69.7300	+18		− 4.1092				
58.1990	+ 8	70.2170	+18		− 4.5845	− 4.5882			
57.7030	+ 8	70.6940	+14		− 5.0708				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
63.7790	+11	64.6000	+17		+ 1.0142	−0.2862						
62.2490	+12	66.1300	+11		− 0.5154	−0.2874						
60.8455	+13	67.5330	+20		− 1.9191	−0.2797	−0.2829	−0.′2825	−0.′0001	+0.′0010	0.′0000	**−0.′2816**
59.4070	+13	68.9720	+14		− 3.3576	−0.2781						
57.8940	+ 8	70.4860	+13		− 4.8712	−0.2830						
63.5935	+10	64.7870	+17		+ 0.8279	−0.4725						
62.0680	+11	66.3120	+11		− 0.6970	−0.4690						
60.6600	+12	67.7195	+19		− 2.1051	−0.4657	−0.4707	−0.4700	−0.0002	+0.0019	0.0000	**−0.4683**
59.2140	+12	69.1630	+14		− 3.5496	−0.4701						
57.7000	+ 7	70.6780	+13		− 5.0643	−0.4761						
62.7490	+10	65.6310	+10		− 0.0160	−1.3164						
61.2200	+11	67.1605	+ 8		− 1.5451	−1.3171						
59.8120	+15	68.5660	+13		− 2.9519	−1.3125	−1.3166	−1.3145	−0.0006	+0.0043	0.0000	**−1.3108**
58.3740	+ 6	70.0065	+16		− 4.3918	−1.3123						
56.8570	+10	71.5330	+11		− 5.9130	−1.3248						
65.3755	+21	63.0080	+14		+ 2.6091	+1.3087						
63.8445	+13	64.5360	+21		+ 1.0788	+1.3068						
62.4415	+14	65.9365	+15		− 0.3226	+1.3168	+1.3108	+1.3087	+0.0006	−0.0075	0.0000	**+1.3018**
61.0000	+15	67.3790	+13		− 1.7644	+1.3151						
59.4875	+15	68.9000	+18		− 3.2814	+1.3068						

Scheinbare Decldiff: M—Centrum $= +\ 3'0033$ $f^0_\delta = 0.99844$ $i^0_\delta = -0.00013$

N— » $= +\ 3.4505$

Q— » $= -24.4312$ $f_\delta =$ **0.99795** $i_\delta =$ **−0.00017** $\measuredangle\ i_\delta = -0'6$

R— » $= -24.4667$

V— » $= -19.2638$ $f'_\delta =$ **0.99844** $J_\delta =$ **−0.00012**

W— » $= +30.7308$

$\delta_♃ = +20^\circ\ 6'2$

30 C. 1896. Februar 1.

Æ 9

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**66.8731**		**61.5160**							
S	66.8723	+ 8	61.5150	+10	0	0.0000				2—3
M	71.8243	+12	56.5588	+ 9	0	+ 4.9544				2
N	27.9163	+22	100.4735	+ 2	—18	+38.9544				3
Q	80.3940	+21	47.9913	+29	+ 3	+13.5221		8^h 59^m 20^s		3
R	30.3435	+31	98.0300	+10	—21	—36.5186				2—3
V	66.5725	+18	61.8078	+16	0	— 0.2961				2—3
W	67.7090	+30	60.6800	+25	0	+ 0.8362				3 unterexp.
♃ a_w	81.6630	+ 4	46.7335	+12	+ 2	+14.7856				
a_c	82.1580	+ 4	46.2375	+18	+ 2	+15.2808	+15.2802	9^h 1^m 17^s		3
a_o	82.6530	+ 5	45.7455	+18	+ 2	+15.7744				
♃ b_w	81.6615	+ 3	46.7385	+11	+ 2	+14.7824				
b_c	82.1545	+ 3	46.2375	+17	+ 2	+15.2790	+15.2791	1 56		3
b_o	82.6540	+ 4	45.7435	+17	+ 2	+15.7758				
♃ c_w	81.6635	+ 2	46.7355	+11	+ 1	+14.7849				
c_c	82.1580	+ 2	46.2500	+17	+ 1	+15.2746	+15.2790	2 34	9^h 2^m 34^s	3—4
c_o	82.6500	+ 3	45.7365	+17	+ 1	+15.7774				
♃ d_w	81.6450	+ 2	46.7435	+10	+ 1	+14.7717				
d_c	82.1615	+ 2	46.2420	+16	+ 1	+15.2804	+15.2734	3 12		3
d_o	82.6430	+ 3	45.7485	+16	+ 1	+15.7680				
♃ e_w	81.6510	+ 1	46.7420	+ 9	+ 1	+14.7754				
e_c	82.1500	+ 1	46.2515	+15	+ 1	+15.2699	+15.2687	3 49		2—3
e_o	82.6380	+ 2	45.7580	+15	+ 1	+15.7607				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$(J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	81.4760	+17	46.8990	+11	+ 2	+14.6100	—0.6702						3
b	81.4640	+16	46.9100	+11	+ 2	+14.5985	—0.6806						2—3
c	81.4660	+15	46.9120	+10	+ 1	+14.5986	—0.6804	—0.6783	—0'6771	+0'0003	—0'0001	**—0'6769**	3
d	81.4595	+15	46.9160	+10	+ 1	+14.5934	—0.6800						3—4
e	81.4555	+14	46.9215	+ 9	+ 1	+14.5886	—0.6801						3
II a	79.3090	+ 8	49.0680	+16	+ 1	+12.4414	—2.8388						2—3
b	79.2935	+ 7	49.0820	+16	+ 1	+12.4266	—2.8525						2—3
c	79.2985	+ 7	49.0790	+15	+ 1	+12.4307	—2.8483	—2.8472	—2.8422	+0.0012	—0.0001	**—2.8411**	2—3
d	79.2915	+ 6	49.0860	+15	+ 1	+12.4236	—2.8498						3
e	79.2900	+ 6	49.0880	+14	+ 1	+12.4220	—2.8467						2—3
III a	83.8515	— 3	44.5240	+22	+ 2	+16.9838	+1.7036						2
b	83.8475	— 4	44.5330	+21	+ 2	+16.9772	+1.6981						2—3
c	83.8460	— 5	44.5295	+21	+ 2	+16.9782	+1.6992	+1.7007	+1.6977	—0.0009	—0.0001	**+1.6967**	2
d	83.8440	— 6	44.5360	+20	+ 2	+16.9740	+1.7006						2—3
e	83.8395	— 6	44.5380	+19	+ 1	+16.9708	+1.7021						2
IV a	72.6945	+15	55.6870	+ 2	0	+ 5.8258	—9.4544						2—3
b	72.6895	+14	55.6920	+ 1	0	+ 5.8208	—9.4583						3
c	72.6925	+14	55.6860	+ 1	0	+ 5.8254	—9.4536	—9.4544	—9.4380	+0.0040	—0.0001	**—9.4341**	3
d	72.6820	+13	55.6950	0	0	+ 5.8156	—9.4578						2—3
e	72.6870	+13	55.6900	0	0	+ 5.8206	—9.4481						2—3

Scheinbare ÆDiff: M—Centrum = + 5'2697 $\quad f^\circ_\alpha = 0.99825 \quad -i^\circ_\alpha = -0.00001$

N— » = —41.4067

Q— » = +14.3262 $\quad f_\alpha = \mathbf{0.99797} \quad -i_\alpha = \mathbf{0.00000} \quad \measuredangle\, i_\alpha = 0'0$

R— » = —38.7062 $\quad$ *Refr.* = + 2

V— » = — 0.3185 $\quad Tx_♃$ = + 163

W— » = + 0.8863 $\quad f'_\alpha = \mathbf{0.99826} \quad J_\alpha = \mathbf{+0.00165}$

$\alpha_♃ = 8^h\ 21^m.9$

1896. Februar 1.

Reihe. Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	(♃n + ♃c + ♃s)/3	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.7700		**65.6196**							
62.7690	+ 9	65.6185	+11	0	0.0000		0.0000	0.0000	
65.7818	+11	62.6063	+12	0	+ 3.0125		− 0.0013	+ 3.0112	Luft 1.
66.3062	+25	62.0832	+25	− 1	+ 3.5362		− 0.0806	+ 3.4556	
38.3102	+30	90.0750	− 2	+ 5	−24.4555		− 0.0094	−24.4649	
38.3252	+36	90.0570	+ 8	+16	−24.4381		− 0.0690	−24.5071	
43.4772	+21	84.9080	− 1	+ 2	−19.2893		0.0000	−19.2893	
93.5528	− 3	34.8378	+21	− 7	+30.7804		0.0000	+30.7804	
53.9970	+11	74.3930	+18	+ 1	− 8.7734				
54.4650	+11	73.9365	+18	+ 1	− 8.3112	− 8.3073			
54.9375	+ 7	73.4610	+18	+ 1	− 7.8374				
55.4795	+ 7	72.9080	+19	+ 1	− 7.2900				
55.9680	+ 7	72.4540	+17	+ 1	− 6.8186	− 6.8227			
56.4160	+ 7	71.9840	+17	+ 1	− 6.3596				
56.9195	+17	71.4815	+18	+ 1	− 5.8562				
57.3920	+17	71.0195	+18	+ 1	− 5.3889	− 5.3900			
57.8515	+17	70.5510	+18	+ 1	− 4.9249				
58.3945	+18	69.9895	+22	+ 1	− 4.3728				
58.8700	+18	69.5335	+22	+ 1	− 3.9070	− 3.9079			
59.3355	+18	69.0730	+19	+ 1	− 3.4439				
59.8490	+22	68.5300	+24	0	− 2.9158				
60.3380	+22	68.0840	+24	0	− 2.4483	− 2.4473			
60.7975	+18	67.6020	+24	0	− 1.9778				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
54.6170	+ 7	73.7620	+18	+ 1	− 8.1482	+0.1591						
56.0980	+ 7	72.2770	+17	+ 1	− 6.6651	+0.1571						
57.5335	+13	70.8445	+18	+ 1	− 5.2308	+0.1592	+0.1605	+0'.1603	+0'.0001	+0'.0011	0'.0000	**+0'.1615**
59.0180	+18	69.3610	+19	0	− 3.7468	+0.1611						
60.4830	+22	67.8960	+24	0	− 2.2818	+0.1655						
55.2115	+ 5	73.1670	+18	0	− 7.5536	+0.7537						
56.6955	+15	71.6845	+16	0	− 6.0698	+0.7529						
58.1250	+11	70.2535	+21	0	− 4.6400	+0.7500	+0.7548	+0.7536	+0.0003	+0.0042	0.0000	**+0.7581**
59.6150	+20	68.7645	+18	0	− 3.1498	+0.7581						
61.0785	+16	67.3045	+13	0	− 1.6880	+0.7593						
53.9300	+12	74.4450	+18	+ 1	− 8.8334	−0.5261						
55.4170	+ 8	72.9630	+19	+ 1	− 7.3486	−0.5259						
56.8480	+18	71.5305	+17	+ 1	− 5.9163	−0.5263	−0.5240	−0.5232	−0.0002	−0.0029	0.0000	**−0.5263**
58.3345	+14	70.0430	+22	+ 1	− 4.4298	−0.5219						
59.7945	+23	68.5790	+19	+ 1	− 2.9672	−0.5199						
56.9090	+12	71.4720	+15		− 5.8568	+2.4505						
58.3930	+ 8	69.9990	+19		− 4.3788	+2.4439						
59.8290	+17	68.5570	+16		− 2.9392	+2.4508	+2.4514	+2.4477	+0.0009	+0.0107	0.0000	**+2.4593**
61.3155	+13	67.0710	+11		− 1.4528	+2.4551						
62.7770	+12	65.6080	+13		+ 0.0092	+2.4565						

Scheinbare Decldiff: M—Centrum = + 3'.0033
N— » = + 3.4505
Q— » = −24.4312
R— » = −24.4667
V— » = −19.2638
W— » = +30.7308

$\delta_♃ = +20° 10'.0$

$f^\circ_\delta = 0.99850$ $i^\circ_\delta = -0.00010$

$f_\delta = \mathbf{0.99801}$ $i_\delta = \mathbf{-0.00013}$ $\measuredangle\, i_\delta = -0'.4$

$f'_\delta = \mathbf{0.99849}$ $J_\delta = \mathbf{-0.00009}$

30 D. **1896. Februar 10.**

Æ

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
		mm/10000		mm/10000	mm/10000	mm	mm			
Ctr.	mm 66.8363		mm 61.5463							
S	66.8355	+ 8	61.5453	+10	0	0.0000				2—3
M	71.7815	+11	56.5960	+ 9	0	+ 4.9478				2
N	27.8820	+21	100.5073	+ 3	+ 7	—38.9560				2—3
Q	80.3505	+22	48.0330	+30	— 4	+13.5130		$8^h\ 32^m\ 59^s$		3
R	30.2940	+32	98.0822	+11	+19	—36.5362				2—3
V	66.5295	+19	61.8535	+17	0	— 0.3069				2
W	67.6825	+30	60.7020	+24	0	+ 0.8456				3
♃ a_w	77.4390	+ 8	50.9450	+10		+10.6019				
a_c	77.9340	+ 8	50.4710	+ 5		+11.0866	+11.0865	8 35 2		3—4
a_o	78.4235	+ 8	49.9920	+ 5		+11.5709				
♃ b_w	77.4245	+ 9	50.9620	+10		+10.5862				
b_c	77.9400	+ 9	50.4625	+ 5		+11.0940	+11.0885	35 44		3—4
b_o	78.4275	+ 9	49.9675	+ 5		+11.5852				
♃ c_w	77.4570	+ 9	50.9385	+10		+10.6142				
c_c	77.9360	+ 9	50.4690	+ 5		+11.0887	+11.0930	36 22	$8^h\ 36^m\ 21^s$	2—3
c_o	78.4175	+ 9	49.9760	+ 5		+11.5760				
♃ d_w	77.4485	+ 9	50.9600	+10		+10.5992				
d_c	77.9445	+ 9	50.4680	+ 5		+11.0934	+11.0919	36 59		2—3
d_o	78.4215	+ 9	49.9655	+ 5		+11.5832				
♃ e_w	77.4295	+10	50.9655	+11		+10.5870				
e_c	77.9375	+10	50.4795	+ 6		+11.0840	+11.0841	37 27		3
e_o	78.4285	+10	49.9770	+ 6		+11.5810				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	76.4825	+ 7	51.8955	+11		+ 9.6483	—1.4382						1—2
b	76.4790	+ 8	51.8955	+11		+ 9.6466	—1.4419						1—2
c	76.4815	+ 8	51.8960	+11		+ 9.6476	—1.4454	—1.4453	—1'.4428	+0'.0003	—0'.0003	**—1'.4428**	2—3
d	76.4730	+ 8	51.9050	+12		+ 9.6388	—1.4531						1—2
e	76.4700	+ 9	51.9070	+12		+ 9.6364	—1.4479						1—2
II a	80.9505	+14	47.4250	+ 9	— 1	+14.1179	+3.0314						1—2
b	80.9540	+14	47.4210	+ 8	— 1	+14.1217	+3.0332						1—2
c	80.9570	+15	47.4185	+ 8	— 1	+14.1245	+3.0315	+3.0321	+3.0268	—0.0006	—0.0003	**+3.0259**	2—3
d	80.9530	+15	47.4205	+ 8	— 1	+14.1215	+3.0296						2
e	80.9520	+16	47.4250	+ 9	— 1	+14.1188	+3.0347						2
III a	72.6620	+14	55.7130	— 1		+ 5.8302	—5.2563						1—2
b	72.6635	+14	55.7135	— 1		+ 5.8308	—5.2577						1—2
c	72.6660	+15	55.7085	— 1		+ 5.8346	—5.2584	—5.2589	—5.2497	+0.0011	—0.0003	**—5.2489**	1—2
d	72.6600	+15	55.7150	0		+ 5.8282	—5.2637						1—2
e	72.6570	+16	55.7170	0		+ 5.8258	—5.2583						1—2
IV a	87.5500	— 6	40.8315	+25	— 2	+20.7125	+9.6260						1—2
b	87.5510	— 6	40.8260	+24	— 2	+20.7158	+9.6273						2
c	87.5530	— 6	40.8290	+24	— 2	+20.7153	+9.6223	+9.6242	+9.6073	—0.0019	—0.0003	**+9.6051**	2
d	87.5510	— 5	40.8355	+24	— 2	+20.7111	+9.6192						2
e	87.5480	— 5	40.8345	+24	— 2	+20.7101	+9.6260						2

Scheinbare Ædiff: M— Centrum = + 5'.2699 $f^\circ_\alpha = 0.99824$ $-i^\circ_\alpha = -0.00041$

N— » = —41.4074

Q— » = +14.3264 f_α = **0.99796** $-i_\alpha$ = **—0.00041** ∢ i_α = + 1'.4

R— » = —38.7069 Refr. = + 1

V— » = — 0.3187 $Tx_♃$ = + 120

W— » = + 0.8861 f'_α = **0.99824** J_α = **+0.00080**

$\alpha_♃ = 8^h\ 17^m.3$

1896. Februar 10.

eihe. Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.7700		**65.6200**							
61.2517	+10	67.1360	+9	0	− 1.5171		0.0000	− 1.5171	
64.2545	+10	64.1292	+11	0	− 1.4876		− 0.0013	+ 1.4863	
64.8035	+31	63.5835	+24	0	+ 2.0354		− 0.0806	+ 1.9548	
36.7855	+29	91.6048	0	+ 6	−25.9826		− 0.0094	−25.9920	Luft 1.
36.8155	+35	91.5615	+10	+15	−25.9452		− 0.0690	−26.0142	
41.9530	+22	86.4292	− 2	+ 2	−20.8117		0.0000	−20.8117	
92.0382	− 6	36.3535	+22	− 7	+29.2652		0.0000	+29.2652	
63.8500	+14	64.5570	+13		+ 1.0716				
64.3020	+14	64.1040	+13		+ 1.5240	+ 1.5278			
64.7460	+22	63.6415	+13		+ 1.987[illegible]				
65.3070	+22	63.0895	+14		+ 2.5342				
65.7765	+16	62.6350	+14		+ 2.9958	+ 2.9896			
66.2100	+16	62.1825	+14		+ 3.4388				
66.7570	+14	61.6450	+15		+ 3.9810				
67.2040	+14	61.2010	+15		+ 4.4264	+ 4.4250			
67.6395	+14	60.7540	+15		+ 4.8677				
68.2100	+24	60.1920	+19		+ 5.4342				
68.6665	+19	59.7570	+19		+ 5.8898	+ 5.8845			
69.1035	+19	59.2950	+15		+ 6.3294				
69.6400	+22	58.7510	+15		+ 6.8698				
70.1075	+22	58.3120	+10		+ 7.3234	+ 7.3212			
70.5445	+22	57.8550	+10		+ 7.7704				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
64.6500	+21	63.7325	+13		+ 1.8842	+0.3564						
66.1125	+15	62.2670	+14		+ 3.3478	+0.3582						
67.5565	+23	60.8265	+15		+ 4.7904	+0.3654	+0.3617	+0.′3611	−0.′0005	+0.′0017	0.′0000	**+0.′3623**
69.0110	+18	59.3685	+15		+ 6.2464	+0.3619						
70.4520	+21	57.9275	+10		+ 7.6878	+0.3666						
63.4930	+16	64.8825	+22		+ 0.7300	−0.7978						
64.9585	+23	63.4190	+15		+ 2.1952	−0.7944						
66.3990	+17	61.9810	+15		+ 3.6341	−0.7909	−0.7945	−0.7932	+0.0012	−0.0041	0.0000	**−0.7961**
67.8500	+25	60.5260	+16		+ 5.0874	−0.7971						
69.2910	+20	59.0840	+16		+ 6.5287	−0.7925						
65.6540	+13	62.7195	+12		+ 2.8923	+1.3645						
67.1220	+11	61.2485	+13		+ 4.3616	+1.3720						
68.5685	+16	59.8140	+17		+ 5.8022	+1.3772	+1.3709	+1.3687	−0.0020	+0.0049	0.0000	**+1.3716**
70.0170	+19	58.3580	+ 8		+ 7.2550	+1.3705						
71.4550	+15	56.7225	+12		+ 8.6914	+1.3702						
61.8300	+21	66.5525	+16	0	− 0.9360	−2.4638						
63.2895	+21	65.0925	+24	0	+ 0.5234	−2.4662						
64.7310	+28	63.6525	+16	0	+ 1.9648	−2.4602	−2.4633	−2.4592	+0.0037	−0.0165	0.0000	**−2.4720**
66.1880	+22	62.1980	+17	− 1	+ 3.4202	−2.4643						
67.6265	+30	60.7595	+18	− 1	+ 4.8590	−2.4622						

Scheinbare Decldiff:

M— Centrum = + 3.′0033 $\qquad f^\circ_\delta = 0.99837 \qquad i^\circ_\delta = +0.00036$

N— » = + 3.4507

Q— » = −24.4316 $\qquad f_\delta = \mathbf{0.99789} \qquad i_\delta = \mathbf{+0.00036} \qquad \measuredangle\, i_\delta = +1.′2$

R— » = −24.4670

V— » = −19.2641 $\qquad f'_\delta = \mathbf{0.99837} \qquad J_\delta = \mathbf{+0.00038}$

W— » = +30.7314

$\delta_♃ = +20^\circ\ 26.′0$

31 A. **1896. Februar 11.**

Æ 93

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
		10000		10000	10000					
	mm	mm	mm	mm	mm	mm	mm			
Ctr.	**62.2392**		**66.1495**							
S	62.2382	+10	66.1485	+10	0	0.0000				2—3
M	67.1890	+ 9	61.1938	+11	0	+ 4.9526				2—3
N	23.2755	+26	105.1138	+ 8	+17	−38.9614				3—4 verwaschen.
Q	75.7573	+18	52.6345	+15	− 3	+13.5164		8^h 19^m 20^s		3
R	25.6955	+35	102.6792	+13	+18	−36.5338				3
V	61.9348	+17	66.4468	+16	0	− 0.3008				2
W	63.0785	+21	65.3085	+32	0	+ 0.8395				3 unterexp.
♃ a_w	46.9050	+12	81.4850	+17	+ 2	−15.3350				
a_c	47.3845	+12	81.0145	+17	+ 2	−14.8599	−14.8609	8 22 44		3
a_o	47.8580	+23	80.5450	+17	+ 2	−14.3878				
♃ b_w	46.9740	+11	81.4210	+16	+ 2	−15.2684				
b_c	47.4430	+11	80.9640	+16	+ 2	−14.8054	−14.8022	23 22		3
b_o	47.9105	+22	80.4875	+16	+ 2	−14.3328				
♃ c_w	46.9590	+11	81.4260	+15	+ 2	−15.2784				
c_c	47.4270	+11	80.9795	+15	+ 2	−14.8211	−14.8166	27 2	8^h 25^m 48^s	3
c_o	47.8990	+22	80.5110	+15	+ 2	−14.3503				
♃ d_w	46.9360	+10	81.4470	+15	+ 1	−15.3005				
d_c	47.4210	+10	80.9860	+15	+ 1	−14.8275	−14.8318	27 38		2—3
d_o	47.8850	+21	80.5310	+15	+ 1	−14.3674				
♃ e_w	46.9710	+ 9	81.4270	+14	+ 1	−15.2730				
e_c	47.4250	+ 9	80.9785	+14	+ 1	−14.8218	−14.8153	28 13		2
e_o	47.8940	+20	80.5075	+14	+ 1	−14.3512				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	49.3245	+16	79.0515	+ 9	+ 1	−12.9079	+1.9530						2—3
b	49.3745	+16	79.0060	+ 8	+ 1	−12.8601	+1.9421						2—3
c	49.3745	+15	79.0050	+ 7	+ 1	−12.8592	+1.9570	+1.9543	+1′.9506	+0′.0009	−0′.0003	**+1′.9512**	2
d	49.3605	+15	79.0180	+ 7	+ 1	−12.8731	+1.9587						2—3
e	49.3790	+14	78.9990	+ 6	+ 1	−12.8544	+1.9609						2—3
II a	48.2795	+22	80.0950	+11	+ 1	−13.9520	+0.9089						2
b	48.3240	+22	80.0540	+10	+ 1	−13.9092	+0.8930						2—3
c	48.2980	+21	80.0780	+ 9	+ 1	−13.9342	+0.8824	+0.8887	+0.8870	+0.0005	−0.0003	**+0.8872**	2—3
d	48.2840	+21	80.0935	+ 9	+ 1	−13.9489	+0.8829						2
e	48.2940	+20	80.0835	+ 8	+ 1	−13.9289	+0.8764						2—3
III a	42.8610	+25	85.5115	+ 1	+ 3	−19.3686	−4.5077						2
b	42.9100	+24	85.4650	+ 1	+ 3	−19.3214	−4.5192						2
c	42.9085	+24	85.4650	0	+ 3	−19.3216	−4.5050	−4.5073	−4.4988	−0.0022	−0.0003	**−4.5013**	2
d	42.8960	+23	85.4790	− 1	+ 2	−19.3350	−4.5032						2
e	42.9135	+23	85.4600	− 1	+ 2	−19.3167	−4.5014						2
IV a	56.3715	+ 1	72.0115	+13	0	− 5.8654	+8.9955						2—3
b	56.4170	+ 1	71.9685	+12	0	− 5.8212	+8.9810						2—3
c	56.4055	0	71.9785	+12	0	− 5.8320	+8.9846	+8.9863	+8.9694	+0.0042	−0.0003	**+8.9665**	2—3
d	56.3940	0	71.9945	+11	0	− 5.8456	+8.9862						2—3
e	56.4085	0	71.9795	+11	0	− 5.8309	+8.9844						3

Scheinbare Ædiff: M— Centrum $= +\ 5'.2699$ $\quad f^0_\alpha = 0.99812.$ $\quad -i^0_\alpha = -0.00017$

N— » $= -41.4074$

Q— » $= +14.3264$ $\quad f_\alpha = \mathbf{0.99784}$ $\quad -i_\alpha = \mathbf{-0.00017}$ $\quad \measuredangle\, i_\alpha = +\ 0'.6$

R— » $= -38.7069$ $\quad$ *Refr.* $= 0$

V— » $= -\ 0.3187$ $\quad Tx_♃ = -\ 162$

W— » $= +\ 0.8861$ $\quad f'_\alpha = \mathbf{0.99812}$ $\quad J_\alpha = \mathbf{-0.00179}$

$\alpha_♃ = 8^h\ 16^m.8$

1896. Februar 11.

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.9180		**65.4700**							
65.8408	+11	62.5508	+ 9	0	+ 2.9211		0.0000	+ 2.9211	Wolken ziehen vorüber.
68.8430	+13	59.5413	+15	0	+ 5.9268		— 0.0013	+ 5.9255	
69.3772	+29	59.0162	+27	— 3	+ 6.4563		— 0.0806	+ 6.3757	
41.3790	+29	87.1110	0	+ 4	—21.5382		— 0.0094	—21.5476	
41.3895	+41	86.9915	+12	+10	—21.5225		— 0.0690	—21.5915	
46.5438	+ 9	81.8440	+ 1	+ 1	—16.3736		0.0000	—16.3736	
96.6275	+ 1	31.7673	+19	—10	+33.7042		0.0000	+33.7042	
74.5460	+18	53.7545	+10	+ 1	+11.6220				
74.1175	+18	54.2880	+10	+ 1	+11.1910	+11.1838			
73.6640	+18	54.7400	+ 6	+ 1	+10.7385				
72.9430	+19	55.4640	+ 6	+ 1	+10.0160				
72.5130	+19	55.9100	+ 6	+ 1	+ 9.5780	+ 9.5782			
72.0685	+17	56.3400	+ 6	+ 1	+ 9.1407				
71.5130	+18	56.8900	+16	+ 1	+ 8.5875				
71.0900	+18	57.3270	+16	+ 1	+ 8.1575	+ 8.1554			
70.6480	+18	57.7580	+12	+ 1	+ 7.7212				
70.0570	+22	58.3320	+12	+ 1	+ 7.1389				
69.6290	+22	58.7720	+17	+ 1	+ 6.7046	+ 6.7052			
69.1950	+19	59.2030	+17	+ 1	+ 6.2720				
68.5930	+24	59.8020	+21	+ 1	+ 5.6716				
68.1740	+24	60.2330	+21	+ 1	+ 5.2466	+ 5.2432			
67.7385	+24	60.6680	+17	+ 1	+ 4.8115				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
73.5900	+17	54.7900	+ 5		+10.6766	—0.5072						
71.9840	+16	56.3985	+ 5		+ 9.0693	—0.5089						
70.5535	+17	57.8290	+11		+ 7.6386	—0.5168	—0.5117	—0′.5109	—0′.0001	+0′.0029	0′.0000	**—0′.5081**
69.1075	+18	59.2760	+15		+ 6.1919	—0.5133						
67.6465	+23	60.7370	+16		+ 4.7311	—0.5121						
73.8005	+18	54.5805	+ 6	+ 1	+10.8865	—0.2973						
72.1950	+17	56.1840	+ 6	+ 1	+ 9.2820	—0.2962						
70.7715	+18	57.6090	+16	0	+ 7.8574	—0.2980	—0.2969	—0.2964	0.0000	+0.0014	0.0000	**—0.2950**
69.3220	+19	59.0565	+17	0	+ 6.4088	—0.2964						
69.8620	+24	60.5215	+17	0	+ 4.9466	—0.2966						
75.3310	+17	55.0440	+18	+ 2	+12.4192	+1.2354						
73.7250	+19	54.6500	+10	+ 2	+10.8138	+1.2356						
72.2900	+18	56.0780	+10	+ 1	+ 9.3868	+1.2314	+1.2330	+1.2309	+0.0002	—0.0084	0.0000	**+1.2227**
70.8490	+19	57.5280	+16	+ 1	+ 7.9366	+1.2314						
69.3860	+20	58.9890	+21	+ 1	+ 6.4744	+1.2312						
71.7410	+14	56.6470	+11		+ 8.8232	—2.3606						
70.1325	+19	58.2540	+ 7		+ 7.2158	—2.3624						
68.7125	+16	59.6770	+16		+ 5.7938	—2.3616	—2.3611	—2.3572	—0.0004	+0.0101	0.0000	**—2.3475**
67.2610	+11	61.1250	+12		+ 4.3440	—2.3612						
65.8005	+13	62.5860	+11		+ 2.8834	—2.3598						

Scheinbare Decldiff: M—**Centrum** = + 3′.0033 $\quad f^\circ_\delta = 0.99836 \quad i^\circ_\delta = -0.00006$
N— » = + 3.4507
Q— » = —24.4316 $\quad f_\delta =$ **0.99787** $\quad i_\delta =$ **—0.00005** $\quad ♃\ i_\delta = -0'.2$
R— » = —24.4670
V— » = —19.2641 $\quad f'_\delta =$ **0.99835** $\quad J_\delta =$ **—0.00004**
W— » = +30.7314

$\delta_♃ = +20^\circ\ 27'.7$

31 B. 1896. Februar 14.

Æ **94**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.4334**		**65.9592**							
S	62.4325	+ 9	65.9582	+10	0	0.0000				4
M	67.3805	+ 9	61.0005	+10	0	+ 4.9528				3–4
N	23.4702	+25	104.9212	+ 7	+18	−38.9599				4
Q	75.9530	+19	52.4410	+20	− 2	+13.5186		6^h 43^m 27^s		3–4 verwaschen
R	25.8958	+36	102.4822	+13	+19	−36.5272				4 verwaschen.
V	62.1298	+18	66.2500	+16	0	− 0.2971				3–4
W	63.2760	+21	65.1144	+31	0	+ 0.8432				3–4 unterexp.
♃ a_w	50.5855	+10	77.8040	+ 8		−11.8462				
a_c	51.0650	+10	77.3460	+ 9		−11.3776	−11.3725	6 45 39		2
a_o	51.5425	+10	76.8560	+ 9		−10.8938				
♃ b_w	50.5820	+10	77.8120	+ 8		−11.8520				
b_c	51.0675	+10	77.3355	+ 9		−11.3710	−11.3739	46 16		2
b_o	51.5365	+10	76.8600	+ 9		−10.8988				
♃ c_w	50.5935	+10	77.8025	+ 9		−11.8416				
c_c	51.0680	+10	77.3375	+10		−11.3718	−11.3681	46 51	6^h 46^m 53^s	
c_o	51.5470	+10	76.8545	+10		−10.8908				
♃ d_w	50.5900	+10	77.8050	+ 9		−11.8450				
d_c	51.0710	+10	77.3320	+10		−11.3676	−11.3647	47 33		2–3
d_o	51.5540	+10	76.8425	+10		−10.8814				
♃ e_w	50.6130	+11	77.7880	+10		−11.8245				
e_c	51.0810	+11	77.3260	+11		−11.3596	−11.3564	48 6		2
e_o	51.5560	+11	76.8520	+11		−10.8851				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	49.1965	+13	79.1750	+ 6		−13.2260	−1.8535						2–3
b	49.1895	+13	79.1820	+ 6		−13.2330	−1.8591						3–4
c	49.2030	+13	79.1720	+ 7		−13.2213	−1.8532	−1.8557	−1′.8523	−0′.0007	−0′.0005	**−1′.8535**	3
d	49.1995	+13	79.1750	+ 7		−13.2246	−1.8599						3
e	49.2160	+14	79.1610	+ 8		−13.2093	−1.8529						2–3
II a	54.3770	+ 3	73.9995	+12		− 8.0488	+3.3237						3
b	54.3730	+ 3	74.0015	+13		− 8.0518	+3.3221						3
c	54.3770	+ 3	73.9945	+13		− 8.0464	+3.3217	+3.3198	+3.3137	+0.0013	−0.0005	**+3.3145**	2–3
d	54.3725	+ 4	74.0015	+13		− 8.0520	+3.3127						2
e	54.3890	+ 4	73.9885	+14		− 8.0374	+3.3190						2
III a	56.5120	+ 9	71.8660	+12		− 5.9142	+5.4583						2–3
b	56.5025	+ 9	71.8710	+12		− 5.9215	+5.4524						2
c	56.5100	+10	71.8625	+13		− 5.9135	+5.4546	+5.4554	+5.4454	+0.0020	−0.0005	**+5.4469**	2–3 eiförmig.
d	56.5070	+10	71.8670	+13		− 5.9172	+5.4475						2–3
e	56.5225	+11	71.8520	+14		− 5.9020	+5.4544						2
IV a	51.9275	+11	76.4545	+ 7		−10.5004	+0.8721						3
b	51.9270	+11	76.4605	+ 8		−10.5037	+0.8702						3
c	51.9280	+11	76.4525	+ 8		−10.4992	+0.8689	+0.8663	+0.8647	+0.0005	−0.0005	**+0.8647**	3
d	51.9230	+11	76.4645	+ 8		−10.5077	+0.8570						3
e	51.9360	+12	76.4480	+ 9		−10.4930	+0.8634						3

Scheinbare Ædiff: M—Centrum $= + 5'.2699$ $\quad f^\circ_\alpha = 0.99818$ $\quad -i^\circ_\alpha = -0.00017$

N— » $= -41.4077$

Q— » $= +14.3264$ $\quad f_\alpha = \mathbf{0.99787}$ $\quad -i_\alpha = \mathbf{-0.00012}$ $\quad ∡\, i_\alpha = +0'.4$

R— » $= -38.7072$ $\quad$ *Refr.* $= -$ 4

V— » $= - 0.3187$ $\quad Tx_♃ = -$ 124

W— » $= + 0.8861$ $\quad f'_\alpha = \mathbf{0.99817}$ $\quad J\alpha = \mathbf{-0.00140}$

$\alpha_♃ = 8^h 15^m.4$

1896. Februar 14.

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Decl.

P.-Kr. 90° (Scalenablesung)	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm 62.9180	mm/10000	mm 65.4700	mm/10000	mm/10000	mm	mm	mm	mm	
64.3545	+ 9	64.0368	+ 8	0	+ 1.4349		0.0000	+ 1.4369	Luft 3—1.
67.3655	+ 8	61.0235	+11	0	+ 4.4468		— 0.0013	+ 4.4455	
67.8844	+35	60.5058	+27	— 2	+ 4.9655		— 0.0806	+ 4.8849	
39.9000	+30	88.4928	— 3	+ 4	—23.0184		— 0.0094	—23.0278	
39.8975	+42	88.4790	+10	+13	—23.0118		— 0.0690	—23.0808	
45.0580	+19	83.3228	+ 2	+ 2	—17.8554		0.0000	—17.8554	
95.1495	— 2	33.2510	+19	— 9	+32.2233		0.0000	+32.2233	
64.7650	+21	63.6415	+13		+ 1.8382				
64.3300	+13	64.0735	+13		+ 1.4042	+ 1.3993			
63.8805	+13	64.5215	+13		+ 0.9555				
63.3760	+14	65.0260	+21		+ 0.4506				
62.9460	+14	65.4690	+21		+ 0.0142	+ 0.0105			
62.4920	+14	65.9105	+15		— 0.4333				
61.8840	+14	66.5170	+13		— 1.0404				
61.4535	+15	66.9595	+13		— 1.4769	— 1.4797			
61.0050	+15	67.4010	+13		— 1.9219				
60.3790	+19	68.0170	+23		— 2.5432				
59.9505	+19	68.4535	+23		— 2.9757	— 2.9771			
59.5145	+19	68.8915	+18		— 3.4124				
58.9140	+15	69.4890	+21		— 4.0118				
58.4870	+10	69.9210	+21		— 4.4416	— 4.4443			
58.0440	+10	70.3540	+21		— 4.8796				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.8020	+21	63.5770	+14		+ 1.8888	+0.4895						
63.4200	+14	64.9620	+22		+ 0.5046	+0.4941						
61.9260	+14	66.4560	+16		— 0.9891	+0.4906	+0.4919	+0'.4911	+0'.0005	—0'.0025	0'.0000	+0'.4892
60.4310	+19	67.9480	+24		— 2.4828	+0.4943						
58.9610	+15	69.4190	+19		— 3.9532	+0.4911						
63.4025	+12	64.9740	+19		+ 0.4899	—0.9094						
62.0160	+12	66.3575	+13		— 0.8948	—0.9053						
60.5260	+13	67.8480	+21		— 2.3854	—0.9057	—0.9064	—0.9049	—0.0008	+0.0035	0.0000	—0.9022
59.0300	+13	69.3460	+16		— 3.8822	—0.9051						
57.5600	+ 8	70.8130	+15		— 5.3508	—0.9065						
62.8685	+12	65.5070	+12		— 0.0432	—1.4425						
61.4830	+13	66.8905	+10		— 1.4276	—1.4381						
59.9905	+17	68.3770	+20		— 2.9174	—1.4377	—1.4403	—1.4378	—0.0014	+0.0051	0.0000	—1.4341
58.4915	+13	69.8830	+18		— 4.4200	—1.4429						
57.0255	+12	71.3470	+14		— 5.8848	—1.4405						
63.9720	+13	64.4175	+13		+ 1.0532	—0.3461						
62.5860	+14	65.8010	+15		— 0.3316	—0.3421						
61.0930	+15	67.2900	+13		— 1.8224	—0.3427	—0.3426	—0.3420	—0.0002	+0.0010	0.0000	— 0.3412
59.5980	+19	68.7885	+18		— 3.3192	—0.3421						
58.1350	+10	70.2545	+21		— 4.7843	—0.3400						

Scheinbare Decldiff:
M—Centrum = + 3'.0033
N— » = + 3.4507
Q— » = —24.4318
R— » = —24.4671
V— » = —19.2642
W— » = +30.7316

$\delta_{♃} = +20° \; 32'.3$

$f^\circ_\delta = 0.99834$ $i^\circ_\delta = -0.00028$

$f_\delta = 0.99781$ $i_\delta = -0.00016$ $\measuredangle\, i_\delta = -0'.5$

$f'_\delta = 0.99831$ $J_\delta = -0.00025$

31 C. 1896. Februar 17.

Æ 95

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
		mm/10000		mm/10000	mm/10000	mm	mm			
Ctr.	mm 62.4264		mm 65.9612							
S	62.4255	+ 9	65.9595	+17	0	0.0000				2
M	67.3755	+ 9	61.0100	+10	0	+ 4.9501				2
N	23.4630	+25	104.9272	+ 7	+18	−38.9620				3
Q	75.9555	+20	52.4318	+21	− 3	+13.5289		9^h 56^m 20^s		3
R	25.8960	+37	102.4822	+14	+20	−36.5226				3
V	62.1308	+19	66.2535	+17	0	− 0.2938				3
W	63.2520	+21	65.1302	+30	0	+ 0.8278				3 unterexp.
♃ a_w	76.3470	+12	52.0550	+14	− 1	+13.9132				
a_c	76.8060	+12	51.5975	+14	− 1	+14.3714	+14.3719	9 50 39		2
a_o	77.2670	+12	51.1395	+13	− 1	+14.8310				
♃ b_w	76.3240	+10	52.0680	+14	− 1	+13.8951				
b_c	76.8045	+10	51.6045	+14	− 1	+14.3671	+14.3615	51 17		2—3
b_o	77.2575	+10	51.1470	+13	− 1	+14.8224				
♃ c_w	76.3550	+10	52.0525	+13	− 1	+13.9184				
c_c	77.8100	+10	51.5990	+13	− 1	+14.3726	+14.3753	51 53	9^h 51^m 55^s	3
c_o	77.2650	+10	51.1295	+12	− 1	+14.8350				
♃ d_w	76.3380	+10	52.0615	+12	− 1	+13.9054				
d_c	76.8035	+10	51.6040	+12	− 1	+14.3670	+14.3647	52 32		2—3
d_o	77.2555	+10	51.1465	+11	− 1	+14.8218				
♃ e_w	76.3435	+ 9	52.0545	+12	− 1	+13.9116				
e_c	76.8030	+ 9	51.6065	+12	− 1	+14.3654	+14.3666	53 15		2—3
e_o	77.2585	+ 9	51.1475	+11	− 1	+14.8227				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J^\circ_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	75.6065	+10	52.7730	+10	− 1	+13.1840	−1.1879						2 etwas ellipt.
b	75.5975	+ 9	52.7840	+ 9	− 1	+13.1740	−1.1875						2 » »
c	75.6090	+ 8	52.7710	+ 9	− 1	+13.1862	−1.1891	−1.1910	−1ʹ.1888	+0ʹ.0005	−0ʹ.0006	**−1ʹ.1889**	2
d	75.5935	+ 7	52.7860	+ 8	− 1	+13.1710	−1.1937						2
e	75.5910	+ 7	52.7860	+ 8	− 1	+13.1698	−1.1968						2 etwas ellipt.
II a	79.6080	+11	48.7645	+17	− 1	+17.1888	+2.8169						2
b	79.6030	+10	48.7740	+16	− 1	+17.1815	+2.8200						1—2
c	79.6240	+10	48.7545	+15	− 1	+17.2018	+2.8265	+2.8233	+2.8181	−0.0013	−0.0006	**+2.8162**	2
d	79.6120	+ 9	48.7685	+15	− 1	+17.1888	+2.8241						1—2
e	79.6170	+ 9	48.7620	+14	− 1	+17.1956	+2.8290						2
III a	71.7395	+13	56.6365	+12		+ 9.3184	−5.0535						2
b	71.7310	+12	56.6425	+11		+ 9.3116	−5.0499						1—2
c	71.7455	+12	56.6290	+11		+ 9.3256	−5.0497	−5.0513	−5.0419	+0.0023	−0.0006	**−5.0402**	2
d	71.7320	+11	56.6435	+10		+ 9.3117	−5.0530						1—2
e	71.7355	+11	56.6380	+10		+ 9.3162	−5.0504						2
IV a	68.2690	+19	60.1135	+17		+ 5.8452	−8.5267						2
b	68.2630	+19	60.1200	+16		+ 5.8390	−8.5225						2
c	68.2790	+18	60.1055	+16		+ 5.8542	−8.5211	−8.5249	−8.5091	+0.0037	−0.0006	**−8.5060**	2
d	68.2640	+18	60.1225	+15		+ 5.8383	−8.5264						2
e	68.2650	+18	60.1220	+15		+ 5.8390	−8.5276						2

Scheinbare Ædiff: M—Centrum = + 5ʹ.2700 $\quad f^\circ_\alpha = 0.99814 \quad -i^\circ_\alpha = +0.00020$

N— » = −41.4079

Q— » = +14.3265 $\quad f_\alpha =$ **0.99784** $\quad -i_\alpha =$ **+0.00016** $\quad ♃\ i_\alpha = -0ʹ.5$

R— » = −38.7074 $\quad Refr. = +\ 4$

V— » = − 0.3188 $\quad Tx_♃ = +\ 157$

W— » = + 0.8860 $\quad f'_\alpha =$ **0.99814** $\quad J_\alpha =$ **+0.00177**

$\alpha_♃ = 8^h\ 14^m.0$

1896. Februar 17.

Decl.

	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
	62.9180		**65.4698**							
	62.9170	+10	65.4682	+16	0	0.0000		0.0000	0.0000	Luft 1.
	65.9252	+10	62.4608	+10	0	+ 3.0081		− 0.0013	+ 3.0068	
	66.4472	+27	61.9438	+26	− 2	+ 3.5274		− 0.0806	+ 3.4468	
	38.4595	+28	89.9308	− 4	+ 5	−24.4576		− 0.0094	−24.4670	
	38.4648	+40	89.9230	+ 8	+14	−24.4502		− 0.0690	−24.5192	
	43.6228	+20	84.7620	− 2	+ 2	−19.2924		0.0000	−19.2924	
	93.7100	− 3	34.6830	+20	− 8	+30.7874		0.0000	+30.7874	
	54.6130	+ 4	73.7880	+17	+ 1	− 8.3122				
	55.0450	+ 4	73.3670	+18	+ 1	− 7.8857	− 7.8854			
	55.4650	+ 4	72.9320	+18	+ 1	− 7.4582				
	56.0830	+14	72.3180	+16		− 6.8417				
	56.5265	+14	71.8840	+16		− 6.4030	− 6.4108			
	56.9350	+14	71.4620	+16		− 5.9877				
	57.5350	+10	70.8630	+17		− 5.3884				
	57.9720	+10	70.4410	+21		− 4.9592	− 4.9597			
	58.3920	+10	70.0060	+21		− 4.5316				
	58.9120	+15	69.4890	+18		− 4.0128				
	59.3555	+15	69.0540	+18		− 3.5735	− 3.5785			
	59.7730	+19	68.6335	+18		− 3.1493				
	60.4200	+15	67.9810	+23		− 2.5050				
	60.8590	+15	67.5490	+23		− 2.0695	− 2.0772			
	61.2730	+15	67.1390	+13		− 1.6570				

Trabant — Jupiterscentrum.

	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
a	55.3200	+ 4	73.0690	+17		− 7.5992	+0.2862						
b	56.7930	+14	71.5970	+17		− 6.1252	+0.2856						
c	58.2405	+10	70.1425	+20		− 4.6756	+0.2841	+0.2848	+0.′2843	+0.′0003	+0.′0018	0.′0000	**+0.′2864**
d	59.6185	+19	68.7650	+17		− 3.2972	+0.2813						
e	61.1250	+15	67.2580	+12		− 1.7904	+0.2868						
a	54.3160	+10	74.0680	+17	+ 1	− 8.6004	−0.7150						
b	55.7910	+ 6	73.5960	+18	+ 1	− 7.1271	−0.7163						
c	57.2350	+16	71.1430	+17	+ 1	− 5.6780	−0.7183	−0.7193	−0.7181	−0.0007	−0.0049	0.0000	**−0.7237**
d	58.6130	+17	69.7660	+21	+ 1	− 4.3007	−0.7222						
e	60.1155	+21	68.2705	+23	0	− 2.8017	−0.7245						
a	56.3060	+ 1	72.0750	+14		− 6.6092	+1.2762						
b	57.7760	+ 7	70.6000	+15		− 5.1365	+1.2743						
c	59.2280	+12	69.1490	+16		− 3.6848	+1.2749	+1.2745	+1.2724	+0.0013	+0.0065	0.0000	**+1.2802**
d	60.6045	+12	67.7705	+21		− 2.3076	+1.2709						
e	62.1125	+11	66.2660	+13		− 0.8010	+1.2762						
a	57.1035	+ 9	71.2820	+13		− 5.8136	+2.0718						
b	58.5760	+10	69.8060	+17		− 4.3394	+2.0714						
c	60.0260	+14	68.3590	+19		− 2.8908	+2.0689	+2.0699	+2.0664	+0.0021	+0.0094	0.0000	**+2.0779**
d	61.4060	+10	66.9810	+ 9		− 1.5116	+2.0669						
e	62.9095	+ 9	65.4740	+17		− 0.0068	+2.0704						

Scheinbare Decldiff: M—Centrum = + 3.′0033 $\quad f^\circ_\delta = 0.99833 \quad i^\circ_\delta = -0.00026$

N— » = + 3.4508

Q— » = −24.4320 $\quad f_\delta = \mathbf{0.99782} \quad i_\delta = \mathbf{-0.00035} \quad \angle\, i_\delta = -1.′2$

R— » = −24.4672

V— » = −19.2643 $\quad f'_\delta = \mathbf{0.99833} \quad J_\delta = \mathbf{-0.00025}$

W— » = +30.7318

$\delta_♃ = +20°\ 37.′0$

31 D. 1896. Februar 18.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	62.4141		65.9741							
S	62.4132	+ 9	65.9730	+11	0	0.0000				2
M	67.3662	+ 8	61.0185	+10	0	+ 4.9538				2—3 ellipt.
N	23.4538	+25	104.9345	+ 7	+17	—38.9578				3—4
Q	75.9420	+21	52.4470	+22	— 6	+13.5268		$8^h\ 35^m\ 9^s$		3
R	25.8810	+37	102.4940	+15	+26	—36.5228				2—3 ellipt.
V	62.1201	+20	66.2640	+18	0	— 0.2918				2
W	63.2460	+21	65.1402	+30	0	+ 0.8324				3
$♃\ a_w$	77.3220	+ 9	51.0715	+10	— 1	+14.9051				
a_c	77.7565	+ 8	50.6435	+10	— 1	+15.3363	+15.3426	$8^h\ 37^m\ 10^s$		1
a_o	78.2060	+ 8	50.1935	+ 5	— 1	+15.7863				
$♃\ b_w$	77.3150	+ 9	51.0825	+10	— 1	+14.8961				
b_c	77.7580	+ 8	50.6485	+10	— 1	+15.3346	+15.3332	37 53		1
b_o	78.1895	+ 8	50.2120	+ 5	— 1	+15.7688				
$♃\ c_w$	77.3140	+10	51.0840	+10	— 1	+14.8949				
c_c	77.7520	+ 9	50.6505	+10	— 1	+15.3306	+15.3315	39 25	$8^h\ 39^m\ 7^s$	1
c_o	78.1900	+ 9	50.2120	+ 5	— 1	+15.7691				
$♃\ d_w$	77.3205	+10	51.0790	+10	— 1	+14.9006				
d_c	77.7585	+ 9	50.6375	+10	— 1	+15.3404	+15.3354	40 8		1
d_o	78.1860	+ 9	50.2160	+ 5	— 1	+15.7651				
$♃\ e_w$	77.3135	+11	51.0825	+11	— 1	+14.8954				
e_c	77.7500	+10	50.6525	+11	— 1	+15.3286	+15.3315	40 59		1
e_o	78.1915	+10	50.2110	+ 6	— 1	+15.7704				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	79.2350	+ 6	49.1510	+14	— 1	+16.8215	+1.4789						2 etwas ellipt.
b	79.2205	+ 6	49.1640	+13	— 1	+16.8078	+1.4746						2 » »
c	79.2190	+ 7	49.1690	+13	— 1	+16.8046	+1.4731	+1.4713	+1.4686	—0.0008	—0.0007	**+1.4671**	2
d	79.2145	+ 7	49.1700	+13	— 2	+16.8018	+1.4664						2—3
e	79.2085	+ 7	49.1775	+14	— 2	+16.7950	+1.4635						2
II a	79.3325	+ 6	49.0540	+14	— 1	+16.9188	+1.5762						2 etwas ellipt.
b	79.3290	+ 6	49.0580	+13	— 1	+16.9150	+1.5818						2
c	79.3340	+ 7	49.0540	+13	— 1	+16.9196	+1.5881	+1.5846	+1.5817	—0.0007	—0.0007	**+1.5803**	2
d	79.3370	+ 7	49.0495	+13	— 2	+16.9232	+1.5878						2—3
e	79.3350	+ 7	49.0530	+14	— 2	+16.9204	+1.5889						2
III a	72.9200	+13	55.4580	— 1		+10.5117	—4.8309						1—2
b	72.9110	+14	55.4680	— 1		+10.5022	—4.8310						2 etwas ellipt.
c	72.9170	+14	55.4650	— 1		+10.5068	—4.8247	—4.8278	—4.8189	+0.0024	—0.0007	**—4.8172**	2
d	72.9165	+14	55.4625	0		+10.5077	—4.8277						2 etwas ellipt.
e	72.9175	+15	55.4650	0		+10.5070	—4.8245						2 » »
IV a	68.2520	+19	60.1300	+14		+ 5.8412	—9.5014						2
b	68.2440	+19	60.1375	+14		+ 5.8335	—9.4997						2
c	68.2425	+20	60.1390	+15		+ 5.8320	—9.4995	—9.5009	—9.4834	+0.0044	—0.0007	**—9.4797**	2
d	68.2430	+20	60.1380	+15		+ 5.8328	—9.5026						2—3
e	68.2410	+21	60.1415	+16		+ 5.8300	—9.5015						2—3

Scheinbare Ædiff: M—Centrum = + 5'.2700 $f^\circ_\alpha = 0.99816$ $-i^\circ_\alpha = +0.00015$

N— » = —41.4080

Q— » = +14.3265 f_α = **0.99788** $-i_\alpha$ = **+0.00015** $\measuredangle\ i_\alpha = -0'.5$

R— » = —38.7075 *Refr.* = + 1

V— » = — 0.3188 $Tx_♃$ = + 168

W— » = + 0.8860 f'_α = **0.99816** J_α = **+0.00184**

$\alpha_♃ = 8^h\ 13^m.6$

*) Trabant I und II berühren sich.

1896. Februar 18.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.9180		**65.4700**							
61.4355	+11	66.9505	+ 8	0	− 1.4814		0.0000	− 1.4814	Luft 1.
64.4425	+ 8	63.9408	+ 9	0	+ 1.5268		− 0.0013	+ 1.5255	Durch dünne Wol-
64.9678	+32	63.4218	+26	− 1	+ 2.0492		− 0.0806	+ 1.9686	ken.
36.9798	+27	91.4108	− 3	+15	−25.9365		− 0.0094	−25.9459	
36.9838	+39	91.3975	+ 9	+27	−25.9266		− 0.0690	−25.9956	
42.1425	+23	86.2428	− 3	+ 2	−20.7726		0.0000	−20.7726	
92.2310	− 5	36.1610	+21	− 7	+29.3090		0.0000	+29.3090	
63.1040	+15	65.3000	+21		+ 0.1777				
63.5075	+14	64.8955	+21		+ 0.5816	+ 0.5861			
63.9195	+14	64.4730	+21		+ 0.9989				
64.5630	+22	63.8400	+13		+ 1.6380				
64.9695	+22	63.4370	+14		+ 2.0426	+ 2.0414			
65.3650	+22	63.0305	+14		+ 2.4436				
66.0190	+16	62.3875	+14		+ 3.0918				
66.4220	+16	61.9920	+14		+ 3.4911	+ 3.4920			
66.8175	+14	61.5830	+14		+ 3.8932				
67.4835	+24	60.9195	+15		+ 4.5584				
67.8790	+24	60.5220	+15		+ 4.9550	+ 4.9529			
68.2660	+24	60.1280	+19		+ 5.3452				
68.9210	+19	59.4820	+15		+ 5.9957				
69.3235	+19	59.0860	+15		+ 6.3950	+ 6.3953			
69.7170	+22	58.6795	+15		+ 6.7951				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
63.0660	+15	65.3145	+21	0	+ 0.1514	−0.4347						
64.5175	+22	63.8640	+13	0	+ 1.6032	−0.4382						
65.9785	+16	62.4090	+14	0	+ 3.0608	−0.4312	−0.4324	−0.′4317	−0.′0003	−0.′0026	0.′0000	**−0.′4346**
67.4415	+14	60.9440	+15	− 1	+ 4.5246	−0.4283						
68.8795	+19	59.5010	+15	− 1	+ 5.9654	−0.4299						
63.1090	+15	65.2705	+21	0	+ 0.1950	−0.3911						
64.5645	+22	63.8200	+13	0	+ 1.6487	−0.3927						
66.0185	+16	62.3642	+14	0	+ 3.1032	−0.3888	−0.3908	−0.3901	−0.0003	−0.0028	0.0000	**−0.3932**
67.4795	+14	60.9065	+15	− 1	+ 4.5624	−0.3905						
68.9200	+19	59.4630	+15	− 1	+ 6.0046	−0.3907						
64.7770	+19	63.6090	+11		+ 1.8604	+1.2743						
66.2280	+13	62.1590	+12		+ 3.3106	+1.2692						
67.6800	+21	60.7020	+13		+ 4.7654	+1.2734	+1.2718	+1.2696	+0.0009	+0.0069	0.0000	**+1.2774**
69.1390	+16	59.2450	+13		+ 6.2232	+1.2703						
70.5820	+15	57.8005	+ 8		+ 7.6671	+1.2718						
65.8550	+10	62.5310	+10		+ 2.9380	+2.3519						
67.3075	+ 8	61.0825	+11		+ 4.3884	+2.3470						
68.7600	+13	59.6280	+15		+ 5.8419	+2.3499	+2.3494	+2.3454	+0.0017	+0.0110	0.0000	**+2.3581**
70.2200	+16	58.1720	+ 6		+ 7.3005	+2.3476						
71.6640	+11	56.7245	+10		+ 8.7458	+2.3505						

Scheinbare Decldiff: M—Centrum = + 3.′0033
N— » = + 3.4508
Q— » = −24.4320
R— » = −24.4672
V— » = −19.2643
W— » = +30.7318

$\delta_♃ = +20°\ 38.′3$

$f°_\delta = 0.99829$ $i°_\delta = -0.00020$

$f_\delta = \mathbf{0.99781}$ $i_\delta = \mathbf{-0.00020}$ $\measuredangle\ i_\delta = -0.′7$

$f'_\delta = \mathbf{0.99829}$ $J_\delta = \mathbf{-0.00018}$

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	mm 64.2977		mm 64.0850							
S	64.2968	+ 9	64.0842	+ 8	0	0.0000				3
M	69.2532	+14	59.1275	+11	0	+ 4.9566				3
N	25.3400	+27	103.0465	+ 6	+17	−38.9568				3—4
Q	77.8102	+19	50.5742	+18	− 2	+13.5115		8^h 44^m 13^s		3—4
R	27.7578	+32	100.6148	+11	+18	−36.5320				3
V	63.9920	+16	64.3878	+14	0	− 0.3042				2—3
W	65.1430	+28	63.2362	+25	0	+ 0.8472				3
♃ a_w	56.8340	+12	71.5460	+14		− 7.4624				
a_c	57.3050	+12	71.0875	+14		− 6.9977	− 6.9974	8^h 39^m 31^s		3
a_o	57.7680	+ 8	70.6190	+14		− 6.5322				
♃ b_w	56.8400	+11	71.5420	+13		− 7.4574				
b_c	57.3105	+11	71.0835	+13		− 6.9930	− 6.9892	39 59		3
b_o	57.7870	+ 7	70.6080	+13		− 6.5172				
♃ c_w	56.8450	+11	71.5360	+13		− 7.4520				
c_c	57.3200	+11	71.0735	+13		− 6.9832	− 6.9806	40 36	8^h 40^m 36^s	3
c_o	57.7940	+ 7	70.5940	+13		− 6.5066				
♃ d_w	56.8440	+10	71.5420	+12		− 7.4554				
d_c	57.3160	+10	71.0805	+12		− 6.9887	− 6.9864	41 13		3
d_o	57.7810	+ 6	70.5980	+12		− 6.5152				
♃ e_w	56.8590	+10	71.5250	+12		− 7.4394				
e_c	57.3345	+10	71.0630	+12		− 6.9707	− 6.9721	41 51		3—4
e_o	57.7980	+ 6	70.5970	+12		− 6.5062				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$(J_\alpha(y_t - y_♃))$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	58.4330	+ 8	69.9495	+17		− 5.8650	+1.1324						3
b	58.4335	+ 7	69.9470	+17		− 5.8636	+1.1256						3
c	58.4430	+ 7	69.9400	+16		− 5.8553	+1.1253	+1.1254	+1!1234	+0!0004	−0!0017	**+1!1221**	3
d	58.4290	+ 6	69.9485	+16		− 5.8666	+1.1198						3
e	58.4490	+ 6	69.9320	+16		− 5.8484	+1.1237						3
II a	58.2005	+ 8	70.1815	+17		− 6.0973	+0.9001						3
b	58.2050	+ 7	70.1705	+17		− 6.0896	+0.8996						3—4
c	58.2195	+ 7	70.1595	+16		− 6.0768	+0.9038	+0.9025	+0.9009	+0.0002	− 0.0017	**+0.8994**	3—4
d	58.2090	+ 6	70.1600	+16		− 6.0854	+0.9010						3—4
e	58.2305	+ 6	70.1450	+16		− 6.0641	+0.9080						3
III a	53.8650	+ 6	74.5090	+12		−10.4286	−3.4312						3
b	53.8650	+ 5	74.5060	+11		−10.4272	−3.4380						2—3
c	53.8790	+ 5	74.4920	+11		−10.4132	−3.4326	−3.4356	−3.4296	−0.0009	−0.0017	**−3.4322**	3
d	53.8670	+ 4	74.5060	+10		−10.4262	−3.4398						3
e	53.8845	+ 4	74.4880	+10		−10.4084	−3.4363						3
IV a	53.3680	+10	75.0110	+13		−10.9280	−3.9306						3
b	53.5765	+ 9	75.0055	+12		−10.9210	−3.9318						3—4
c	53.3880	+ 9	74.9945	+11		−10.9097	−3.9291	−3.9291	−3.9222	−0.0012	−0.0017	**−3.9251**	3—4
d	53.3825	+ 8	75.0030	+11		−10.9168	−3.9304						3—4
e	53.4030	+ 8	74.9815	+10		−10.8957	−3.9236						2—3

Scheinbare Ædiff.: M—Centrum = + 5!2700 $f^\circ_\alpha = 0.99824$ $-i^\circ_\alpha = -0.00040$

N— » = −41.4093

Q— » = +14.3270 f_α = **0.99796** $-i_\alpha$ = **−0.00040** $\measuredangle\ i_\alpha = +1!4$

R— » = −38.7087   *Refr.* = + 1

V— » = − 0.3187 $Tx_♃$ = − 78

W— » = + 0.8860 f'_α = **0.99824** J_α = **−0.00117**

$\alpha_♃ = 8^h\ 7^m.1$

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Decl.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.5330		**65.8486**							
65.4530	+16	62.9352	+ 9	0	+ 2.9170		0.0000	+ 2.9170	Luft 3. Neblig.
68.4578	+19	59.9245	+16	0	+ 5.9246		— 0.0013	+ 5.9233	
69.0022	+30	59.3868	+26	— 3	+ 6.4654		— 0.0806	+ 6.3848	
40.9830	+30	87.4038	+ 1	+ 4	—21.5508		— 0.0094	—21.5602	
41.0162	+39	87.3618	+12	+11	—21.5126		— 0.0690	—21.5816	
46.1538	+14	82.2270	+ 1	+ 5	—26.3776		0.0000	—26.3776	
96.2390	— 1	32.1520	+20	—11	+33.6992		0.0000	+33.6992	
72.0210	+14	56.3890	+10		+ 9.4740				
71.5894	+14	56.8170	+10		+ 9.0442	+ 9.0363			
71.1280	+15	57.2630	+10		+ 8.5906				
70.4990	+19	57.9020	+ 6		+ 7.9570				
70.0605	+19	58.3405	+ 6		+ 7.5184	+ 7.5172			
69.6100	+19	58.7740	+11		+ 7.0762				
69.0730	+16	59.3355	+15		+ 6.5266				
68.6335	+16	59.7590	+15		+ 6.0951	+ 6.0867			
68.1745	+21	60.2140	+15		+ 5.6384				
67.5945	+11	60.8090	+11		+ 5.0506				
67.1600	+11	61.2400	+11		+ 4.6178	+ 4.6148			
66.7135	+11	61.6770	+10		+ 4.1761				
66.1870	+13	62.2195	+10		+ 3.6417				
65.7585	+13	62.6435	+10		+ 3.2154	+ 3.2100			
65.3095	+19	63.0805	+10		+ 2.7728				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
71.2690	+14	57.1155	+10		+ 8.7348	—0.3015						
69.7490	+18	58.6390	+11		+ 7.2132	—0.3040						
68.3175	+20	60.0670	+15		+ 5.7833	—0.3034	—0.3023	—0'.3018	+0'.0004	+0'.0008	+0'.0001	**—0'.3005**
66.8490	+10	61.5320	+11		+ 4.3162	—0.2986						
65.4410	+12	62.9450	+10		+ 2.9059	—0.3041						
71.3950	+14	56.9910	+10		+ 8.8600	—0.1763						
69.8700	+18	58.5170	+11		+ 7.3346	—0.1826						
68.4365	+20	59.9445	+15		+ 5.9040	—0.1827	—0.1811	—0.1808	+0.0003	+0.0006	+0.0001	**—0.1798**
66.9690	+10	61.4135	+11		+ 4.4355	—0.1793						
65.5600	+12	62.8250	+10		+ 3.0254	—0.1846						
72.3710	+15	56.0055	+ 3		+ 9.8412	+0.8049						
70.8475	+16	57.5240	+ 9		+ 8.3199	+0.8027						
69.4170	+17	58.9556	+14		+ 6.8886	+0.8019	+0.8036	+0.8023	—0.0011	—0.0034	+0.0001	**+0.7979**
67.9500	+22	60.4220	+18		+ 5.4220	+0.8072						
66.5420	+12	61.8350	+13		+ 4.0112	+0.8012						
72.6295	+17	55.7610	+ 3		+10.0928	+1.0565						
71.1045	+16	57.2830	+13		+ 8.5687	+1.0515						
69.6740	+20	58.7125	+14		+ 7.1388	+1.0521	+1.0531	+1.0514	—0.0012	—0.0039	+0.0001	**+1.0464**
68.2040	+22	60.1855	+18		+ 5.6672	+1.0524						
66.7950	+12	61.5845	+13		+ 4.2630	+1.0530						

Scheinbare Decldiff: *M*—Centrum = + 3'.0037 $\quad f^\circ_\delta = 0.99842 \quad i^\circ_\delta = +0.00030$

N— » = + 3.4510

Q— » = —24.4325 $\quad f_\delta = \mathbf{0.99794} \quad i_\delta = \mathbf{+0.00029} \quad ∢\, i_\delta = +1'.0$

R— » = —24.4680

V— » = —19.2648 $\quad f'_\delta = \mathbf{0.99841} \quad J_\delta = \mathbf{+0.00032}$

W— » = +30.7327

$\delta_♃ = +20^\circ\ 58'.6$

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.3196**		**64.0630**							
S	64.3188	+ 8	64.0622	+ 8	0	0.0000				2—3
M	69.2700	+14	59.1068	+10	0	+ 4.9540				2
N	25.3700	+26	103.0155	+ 5	+18	—38.9482				3
Q	77.8345	+20	50.5540	+20	— 5	+13.5114		10^h 25^m 33^s		3
R	27.7852	+33	100.5855	+12	+26	—36.5248				2—3
V	64.0158	+17	64.3642	+14	0	— 0.3024				2—3
W	65.1618	+28	63.2150	+24	0	+ 0.8453				3
♃ a_w	49.0175	+13	79.3460	+ 6	+ 1	—15.2921				
a_c	49.5285	+ 5	78.8715	+ 6	+ 1	—14.7998	—14.8019	10 19 58		4—5
a_o	50.0165	+ 5	78.3875	+ 8	+ 1	—14.3138				
♃ b_w	49.0345	+13	79.3470	+ 6	+ 1	—15.2841				
b_c	49.5300	+ 5	78.8680	+ 6	+ 1	—14.7972	—14.8010	20 41		3—4
b_o	50.0100	+ 5	78.3970	+ 8	+ 1	—14.3218				
♃ c_w	49.0495	+13	79.3390	+ 7	+ 1	—15.2726				
c_c	49.5230	+ 5	78.8655	+ 7	+ 1	—14.7996	—14.7959	21 20	10^h 21^m 21^s	4
c_o	50.0155	+ 5	78.3900	+ 9	+ 1	—14.3156				
♃ d_w	49.0705	+13	79.3215	+ 7	+ 1	—15.2534				
d_c	49.5485	+ 5	78.8490	+ 7	+ 1	—14.7786	—14.7786	21 59		4
d_o	50.0230	+ 5	78.3740	+ 9	+ 1	—14.3039				
♃ e_w	49.0265	+14	79.3550	+ 8	+ 1	—15.2922				
e_c	49.5200	+ 6	78.8920	+ 8	+ 1	—14.8143	—14.8125	22 45		4
e_o	49.9940	+ 6	78.3990	+10	+ 1	—14.3309				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	51.5500	+11	76.8270	+ 9	+ 1	—12.7666	+2.0353						2
b	51.5380	+11	76.8350	+10	+ 1	—12.7766	+2.0244						2
c	51.5550	+11	76.8240	+10	+ 1	—12.7626	+2.0333	+2.0300	+2'0269	+0'0010	—0'0020	**+2'0259**	2—3
d	51.5570	+12	76.8210	+10	+ 1	—12.7601	+2.0185						2—3
e	51.5430	+12	76.8350	+11	+ 1	—12.7742	+2.0383						
II a	50.0655	+ 5	78.3085	+ 8	+ 1	—14.2498	+0.5521						2—3
b	50.0565	+ 5	78.3195	+ 9	+ 1	—14.2599	+0.5411						2—3
c	50.0715	+ 5	78.3105	+ 9	+ 1	—14.2479	+0.5480	+0.5436	+0.5428	+0.0004	—0.0020	**+0.5412**	2—3 Jupite scheibe s
d	50.0695	+ 6	78.3110	+ 9	+ 1	—14.2491	+0.5295						2—3
e	50.0550	+ 6	78.3285	+10	+ 1	—14.2652	+0.5473						2—3
III a	54.1380	+ 3	74.2320	+13		—10.1758	+4.6261						2
b	54.1420	+ 3	74.2395	+13		—10.1776	+4.6234						2
c	54.1410	+ 3	74.2335	+13		—10.1750	+4.6209	+4.6209	+4.6138	+0.0023	—0.0020	**+4.6141**	2—3
d	51.1470	+ 4	74.2330	+14		—10.1668	+4.6118						2—3
e	54.1250	+ 4	74.2480	+14		—10.1903	+4.6222						2—3
IV a	58.4675	+ 5	69.9135	+17		— 5.8519	+8.9500						2
b	58.4660	+ 5	69.9180	+17		— 5.8549	+8.9461						2—3
c	58.4740	+ 6	69.9035	+17		— 5.8436	+8.9523	+8.9489	+8.9351	+0.0042	—0.0020	**+8.9373**	2
d	58.4775	+ 7	69.9040	+18		— 5.8421	+8.9365						3
e	58.4670	+ 8	69.9150	+19		— 5.8528	+8.9597						2—3

Scheinbare Ædiff: M— Centrum = + 5'2700 $f^\circ_\alpha = 0.99844$ $-i^\circ_\alpha = -0.00032$

N— » = —41.4095

Q— » = +14.3271 f_α = **0.99813** $-i_\alpha$ = **—0.00037** ∡ $i_\alpha = +$ 1'3

R— » = —38.7088 *Refr.* = + 6

V— » = — 0.3186 $Tx_♃$ = — 165

W— » = + 0.8860 f'_α = **0.99846** J_α = **—0.00196**

$\alpha_♃ = 8^h\ 6^m.3$

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{*_n + *_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.5330		65.8486							
64.0058	+ 8	64.3802	+ 8	0	+ 1.4706		0.0000	− 1.4706	Luft 3.
67.0120	+ 9	61.3715	+12	0	+ 4.4779		− 0.0013	+ 4.4766	Neblig. Schnee zu erwarten.
67.5628	+35	60.8232	+26	− 2	+ 5.0278		− 0.0806	+ 4.9472	
39.5400	+31	88.8475	− 2	+11	−22.9832		− 0.0094	−22.9926	
39.5795	+40	88.7970	+ 9	+26	−22.9468		− 0.0690	−23.0158	
44.7128	+18	83.6740	− 3	+ 2	−17.8216		0.0000	−17.8216	
94.7892	− 2	33.5977	+21	−21	+42.2503		0.0000	+42.2503	
65.1095	+21	63.2755	+15		+ 2.5751				
64.6555	+21	63.7425	+14		+ 2.1146	+ 2.1141			
64.1890	+13	64.1995	+14		+ 1.6525				
63.6150	+14	64.7820	+22		+ 1.0739				
63.1650	+14	65.2360	+22		+ 0.6219	+ 0.6222			
62.7080	+14	65.6810	+22		+ 0.1709				
62.2280	+14	66.1530	+16		− 0.3048				
61.7950	+14	66.6090	+14		− 0.7492	− 0.7544			
61.3305	+14	67.0645	+14		− 1.2092				
60.7200	+15	67.6745	+24		− 1.8199				
60.2680	+19	68.1280	+24		− 2.2724	− 2.2741			
59.8060	+19	68.5810	+24		− 2.7300				
59.3175	+15	69.0720	+19		− 3.2196				
58.8680	+15	69.5405	+22		− 3.6788	− 3.6805			
58.3930	+15	69.9940	+22		− 4.1430				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.1310	+13	64.2475	+13		+ 1.5996	−0.5145						
62.6440	+14	65.7355	+15		+ 0.1120	−0.5102						
61.2645	+15	67.1140	+13		− 1.2668	−0.5124	−0.5113	−0'.5106	+0'.0008	+0'.0031	+0'.0001	−0'.5066
59.7510	+19	68.6290	+18		− 2.7812	−0.5071						
58.3400	+10	70.0400	+21		− 4.1928	−0.5123						
64.4440	+13	63.9345	+14		+ 1.9125	−0.2016						
62.9580	+14	65.4210	+22		+ 0.4259	−0.1963						
61.5760	+14	66.7965	+14		− 0.9524	−0.1980	−0.1975	−0.1973	+0.0002	+0.0009	+0.0001	−0.1961
60.0610	+21	68.3165	+24		− 2.4701	−0.1960						
58.6550	+15	69.7220	+22		− 3.8760	−0.1955						
63.4570	+13	64.9190	+19		+ 0.9265	−1.1876						
61.9680	+13	66.4050	+13		− 0.5607	−1.1829						
60.5880	+14	67.7850	+21		− 1.9410	−1.1866	−1.1840	−1.1822	+0.0019	+0.0064	+0.0001	−1.1738
59.0745	+14	69.3000	+16		− 3.4550	−1.1809						
57.6660	+ 9	70.7063	+15		− 4.8626	−1.1821						
62.5020	+11	65.8830	+11		− 0.0327	−2.1468						
61.0190	+12	67.3665	+ 9		− 1.5158	−2.1380						
59.6340	+18	68.7544	+14		− 2.9022	−2.1478	−2.1425	−2.1393	+0.0037	+0.0103	+0.0001	−2.1252
58.1230	+ 7	70.2635	+17		− 4.4130	−2.1389						
56.7125	+11	71.6710	+12		− 5.8215	−2.1410						

Scheinbare Decldiff: M— Centrum $= + 3'.0037$ $\quad f^\circ_\delta = 0.99852 \quad i^\circ_\delta = +0.00038$

N— » $= + 3.4510$

Q— » $= -24.4325$ $\quad f_\delta = 0.99799 \quad i_\delta = +0.00026 \quad \measuredangle\, i_\delta = +0'.9$

R— » $= -24.4681$

V— » $= -19.2648$ $\quad f'_\delta = 0.99853 \quad J_\delta = +0.00041$

W— » $= +30.7328$

$\delta_♃ = +21^\circ\ 1'.1$

32 C. **1896. März 16.**

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99

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.2870**		**64.0994**							
S	64.2862	+ 8	64.0985	+ 9	0	0.0000				2—3
M	69.2352	+14	59.1390	+10	0	+ 4.9545				2
N	25.3338	+26	103.0520	+ 5	+18	—38.9500				3
Q	77.8030	+21	50.5822	+20	— 3	+13.5164		9^h 55^m 11^s		3
R	27.7505	+34	100.6230	+13	+20	—36.5270				2—3
V	63.9835	+18	64.3905	+15	0	— 0.2962				2
W	65.1275	+28	63.2520	+23	0	+ 0.8442				3
♃ a_w	72.5938	+15	55.8040	+ 2		+ 8.3018				
a_c	73.0820	+15	55.3145	+ 2		+ 8.7906	+ 8.7952	9 50 46		3—4
a_o	73.5795	+15	54.8070	+ 2		+ 9.2931				
♃ b_w	72.5890	+14	55.7995	+ 1		+ 8.3016				
b_c	73.0860	+14	55.3170	+ 1		+ 8.7914	+ 8.7915	51 27		3
b_o	73.5695	+14	54.8200	+ 1		+ 9.2816				
♃ c_w	72.6010	+14	55.8020	+ 1		+ 8.3064				
c_c	73.0870	+14	55.3140	+ 1		+ 8.7934	+ 8.7942	52 9	9^h 52^m 10^s	3
c_o	73.5680	+14	54.8160	+ 1		+ 9.2828				
♃ d_w	72.5960	+13	55.7990	0		+ 8.3054				
d_c	73.0920	+13	55.3180	0		+ 8.7938	+ 8.7929	52 52		3—4
d_o	73.5710	+13	54.8255	0		+ 9.2796				
♃ e_w	72.5920	+13	55.8070	0		+ 8.2994				
e_c	73.0955	+13	55.3100	0		+ 8.7996	+ 8.7986	53 37		2—3
e_o	73.5850	+13	54.8050	0		+ 9.2968				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	74.4440	+15	53.9290	+ 6		+10.1642	+1.3690						2
b	74.4360	+14	53.9355	+ 5		+10.1569	+1.3654						2
c	74.4415	+13	53.9350	+ 5		+10.1598	+1.3656	+1.3625	+1.'3603	—0.'0003	—0.'0021	**+1.'3579**	2—3
d	74.4285	+13	53.9455	+ 4		+10.1482	+1.3553						2
e	74.4360	+12	53.9380	+ 4		+10.1556	+1.3570						2—3
II	bedeckt												
III a	70.1270	+18	58.2410	+ 8		+ 5.8497	—2.9455						2
b	70.1220	+17	58.2505	+ 7		+ 5.8424	—2.9491						2
c	70.1190	+17	58.2500	+ 6		+ 5.8412	—2.9530	—2.9527	—2.9478	+0.0005	—0.0021	**—2.9494**	2
d	70.1130	+16	58.2570	+ 6		+ 5.8347	—2.9582						1—2
e	70.1190	+16	58.2510	+ 6		+ 5.8407	—2.9579						2
IV a	80.3210	+11	48.0610	+23	— 2	+16.0354	+7.2402						2—3
b	80.3150	+10	48.0670	+22	— 2	+16.0294	+7.2379						2—3
c	80.3210	+ 9	48.0615	+22	— 1	+16.0352	+7.2410	+7.2372	+7.2253	—0.0014	—0.0021	**—7.2288**	2
d	80.3110	+ 9	48.0720	+21	— 1	+16.0250	+7.2321						2
e	80.3185	+ 8	48.0630	+20	— 1	+16.0332	+7.2346						2—3

Scheinbare Ædiff: M— Centrum = + 5.'2701 $\qquad f^\circ_\alpha = 0.99835 \qquad -i^\circ_\alpha = -0.00018$

N— » = —41.4096

Q— » = +14.3271 $\qquad f_\alpha = \mathbf{0.99805} \qquad -i_\alpha = \mathbf{-0.00022} \qquad ♃\ i_\alpha = +\ 0.'8$

R— » = —38.7089 $\qquad Refr. = +\ 4$

V— » = — 0.3186 $\qquad Tx_♃ = +\ 98$

W— » = + 0.8859 $\qquad f'_\alpha = \mathbf{0.99836} \qquad J_\alpha = \mathbf{+0.00080}$

$\alpha_♃ = 8^h\ 6.^m0$

1896. März 16.

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Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 62.5410	mm/10000	mm 65.8486	mm/10000	mm/10000	mm	mm	mm	mm	
62.5400	+10	65.8470	+16	0	0.0000		0.0000	0.0000	Luft 3.
65.5402	+16	62.8388	+11	0	+ 3.0048		— 0.0013	+ 3.0035	
66.0915	+27	62.2935	+25	— 1	+ 3.5528		— 0.0806	+ 3.4722	
38.0775	+29	90.3128	— 3	+ 5	—24.4618		— 0.0094	—24.4712	
38.1070	+38	90.2662	+ 8	+14	—24.4229		— 0.0690	—24.4919	
43.2438	+21	85.1330	— 2	+ 2	—19.2894		0.0000	—19.2894	
93.3205	— 4	35.0662	+21	— 8	+30.7789		0.0000	+30.7789	
55.6080	+ 2	72.7920	+16		— 6.9389				
56.0775	+ 2	72.3250	+14		— 6.4706	— 6.4764			
56.5270	+ 2	71.8725	+14		— 6.0196				
57.0470	+12	71.3450	+15		— 5.4954				
57.5130	+ 8	70.8920	+15		— 5.0360	— 5.0383			
57.9580	+ 8	70.4320	+15		— 4.5836				
58.5335	+13	69.8610	+19		— 4.0102				
58.9870	+13	69.4170	+16		— 3.5614	— 3.5609			
59.4345	+13	68.9640	+16		— 3.1111				
60.0010	+17	68.3940	+21		— 2.5429				
60.4580	+17	67.9445	+21		— 2.0896	— 2.0915			
60.9035	+13	67.4945	+21		— 1.6421				
61.4290	+12	66.9650	+11		— 1.1142				
61.8940	+12	66.5090	+11		— 0.6536	— 0.6507			
62.3590	+12	66.0350	+13		— 0.1842				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
55.7120	+12	72.6760	+17		— 6.8290	—0.3526						
57.1430	+12	71.2370	+16		— 5.3934	—0.3551						
58.6210	+13	69.7610	+20		— 3.9166	—0.3557	—0.3558	—0′3553	+0′0006	—0′0015	+0′0001	**—0′3561**
60.0880	+17	68.2920	+22		— 2.4484	—0.3569						
61.5260	+12	66.8520	+12		— 1.0092	—0.3585						
bedeckt												
56.7230	+10	71.6525	+13		— 5.8111	+0.6653						
58.1585	+ 6	70.2125	+18		— 4.3738	+0.6645						
59.6380	+15	68.7370	+15		— 2.8957	+0.6652	+0.6640	+0.6631	—0.0012	+0.0024	+0.0001	**+0.6644**
61.1040	+11	67.2680	+10		— 1.4282	+0.6633						
62.5445	+10	65.8295	+12		+ 0.0112	+0.6619						
54.2710	+10	74.1165	+18	+ 1	— 8.2692	—1.7928						
55.7120	+ 6	72.6755	+19	+ 1	— 6.8285	—1.7902						
57.1885	+16	71.2020	+18	+ 1	— 5.3530	—1.7921	—1.7937	—1.7911	+0.0030	—0.0101	+0.0001	**—1.7981**
58.6530	+17	69.7345	+22	0	— 3.8872	—1.7957						
60.0900	+21	68.2940	+24	0	— 2.4484	—1.7977						

Scheinbare Decldiff: M—Centrum = + 3′0036 $\quad f^\circ_\delta = 0.99859 \quad i^\circ_\delta = +0.00038$

N— » = + 3.4507

Q— » = —24.4328 $\quad f_\delta$ = **0.99808** $\quad i_\delta$ = **+0.00030** $\quad \measuredangle\, i_\delta = +\ 1'0$

R— » = —24.4683

V— » = —19.2649 $\quad f'_\delta$ = **0.99859** $\quad J_\delta$ = **+0.00041**

W— » = +30.7328

$\delta_♃ = +21°\ 1'8$

32 D. **1896. März 31.**

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.2830**		**64.1054**							
S	64.2822	+ 8	64.1045	+ 9	0	0.0000				1—2
M	69.2318	+13	59.1445	+10	0	+ 4.9550				2
N	25.3278	+25	103.0608	+ 5	+17	—38.9526				2—3
Q	77.7960	+22	50.5880	+22	— 4	+13.5148		10^h 26^m 0^s		2—3
R	27.7435	+35	100.6290	+14	+20	—36.5285				2
V	63.9770	+19	64.3995	+16	0	— 0.2999				2
W	65.1242	+27	63.2545	+23	0	+ 0.8462				2—3
♃ a_w	74.1925	+12	54.1885	+ 3		+ 9.9136				
a_c	74.6685	+10	53.7330	+ 3		+10.3793	+10.3760	10 20 17		3
a_o	75.1180	+10	53.2705	+ 7		+10.8351				
♃ b_w	74.2185	+11	54.1705	+ 3		+ 9.9356				
b_c	74.6760	+11	53.7145	+ 3		+10.3924	+10.3921	20 55		3—4
b_o	75.1305	+11	53.2565	+ 7		+10.8484				
♃ c_w	74.1965	+11	54.1845	+ 3		+ 9.9176				
c_c	74.6490	+11	53.7485	+ 3		+10.3618	+10.3665	21 37	10^h 21^m 38^s	3—4
c_o	75.1015	+11	53.2840	+ 7		+10.8202				
♃ d_w	74.2105	+13	54.1950	+ 3		+ 9.9194				
d_c	74.6585	+11	53.7205	+ 3		+10.3806	+10.3778	22 21		3—4
d_o	75.1160	+11	53.2720	+ 7		+10.8334				
♃ e_w	74.1940	+14	54.1935	+ 4		+ 9.9120				
e_c	74.6725	+12	53.7410	+ 4		+10.3774	+10.3724	23 0		3
e_o	75.1070	+12	53.2740	+ 8		+10.8279				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	73.1285	+13	55.2530	— 1		+ 8.8496	—1.5264						2—3
b	73.1415	+14	55.2390	— 1		+ 8.8632	—1.5289						2
c	73.1260	+14	55.2585	— 1		+ 8.8457	—1.5208	—1.5233	—1′.5208	+0′.0003	—0′.0027	**—1′.5232**	2—3
d	73.1385	+14	55.2470	— 1		+ 8.8577	—1.5201						2
e	73.1310	+15	55.2510	0		+ 8.8520	—1.5204						2
II a	77.6860	+ 8	50.6870	+10	— 1	+13.4105	+3.0345						1—2
b	77.7010	+ 8	50.6745	+10	— 1	+13.4242	+3.0321						1—2
c	77.6815	+ 9	50.6930	+10	— 1	+13.4053	+3.0388	+3.0360	+3.0310	—0.0007	— 0.0027	**+3.0276**	2
d	77.6910	+ 9	50.6820	+10	— 1	+13.4156	+3.0378						2
e	77.6825	+10	50.6865	+11	— 1	+13.4090	+3.0366						2
III a	70.1145	+17	58.2590	+ 5		+ 5.8396	—4.5364						2
b	70.1295	+17	58.2440	+ 5		+ 5.8546	—4.5375						2
c	70.1050	+17	58.2670	+ 5		+ 5.8308	—4.5357	—4.5368	—4.5293	+0.0009	—0.0027	**—4.5311**	2
d	70.1150	+18	58.2560	+ 5		+ 5.8414	—4.5364						1—2
e	70.1095	+19	58.2645	+ 6		+ 5.8344	—4.5380						2
IV a	83.2200	+ 2	45.1670	+19	— 2	+18.9366	+8.5606						2—3
b	83.2310	+ 2	45.1520	+18	— 2	+18.9497	+8.5576						2—3
c	83.2130	+ 3	45.1720	+18	— 2	+18.9308	+8.5643	+8.5617	+8.5476	—0.0017	—0.0027	**+8.5432**	3
d	83.2205	+ 3	45.1620	+18	— 2	+18.9395	+8.5617						2—3
e	83.2175	+ 3	45.1650	+18	— 2	+18.9365	+8.5641						3

Scheinbare Ædiff: M—Centrum = + 5′.2702 $f^\circ_\alpha = 0.99833$ $-i^\circ_\alpha = -0.00030$

N— » = —41.4104

Q— » = +14.3274 $f_\alpha = \mathbf{0.99802}$ $-i_\alpha = \mathbf{-0.00036}$ $\measuredangle\, i_\alpha = +\ 1'.2$

R— » = —38.7093 *Refr.* = + 6

V— » = — 0.3184 $Tx_♃$ = + 116

W— » = + 0.8858 $f'_\alpha = \mathbf{0.99835}$ $J_\alpha = \mathbf{+0.00086}$

$\alpha_♃ = 8^h\ 5^m.9$

1896. März 31.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.5410		**65.8486**							
61.0475	+10	67.3340	+ 8	0	− 1.4894		0.0000	− 1.4894	Luft beinahe 1.
64.0508	+ 9	64.3275	+10	0	+ 1.5154		− 0.0013	+ 1.5141	
64.6032	+33	63.7788	+24	− 1	+ 2.0664		− 0.0806	+ 1.9858	
36.5815	+28	92.8025	− 1	+ 6	−25.9546		− 0.0094	−25.9640	
36.6198	+37	92.7555	+10	+15	−25.9112		− 0.0690	−25.9802	
41.7505	+22	86.6298	− 4	+ 2	−20.7844		0.0000	−20.7844	
91.8310	− 6	36.5525	+23	−17	+29.2899		0.0000	+29.2899	
63.9710	+12	64.4230	+12		+ 1.4278				
64.4105	+12	63.9930	+12		+ 1.8626	+ 1.8601			
64.8325	+20	63.5610	+12		+ 2.2900				
65.4240	+14	62.9700	+13		+ 2.8808				
65.8660	+14	62.5420	+13		+ 3.3158	+ 3.3124			
66.2815	+14	62.1080	+13		+ 3.7406				
66.8900	+12	61.5065	+14		+ 4.3454				
67.3200	+12	61.0810	+14		+ 4.7732	+ 4.7705			
67.7340	+22	60.6565	+14		+ 5.1930				
68.2190	+22	60.0820	+18		+ 5.7725				
68.7610	+17	59.6500	+18		+ 6.2092	+ 6.2089			
69.1890	+17	59.2070	+14		+ 6.6450				
69.7790	+20	58.6150	+ 9		+ 7.2364				
70.2170	+20	58.1885	+ 9		+ 7.6686	+ 7.6674			
70.6400	+16	57.7540	+ 9		+ 8.0972				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta\,(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x^2)_♃\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.7810	+19	63.6040	+11		+ 2.2427	+0.3826						
66.2230	+13	62.1585	+12		+ 3.6861	+0.3737						
67.6895	+21	60.1905	+13		+ 5.1537	+0.3832	+0.3761	+0'.3755	−0'.0007	+0'.0016	+0'.0002	**+0'.3766**
69.1130	+16	59.2700	+13		+ 6.5754	+0.3665						
70.5795	+15	57.8040	+ 8		+ 8.0419	+0.3745						
63.6330	+14	64.7405	+21		+ 1.0997	−0.7604						
65.0780	+22	63.2980	+14		+ 2.5442	−0.7682						
66.5435	+14	61.8335	+14		+ 4.0088	−0.7617	−0.7671	−0.7659	+0.0015	−0.0040	+0.0002	**−0.7682**
67.9660	+24	60.4075	+19		+ 5.4333	−0.7756						
69.4310	+19	58.9440	+15		+ 6.8975	−0.7699						
65.4790	+17	62.8915	+11		+ 2.9478	+1.0877						
66.9250	+ 9	61.4450	+12		+ 4.3936	+1.0812						
68.3920	+19	59.9820	+16		+ 5.8590	+1.0885	+1.0827	+1.0810	−0.0022	+0.0041	+0.0002	**+1.0831**
69.8140	+17	58.5570	+12		+ 7.2826	+1.0737						
71.2830	+13	57.0910	+11		+ 8.7499	+1.0825						
62.3690	+18	66.0155	+16	0	− 0.1694	−2.0295						
63.8125	+17	64.5715	+22	0	+ 1.2740	−2.0384						
65.2805	+25	63.1000	+15	0	+ 2.7446	−2.0259	−2.0340	−2.0309	+0.0042	−0.0140	+0.0002	**−2.0405**
66.7045	+17	61.6760	+15	− 1	+ 4.1680	−2.0409						
68.1690	+27	60.2130	+20	− 1	+ 5.6320	−2.0354						

Scheinbare Decldiff:
M— Centrum = + 3'.0036
N— » = + 3.4507
Q— » = −24.4329
R— » = −24.4688
V— » = −19.2652
W— » = +30.7333

$\delta_♃ = +21°\ 1'.9$

$f^\circ_\delta = 0.99848$ $\quad i^\circ_\delta = +0.00046$

f_δ = **0.99795** $\quad i_\delta$ = **+0.00034** $\quad \measuredangle\, i_\delta = +\ 1'.2$

f'_δ = **0.99849** $\quad J_\delta$ = **+0.00049**

33 A.

1896. April 1.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.7647**		**64.6231**							
S	63.7638	+ 9	64.6215	+16	0	0.0000				2
M	68.7148	+15	59.6670	+15	0	+ 4.9531				2
N	24.8062	+27	103.5605	+ 7	+18	−38.9552				3
Q	77.2922	+20	51.0922	+18	− 3	+13.5290		11^h 11^m 19^s		3
R	27.2385	+33	101.1355	+11	+19	−36.5163				2—3
V	63.4682	+17	64.9095	+22	0	− 0.2917				2
W	64.5910	+28	63.7935	+24	0	+ 0.8282				3
♃ a_w	49.5355	+ 8	78.8590	+ 9	+ 1	−14.2325				
a_c	49.9655	+ 8	78.4320	+11	+ 1	−13.8041	−13.8022	11 16 30		3
a_o	50.3960	+ 8	77.9943	+11	+ 1	−13.3700				
♃ b_w	49.5660	+ 8	78.8365	+ 8	+ 1	−14.2014				
b_c	49.9950	+ 8	78.4075	+10	+ 1	−13.7770	−13.7762	17 4		2—3
b_o	50.4200	+ 8	77.9790	+10	+ 1	−13.3503				
♃ c_w	49.5390	+ 7	78.8635	+ 7	+ 1	−14.2330				
c_c	49.9665	+ 7	78.4340	+ 9	+ 1	−13.8046	−13.7974	17 37	11^h 17^m 38^s	2—3
c_o	50.4115	+ 7	77.9790	+ 9	+ 1	−13.3546				
♃ d_w	49.5550	+ 6	78.8445	+ 7	+ 1	−14.2155				
d_c	49.9780	+ 6	78.4115	+ 9	+ 1	−13.7876	−13.7846	18 13		2—3
d_o	50.4160	+ 6	77.9760	+ 9	+ 1	−13.3508				
♃ e_w	49.5520	+ 6	78.8540	+ 6	+ 1	−14.2217				
e_c	49.9745	+ 6	78.4305	+ 8	+ 1	−13.7988	−13.7934	18 48		3
e_o	50.4075	+ 6	77.9855	+ 8	+ 1	−13.3598				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	50.7330	+13	77.6440	+11	+ 1	−13.0261	+0.7761						2
b	50.7470	+13	77.6300	+10	+ 1	−13.0120	+0.7642						2
c	50.7330	+12	77.6480	+ 9	+ 1	−13.0280	+0.7694	+0.7677	+0.′7664	+0.′0003	−0.′0027	**+0.′7640**	2—3
d	50.7395	+11	77.6350	+ 9	+ 1	−13.0178	+0.7668						2—3
e	50.7280	+11	77.6495	+ 8	+ 1	−13.0313	+0.7621						2
II a	49.2390	+16	79.1355	+ 9	+ 1	−14.5186	−0.7164						2
b	49.2570	+16	79.1210	+ 8	+ 1	−14.5023	−0.7261						2
c	49.2410	+15	79.1355	+ 7	+ 1	−14.5176	−0.7202	−0.7223	−0.7211	−0.0001	−0.0027	**−0.7239**	2—3
d	49.2490	+15	79.1270	+ 7	+ 1	−14.5093	−0.7247						2—3
e	49.2420	+14	79.1365	+ 6	+ 1	−14.5176	−0.7242						2—3
III a	45.8425	+18	82.5315	+ 6	+ 2	−17.9144	−4.1122						2
b	45.8600	+17	82.5140	+ 5	+ 2	−17.8970	−4.1208						2
c	45.8440	+17	82.5270	+ 4	+ 2	−17.9114	−4.1140	−4.1142	−4.1073	−0.0013	−0.0027	**−4.1113**	2
d	45.8580	+16	82.5135	+ 3	+ 2	−17.8977	−4.1131						2 etwas ellipt.
e	45.8520	+16	82.5210	+ 3	+ 2	−17.9044	−4.1110						2
IV a	57.9020	+ 8	70.4810	+18		− 5.8608	+7.9414						2—3
b	57.9165	+ 7	70.4630	+17		− 5.8436	+7.9326						2—3
c	57.9055	+ 6	70.4820	+17		− 5.8596	+7.9378	+7.9373	+7.9240	+0.0025	−0.0027	**+7.9238**	2—3
d	57.9150	+ 6	70.4680	+16		− 5.8478	+7.9368						2
e	57.9070	+ 6	70.4755	+16		− 5.8556	+7.9378						2

Scheinbare Ædiff: M— Centrum = + 5.′2703 N— » = −41.4104 Q— » = +14.3274 R— » = −38.7093 V— » = − 0.3184 W— » = + 0.8858

$\alpha_♃ = 8^h\ 6.^m0$

$f^\circ_\alpha = 0.99830$ $f_\alpha = \mathbf{0.99795}$ $f'_\alpha = \mathbf{0.99833}$

$-i^\circ_\alpha = +0.00022$ $-i_\alpha = \mathbf{+0.00013}$ *Refr.* = + 12 $Tx_♃$ = − 154 $J_\alpha = \mathbf{-0.00129}$

$\measuredangle\ i_\alpha = -\ 0.′4$

1896. April 1.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.4043		63.9813							
65.9240	+16	62.4650	+ 9	0	+ 1.5184		0.0000	+ 1.5184	Luft 3.
68.9272	+14	59.4555	+11	0	+ 4.5245		− 0.0013	+ 4.5232	
69.4592	+30	58.9268	+10	− 2	+ 5.0555		− 0.0806	+ 4.9749	
41.4632	+30	86.9248	+ 1	+ 4	−22.9404		− 0.0094	−22.9498	
41.4712	+40	86.9050	+12	+12	−22.9258		− 0.0690	−22.9948	
46.6300	+ 9	81.7558	+ 1	+ 2	−17.7738		0.0000	−17.7738	
96.7092	0	31.6815	+19	− 9	+32.3105		0.0000	+32.3105	
74.0890	+17	54.3070	+ 9	− 1	+ 9.6798				
73.6990	+17	54.7115	+ 5	− 1	+ 9.2828	+ 9.2782			
73.2800	+18	55.1140	+ 5	− 1	+ 8.8720				
72.5675	+16	55.8250	+ 5	− 1	+ 8.1602				
72.1740	+16	56.2310	+ 5	− 1	+ 7.7604	+ 7.7587			
71.7660	+16	56.6330	+ 5	− 1	+ 7.3554				
71.0770	+17	57.3180	+15		+ 6.6681				
70.6890	+17	57.7170	+11		+ 5.2748	+ 6.2679			
70.2695	+17	58.1255	+11		+ 5.8608				
69.6630	+21	58.7305	+16		+ 5.2550				
69.2650	+18	59.1340	+16		+ 4.8541	+ 4.8526			
68.8535	+18	59.5430	+16		+ 4.4488				
68.1870	+23	60.2030	+20		+ 3.7806				
67.7985	+23	60.6015	+16		+ 3.3874	+ 3.3825			
67.3870	+13	61.0045	+16		+ 2.9796				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
73.4650	+18	54.9205	+ 5		+ 9.0614	−0.2168						
71.9470	+16	56.4385	+ 5		+ 7.5433	−0.2154						
70.4570	+21	57.9260	+11		+ 6.0545	−0.2134	−0.2148	−0'.2144	0.0000	+0'.0011	+0'.0002	**−0'.2131**
69.0410	+18	59.3445	+16		+ 4.6368	−0.2158						
67.5750	+23	60.8125	+16		+ 3.1701	−0.2124						
73.8070	+17	54.5760	+ 5	− 1	+ 9.4045	+0.1263						
72.2900	+16	56.1000	+ 5	− 1	+ 7.8840	+0.1253						
70.8020	+17	57.5850	+11	− 1	+ 6.3972	+0.1293	+0.1276	+0.1274	0'.0000	−0.0012	+0.0002	**+0.1264**
69.3835	+18	59.0030	+16	0	+ 4.9788	+0.1262						
67.9180	+23	60.4680	+20	0	+ 3.5136	+0.1311						
74.7280	+16	53.6510	+11	− 1	+10.3272	+1.0490						
73.2085	+19	55.1680	+ 7	− 1	+ 8.8092	+1.0505						
71.7170	+17	56.6620	+17	− 1	+ 7.3159	+1.0480	+1.0478	+1.0460	−0.0001	−0.0073	+0.0002	**+1.0388**
70.2970	+22	58.0780	+13	− 1	+ 5.8984	+1.0458						
68.8280	+19	59.5480	+22	− 1	+ 4.4282	+1.0457						
71.7400	+13	56.6505	+10		+ 7.3334	−1.9448						
70.2170	+18	58.1720	+ 6		+ 5.8116	−1.9471						
68.7265	+15	59.6645	+15		+ 4.3195	−1.9484	−1.9468	−1.9435	+0.0002	+0.0087	+0.0002	**−1.9344**
67.3110	+10	61.0760	+11		+ 2.9060	−1.9466						
65.8395	+12	62.5460	+10		+ 1.4354	−1.9471						

Scheinbare Decldiff: *M*—Centrum = + 3'.0036 $f^\circ_\delta = 0.99829$ $i^\circ_\delta = -0.00004$

N— » = + 3.4507

Q— » = −24.4329 $f_\delta = \mathbf{0.99770}$ $i_\delta = \mathbf{-0.00023}$ $\measuredangle\, i_\delta = -0'.8$

R— » = −24.4688

V— » = −19.2652 $f'_\delta = \mathbf{0.99833}$ $J_\delta = \mathbf{+0.00002}$

W— » = +30.7333

$\delta_♃ = +21°\ 1'.6$

33 B. **1896. April 7.** **102.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**63.7353**		**64.6518**							
S	63.7345	+ 8	64.6502	+16	0	0.0000				2—3 stark ellipt.
M	68.6825	+14	59.6918	+14	0	+ 4.9536				2—3 » »
N	24.7765	+26	103.6100	+ 6	+18	—38.9557				3 » »
Q	77.2618	+21	51.1255	+19	— 3	+13.5262		9^h 49^m 53^s		3 ellipt.
R	27.2060	+34	101.1668	+12	+21	—36.5190				2—3 stark ellipt.
V	63.4352	+18	64.9380	+22	0	— 0.2934				2—3 ellipt.
W	64.5655	+28	63.8208	+23	0	+ 0.8308				3—4
♃ a_w	54.6230	— 1	73.7650	+12		— 9.1134				
a_c	55.0540	— 1	73.3525	+13		— 8.6917	— 8.6858	9 45 13		3—4
a_o	55.4875	— 1	72.9075	+13		— 8.2524				
♃ b_w	54.6065	— 1	73.7880	+13		— 9.1332				
b_c	55.0475	— 1	73.2570	+14		— 8.6972	— 8.6957	46 3		3
b_o	55.4855	— 1	72.9140	+14		— 8.2568				
♃ c_w	54.6315	— 1	73.7580	+13		— 9.1057				
c_c	55.0655	— 1	73.3490	+14		— 8.6842	— 8.6794	46 41	9^h 46^m 39^s	3
c_o	55.4955	— 1	72.9070	+14		— 8.2482				
♃ d_w	54.6170	0	73.7800	+13		— 9.1239				
d_c	55.0560	0	73.3430	+14		— 8.6860	— 8.6862	47 18		3
d_o	55.4910	0	72.9035	+14		— 8.2487				
♃ e_w	54.6290	0	73.7670	+14		— 9.1114				
e_c	55.0700	0	73.2330	+15		— 8.6740	— 8.6677	47 59		2—3
e_o	55.5220	0	72.8725	+15		— 8.2178				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	53.2310	+ 7	75.1590	+10		—10.5059	—1.8201						2
b	53.2180	+ 7	75.1725	+11		—10.5192	—1.8235						2
c	53.2375	+ 7	75.1490	+11		—10.4977	—1.8183	—1.8206	—1'.8175	—0'.0004	—0'.0028	**—1'.8207**	2
d	53.2305	+ 7	75.1580	+11		—10.5057	—1.8195						2
e	53.2490	+ 8	75.1440	+12		—10.4894	—1.8217						2—3
II a	57.8940	+ 5	70.4870	+17		— 5.8388	+2.8470						2 eiförmig.
b	57.8800	+ 5	70.4995	+17		— 5.8521	+2.8436						2
c	57.9040	+ 5	70.4790	+17		— 5.8298	+2.8496	+2.8465	+2.8417	+0.0006	—0.0028	**+2.8395**	2
d	57.8930	+ 6	70.4880	+18		— 5.8398	+2.8464						2
e	57.9110	+ 6	70.4695	+19		— 5.8216	+2.8461						2—3 geschweift.
III a	50.9720	+10	77.4010	+ 9	+ 1	—12.7560	—4.0702						2
b	50.9600	+10	77.4120	+ 9	+ 1	—12.7676	—4.0719						2
c	50.9800	+10	77.3930	+10	+ 1	—12.7482	—4.0688	—4.0711	—4.0643	—0.0008	—0.0028	**—4.0679**	2
d	50.9730	+10	77.4015	+10	+ 1	—12.7559	—4.0697						2
e	50.9850	+11	77.3865	+11	+ 1	—12.7424	—4.0747						2—3 eiförmig.
IV a	47.7850	+20	80.5970	+14	+ 1	—15.9474	—7.2616						2
b	47.7725	+19	80.6090	+14	+ 1	—15.9598	—7.2641						2
c	47.7915	+19	80.5930	+15	+ 1	—15.9422	—7.2628	—7.2634	—7.2511	—0.0014	—0.0028	**—7.2553**	2
d	47.7850	+19	80.6005	+15	+ 1	—15.9492	—7.2630						2—3
e	47.8005	+20	80.5835	+16	+ 1	—15.9330	—7.2653						2—3

Scheinbare Ædiff: M—Centrum = + 5'.2703 $\quad f^\circ_\alpha = 0.99830 \quad -i^\circ_\alpha = +0.00013$

N— » = —41.4107

Q— » = +14.3275 $\quad f_\alpha = \mathbf{0.99800} \quad -i_\alpha = \mathbf{+0.00010} \quad \measuredangle\, i_\alpha = -0'.3$

R— » = —38.7095 $\quad$ *Refr.* = + 4

V— » = — 0.3183 $\quad T x_♃$ = — 97

W— » = + 0.8857 $\quad f'_\alpha = \mathbf{0.99831} \quad J_\gamma = \mathbf{-0.00083}$

$\alpha_♃ = 8^h\ 6^m.8$

1896. April 7.

Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.4043		63.9813							
64.4035	+ 8	63.9805	+ 8	0	0.0000		0.0000	0.0000	Luft 2.
67.4142	+ 9	60.9745	+11	0	+ 3.0082		− 0.0013	+ 3.0069	
67.9368	+35	60.4495	+30	− 1	+ 3.5323		− 0.0806	+ 3.4517	
39.9492	+30	88.4438	− 1	+ 5	−24.4568		− 0.0094	−24.4662	
39.9532	+41	88.4300	+10	+14	−24.4470		− 0.0690	−24.5160	
45.1085	+19	83.2748	+ 2	+ 2	−19.2936		0.0000	−19.2936	
95.1920	− 2	33.1975	+19	− 8	+30.7839		0.0000	+30.7839	
64.0725	+11	64.3345	+11		− 0.3425				
63.6690	+11	64.7295	+19		− 0.7422	− 0.7464			
63.2540	+12	65.1390	+19		− 0.1544				
62.5910	+12	65.8025	+13		− 1.8173				
62.1840	+12	66.2150	+13		− 2.2270	− 2.2272			
61.7705	+12	66.6220	+13		− 2.6373				
61.1265	+13	67.2695	+11		− 3.2829				
60.7250	+13	67.6745	+21		− 3.6866	− 3.6897			
60.3085	+13	68.0840	+21		− 4.0996				
59.6955	+17	68.7040	+16		− 4.7157				
59.2890	+13	69.1150	+16		− 5.1246	− 5.1245			
58.8830	+13	69.5260	+16		− 5.5332				
58.2240	+ 8	70.1800	+19		− 6.1900				
57.8220	+ 8	70.5870	+15		− 6.5944	− 6.5996			
57.3970	+ 8	71.0020	+15		− 7.0144				

Trabant — Jupiterscentrum.

P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.1065	+12	64.2760	+12		− 0.2962	+0.4502						
62.6270	+13	65.7590	+14		− 1.7776	+0.4496						
61.1650	+14	67.2220	+12		− 3.2399	+0.4498	+0.4505	+0'.4498	+0'.0003	−0'.0020	+0'.0002	+0'.4483
59.7340	+18	68.6550	+17		− 4.6720	+0.4525						
58.2580	+ 9	70.1325	+20		− 6.1493	+0.4505						
62.9450	+11	65.4410	+17		− 1.4598	−0.7134						
61.4640	+12	66.9225	+ 9		− 2.9406	−0.7134						
60.0040	+16	68.3830	+19		− 4.4012	−0.7115	−0.7131	−0.7120	−0.0004	+0.0023	+0.0002	−0.7099
58.5680	+12	69.8200	+17		− 5.8378	−0.7133						
57.0915	+11	71.2955	+13		− 7.3136	−0.7140						
64.6280	+21	63.7545	+13		+ 0.2256	+0.9720						
63.1455	+14	65.2305	+21		− 1.2544	+0.9728						
61.6805	+14	66.6940	+13		− 2.7182	+0.9715	+0.9734	+0.9719	+0.0006	−0.0048	+0.0002	+0.9679
60.2530	+19	68.1240	+23		− 4.1472	+0.9773						
58.7755	+15	69.6040	+21		− 5.6260	+0.9736						
65.3410	+22	63.0445	+16		+ 0.9370	+1.6834						
63.8605	+14	64.5240	+23		− 0.5437	+1.6835						
62.3980	+15	65.9880	+17		− 2.0066	+1.6831	+1.6837	+1.6809	+0.0011	−0.0100	+0.0002	+1.6722
60.9635	+16	67.4210	+15		− 3.4402	+1.6843						
59.4895	+16	68.8970	+20		− 4.9154	+1.6842						

Scheinbare Decldiff: M—Centrum $= + 3'.0035$ $\quad f^\circ_\delta = 0.99843 \quad i^\circ_\delta = -0.00017$

N— » $= + 3.4507$

Q— » $= -24.4330$ $\quad f_\delta = 0.99792 \quad i_\delta = -0.00025 \quad \measuredangle\, i_\delta = -0'.9$

R— » $= -24.4690$

V— » $= -19.2653$ $\quad f'_\delta = 0.99842 \quad J_\delta = -0.00015$

W— » $= +30.7335$

$\delta_♃ = +20^\circ\ 58'.9$

A. OPPOSITION 1896.

II. PULKOWAER CLICHÉS.

36 A. **1895. December 27.**

Æ **103.**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**64.0805**		**64.3104**							
M	64.0797	+ 8	64.3096	+ 8	0	0.0000				2
N	19.9499	+23	108.4413	+ 5	+24	−44.1274		$7^h\ 4.^m0$		2
Q	72.7047	+27	55.6879	+11	− 2	+ 8.6240				2—3
R	22.4112	+38	105.9765	+18	+28	−41.6639				3—4 etwas ellipt.
♃ a_w	66.3983	+11	62.0105	+ 9		+ 2.3090				
a_c	66.8400	+ 9	61.5537	+ 9		+ 2.7581	+ 2.7600	$7^h\ 0^m\ 36^s$		3—4
a_o	67.3118	+ 9	61.1160	+10		+ 3.2128				
♃ c_w	66.4728	+10	61.9330	+ 9		+ 2.3849				
c_c	66.8940	+ 8	61.4948	+10		+ 2.8144	+ 2.8178	4 1		3—4
c_o	67.3438	+ 8	61.0650	+10		+ 3.2542			$7^h\ 4^m\ 15^s$	
♃ d_w	66.3963	+10	62.0075	+ 9		+ 2.3094				
d_c	66.8316	+ 8	61.5642	+ 9		+ 2.7486	+ 2.7522	5 36		3—4
d_o	67.2898	+ 8	61.1224	+10		+ 3.1986				
♃ e_w	66.4428	+10	61.9570	+10		+ 2.3578				
e_c	66.8626	+ 8	61.5202	+10		+ 2.7860	+ 2.7849	6 46		3
e_o	67.2964	+ 8	61.1044	+11		+ 3.2108				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	68.8181	+14	59.5767	+14		+ 4.7356	+1.9756						2—3
c	68.8786	+13	59.5152	+14		+ 4.7966	+1.9788	+1.9800	+1.′9667	−0.′0009	+0.′0009	**+1.′9667**	4 verwaschen.
d	68.8196	+13	59.5748	+14		+ 4.7373	+1.9851						4—5 verwaschen.
e	68.8471	+13	59.5462	+15		+ 4.7653	+1.9804						3
II	Geht durch die Jupiterscheibe.												
III a	69.8361	+17	58.5522	+10		+ 5.7572	+2.9972						2—3
c	69.8850	+16	58.5062	+10		+ 5.8046	+2.9868	+2.9864	+2.9663	−0.0014	+0.0009	**+2.9658**	4 verwaschen.
d	69.8161	+16	58.5782	+10		+ 5.7342	+2.9820						4 verwaschen.
e	69.8456	+16	58.5468	+11		+ 5.7646	+2.9797						3
IV a	64.4068	+ 9	63.9870	+ 8		+ 0.3249	−2.4351						3
c	64.4538	+ 8	63.9426	+ 8		+ 0.3706	−2.4472	−2.4450	−2.4285	+0.0009	+0.0009	**−2.4267**	unterexp.
d	64.3868	+ 8	64.0110	+ 8		+ 0.3028	−2.4494						»
e	64.4148	+ 8	63.9815	+ 9		+ 0.3316	−2.4533						

Scheinbare Ædiff: N—Centrum $= -46.'6732$ $\quad f^\circ_\alpha = 0.99327$ $\quad -i^\circ_\alpha = +0.00121$

Q— » $= +\ 9.0567$ $\quad f_\alpha = \mathbf{0.99298}$ $\quad -i_\alpha = \mathbf{+0.00123}$ $\quad \measuredangle\ i_\alpha = -4.'2$

R— » $= -43.9725$ $\quad$ Refr. $= -\ 5$

$\alpha_♃ = 8^h\ 40.^m2$ $\quad$ $Tx_♃ = +\ 28$

$f'_\alpha = \mathbf{0.99328}$ $\quad J\alpha = \mathbf{+0.00146}$

1895. December 27.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.6576		**64.7348**							
63.6568	+ 8	64.7332	+16	0	0.0000		0.0000	0.0000	Bilder 3—4.
64.1555	+24	64.2386	+25	0	+ 0.4970		— 0.1022	+ 0.3948	
36.0616	+24	92.3328	— 3	+ 6	—27.5950		— 0.0038	—27.5988	
36.0356	+38	92.3519	+11	+21	—27.6161		— 0.0890	—27.7051	
68.7911	+13	59.6302	+15		+ 5.1190				Die erste Jupitersaufnahme scheint in Decl. verzerrt, vielleicht durch Erschütterung des Fernrohrs.
68.3598	+18	60.0645	+15		+ 4.6864	+ 4.6869			
67.9206	+18	60.4878	+15		+ 4.2552				
65.6[illegible]2	+10	62.7701	+10		+ 1.9732				
65.2329	+16	63.1769	+10		+ 1.5669	+ 1.5648			
64.8171	+16	63.5862	+ 9		+ 1.1544				
62.4702	+ 9	65.9510	+11		— 1.2019				
62.0490	+ 9	66.3588	+11		— 1.6164	— 1.6150			
61.6332	+ 9	66.7641	+ 9		— 2.0268				
60.8660	+10	67.5348	+19		— 2.7962				
60.4722	+14	67.9376	+19		— 3.1944	— 3.1968			
60.0670	+14	68.3434	+19		— 3.5998				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.7611	+18	60.6347	+11		+ 4.1022	—0.5847						
64.6402	+16	63.7581	+ 9		+ 0.9800	—0.5848	—0.5868	—0'.5830	—0'.0027	—0'.0007	—0'.0001	**—0'.5865**
61.4548	+10	66.9430	+ 9		— 2.2054	—0.5904						
59.8756	+14	68.5208	+19		— 3.7842	—0.5874						
Geht du	rch	die Jupiter	sche	ibe								
67.3988	+ 9	60.9955	+12		+ 3.7401	—0.9468						
64.2814	+ 9	64.1160	+10		+ 0.6212	—0.9436						
61.1020	+11	67.2948	+10		— 2.5578	—0.9428	—0.9444	—0.9382	—0.0041	—0.0013	—0.0001	**—0.9427**
59.5172	+15	68.8770	+15		— 4.1413	—0.9445						
68.9550	+13	59.4398	+10		+ 5.2964	+0.6095						
65.8421	+10	62.5562	+ 9		+ 2.1816	+0.6168						
62.6602	+ 9	65.7392	+10		— 0.0010	+0.6140	+0.6143	+0.6103	+0.0033	+0.0004	—0.0001	**+0.6139**
61.0824	+10	67.3198	+ 8		— 2.5800	+0.6168						

Scheinbare Decldiff: N—Centrum = + 0'.4467 $f^\circ_\delta = 0.99348$ $i^\circ_\delta = -0.00132$

Q— » = —27.4328 f_δ = **0.99299** i_δ = **—0.00126** $\measuredangle\, i_\delta = -4'.3$

R— » = —27.4690 f'_δ = **0.99352** J_δ = **—0.00137**

$\delta_♃ = +18°\ 59'.4$

36 B. 1895. December 27.

Æ 104.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	Anhaltsterne wie 36 A.									
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ g_w	60.1404	+14	68.2628	+19		− 3.9465				
g_c	60.5792	+10	67.7991	+19		− 3.4954	− 3.4951	7^h 23^m 36^s		3
g_o	61.0450	+10	67.3618	+ 9		− 3.0434				
♃ h_w	60.1569	+14	68.2394	+19		− 3.9216				
h_c	60.5992	+10	67.7921	+19		− 3.4820	− 3.4845	25 23		2
h_o	61.0350	+10	67.3648	+ 9		− 3.0499			7^h 26^m 2^s	
♃ i_w	60.2079	+14	68.1954	+18		− 3.8790				
i_c	60.6227	+10	67.7706	+18		− 3.4594	− 3.4580	26 39(36)?		2—3
i_o	61.0555	+10	67.3568	+ 8		− 3.0356				
♃ k_w	60.1499	+14	68.2578	+18		− 3.9392				
k_c	60.5728	+10	67.8271	+18		− 3.5126	− 3.5129	28 31		2—3
k_o	60.9970	+10	67.4008	+ 8		− 3.0868				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I g	62.6097	+ 9	65.7861	+11		− 1.4734	+2.0217						3—4
h	62.6127	+ 9	65.7826	+11		− 1.4701	+2.0144	+2.0184	+2'.0049	−0'.0005	+0'.0009	+2'.0053	3—4
i	62.6427	+ 9	65.7521	+10		− 1.4398	+2.0182						3
k	62.5907	+ 9	65.8081	+10		− 1.4938	+2.0191						3—4
II	Geht durch		die Jupiterscheibe.										
III g	63.5282	+ 9	64.8660	+17		− 0.5544	+2.9407						3
h	63.5238	+ 9	64.8680	+17		− 0.5576	+2.9269	+2.9288	+2.9091	−0.0008	+0.0009	+2.9092	3
i	63.5532	+ 9	64.8460	+16		− 0.5318	+2.9262						3—4
k	63.4912	+ 9	64.9030	+16		− 0.5913	+2.9216						2—3
IV g	58.1080	+ 5	70.2878	+17		− 5.9756	−2.4805						4 verwaschen.
h	58.1020	+ 5	70.2938	+17		− 5.9816	−2.4971	−2.4939	−2.4771	+0.0005	+0.0009	−2.4757	3
i	58.1280	+ 5	70.2673	+16		− 5.9552	−2.4972						unterexp.
k	58.0720	+ 5	70.3284	+16		− 6.0138	−2.5009						»

Scheinbare Ædiff. wie 36 A.

$f^\circ_\alpha = 0.99327$ $-i^\circ_\alpha = +0.00121$

$f_\alpha = \mathbf{0.99298}$ $-i_\alpha = \mathbf{+0.00123}$ $\measuredangle\, i_\alpha = -4'.2$

$Refr. = - \quad 5$

$Tx_♃ = - \quad 35$

$f'_\alpha = \mathbf{0.99328}$ $J_\alpha = \mathbf{+0.00085}$

$\alpha_♃ = 8^h\ 40^m.2$

1895. December 27.

Reihe.

Decl.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	**erne**	**wie 36 A.**							
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
60.1040	+15	68.3018	+18		− 3.5604				Bilder 3—4.
60.5252	+11	67.8830	+18		− 3.1406	− 3.1408			
60.9495	+11	67.4688	+18		− 2.7214				
61.8381	+10	66.5717	+10		− 1.8282				
62.2434	+10	66.1654	+10		− 1.4224	− 1.4222			
62.6526	+10	65.7616	+10		− 1.0159				
63.3478	+10	65.0690	+16		− 0.3223				
63.7462	+ 9	64.6662	+16		+ 0.0782	+ 0.0779			
64.1410	+ 9	64.2628	+ 8		+ 0.4778				
64.8846	+17	63.5268	+ 9		+ 1.2179				
65.2808	+17	63.1280	+ 9		+ 1.6154	+ 1.6138			
65.6722	+11	62.7332	+ 9		+ 2.0082				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
59.9196	+14	68.4758	+18		− 3.7397	−0.5989						
61.6332	+ 9	66.7611	+ 8		− 2.0253	−0.6031	−0.5998	−0.'5959	−0.'0027	+0.'0005	−0.'0001	**−0.'5982**
63.1420	+ 9	65.2548	+16		− 0.5182	−0.5961						
64.6722	+16	63.7252	+ 8		+ 1.0125	−0.6013						
Geht du	**rch**	**die Jupiter**	**sche**	**ibe.**								
59.5882	+14	68.8101	+ 9		− 4.0721	−0.9313						
61.3034	+10	67.0914	+ 8		− 2.3603	−0.9381	−0.9304	−0.9244	−0.0039	+0.0006	−0.0001	**−0.9278**
62.8121	+ 9	65.5832	+10		− 0.8470	−0.9249						
64.3458	+ 8	64.0500	+ 8		+ 0.6865	−0.9273						
61.1454	+12	67.2518	+ 9		− 2.5144	+0.6264						
62.8590	+11	65.5362	+11		− 0.8001	+0.6221	+0.6268	+0.6227	+0.0033	−0.0012	−0.0001	**+0.6247**
64.3678	+10	64.0305	+ 9		+ 0.7072	+0.6293						
65.9046	+12	62.4958	+10		+ 2.2431	+0.6293						

Scheinbare Decldiff. wie 36 A.

$f^\circ_\delta = 0.99348$ $\quad i^\circ_\delta = -0.00132$

$f_\delta = \mathbf{0.99299}$ $\quad i_\delta = \mathbf{-0.00126}$ $\quad \measuredangle\, i_\delta = -4.'3$

$f'_\delta = \mathbf{0.99351}$ $\quad J_\delta = \mathbf{-0.00134}$

$\delta_♃ = +18° \; 59.'4$

37. **1896. Januar 1.** **105.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	64.1421		64.2495							
M	69.1180	+14	59.2698	+10	0	+ 4.9780				4—5 verwaschen.
S	64.1413	+ 8	64.2487	+ 8	0	0.0000				4—5 »
N	24.9906	+26	103.3993	+ 5	+17	—39.1479		$6^h\ 33^m\ 22^s$		4—5 »
Q	77.7455	+21	50.6465	+20	— 4	+13.6028				4—5 »
R	27.4476	+35	100.9399	+13	+22	—36.6892				4—5 »
♃ a_w	66.4748	+ 9	61.9380	+ 9		+ 2.3221				
a_c	66.9140	+ 9	61.4802	+10		+ 2.7706	+ 2.7730	$6^h\ 48^m\ 10^s$		4—5
a_o	67.3793	+ 9	61.0340	+10		+ 3.2263				
♃ b_w	66.5192	+ 9	61.8936	+ 9		+ 2.3665				
b_c	66.9605	+ 9	61.4353	+10		+ 2.8162	+ 2.8174	50 12		4—5
b_o	67.4218	+ 9	60.9900	+10		+ 3.2696				
♃ c_w	66.4942	+ 8	61.9220	+ 9		+ 2.3398				
c_c	66.9190	+ 8	61.4762	+10		+ 2.7750	+ 2.7773	52 4		4—5
c_o	67.3693	+ 8	61.0420	+10		+ 3.2172				
♃ d_w	66.5472	+ 8	61.8710	+10		+ 2.3917			$6^h\ 53^m\ 2^s$	
d_c	66.9560	+ 8	61.4418	+11		+ 2.8106	+ 2.8160	54 17		4—5
d_o	67.3978	+ 8	61.0135	+11		+ 3.2457				
♃ e_w	66.4942	+ 8	61.9200	+10		+ 2.3407				
e_c	66.9110	+ 8	61.4918	+11		+ 2.7632	+ 2.7683	55 47		4—5
e_o	67.3498	+ 8	61.0550	+11		+ 3.2010				
♃ f_w	66.4918	+ 8	61.9220	+11		+ 2.3384				
f_c	66.9296	+ 8	61.4782	+12		+ 2.7792	+ 2.7767	57 44		4—5
f_o	67.3628	+ 8	61.0450	+12		+ 3.2124				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Geht durch die Jupiterscheibe.												
II a	64.9370	+17	63.4532	+ 9		+ 0.7960	—1.9770						3—4
b	64.9865	+17	63.4048	+ 9		+ 0.8450	—1.9724						3—4
c	64.9600	+16	63.4308	+ 9		+ 0.8186	—1.9587	—1.9602	—1′9470	+0′0006	+0′0007	**—1′9457**	3—4
d	65.0055	+16	63.3893	+10		+ 0.8621	—1.9539						3—4
e	64.9580	+16	63.4338	+10		+ 0.8161	—1.9522						4
f	64.9720	+16	63.4208	+10		+ 0.8296	—1.9471						3
III a	70.1839	+17	58.2034	+ 5		+ 6.0446	+3.2716						3—4
b	70.2344	+16	58.1574	+ 5		+ 6.0922	+3.2748						4
c	70.2054	+16	58.1864	+ 6		+ 6.0637	+3.2864	+3.2842	+3.2621	—0.0009	+0.0007	**+3.2619**	4
d	70.2484	+16	58.1470	+ 6		+ 6.1048	+3.2888						3
e	70.2004	+16	58.1939	+ 6		+ 6.0574	+3.2891						3
f	70.2144	+16	58.1794	+ 7		+ 6.0716	+3.2949						3
IV a	58.8181	+12	69.5757	+17		— 5.3254	—8.0984						4
b	58.8646	+11	69.5282	+16		— 5.2784	—8.0958						3—4
c	58.8311	+11	69.5622	+16		— 5.3121	—8.0894	—8.0911	—8.0365	+0.0022	+0.0007	**—8.0336**	3—4
d	58.8746	+10	69.5212	+16		— 5.2699	—8.0859						2—3
e	58.8920	+10	69.5712	+16		— 5.3212	—8.0895						3—4
f	58.8331	+10	69.5612	+17		— 5.3107	—8.0874						3

Scheinbare Ædiff.: M—Centrum = + 5′.2695 $f^\circ_\alpha = 0.99326$ $-i^\circ_\alpha = +0.00062$

N— » = —41.4048

Q— » = +14.3257 f_α = **0.99294** $-i_\alpha$ = **+0.00068** ∡ $i_\alpha = -2'.5$

R— » = —38.7040 $Refr.$ = — 5

$Tx_♃$ = + 28

f'_α = **0.99325** J_α = **+0.00091**

$\alpha_♃ = 8^h\ 38^m.2$

1896. Januar 1.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y-\frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.1918		65.2015							
66.2202	+10	62.1700	+10	0	+ 3.0300		− 0.0013	+ 3.0287	Mondschein. Undurchsichtige Luft.
63.1909	+ 9	65.1999	+16	0	0.0000		0.0000	0.0000	Bilder 2.
66.7118	+25	61.6790	+ 9	− 1	+ 3.5220		− 0.0804	+ 3.4416	
38.6242	+30	89.7714	− 3	+ 5	−24.5666		− 0.0094	−24.5760	
38.5988	+39	89.7904	− 3	+14	−24.5874		− 0.0689	−24.6563	
68.4788	+18	59.9400	+15		+ 5.2744				
68.0540	+18	60.3668	+15		+ 4.8486	+ 4.8509			
67.6292	+18	60.7801	+11		+ 4.4298				
66.6642	+ 8	61.7616	+10		+ 3.4560				
66.2339	+10	62.1759	+10		+ 3.0338	+ 3.0335			
65.8106	+10	62.5992	+10		+ 2.6106				
65.1719	+16	63.2508	+10		+ 1.9657				
64.7651	+16	63.6546	+ 9		+ 1.5604	+ 1.5580			
64.3498	+ 8	64.0035	+ 9		+ 1.1480				
61.9790	+ 9	66.4323	+ 9		− 1.2218				
61.5802	+ 9	66.8301	+ 9		− 1.6201	− 1.6240			
61.1729	+10	67.2429	+ 9		− 2.0301				
60.2758	+14	68.1324	+19		− 2.9237				
59.8800	+14	68.5372	+14		− 3.3238	− 3.3244			
59.4748	+14	68.9360	+14		− 3.7258				
58.8996	+10	69.5072	+17		− 4.2993				
58.4862	+ 5	69.9326	+17		− 4.7190	− 4.7160			
58.0720	+ 5	70.3398	+17		− 5.1296				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht du	rch	die Jupiter	sche	ibe.								
68.6796	+13	59.7186	+14		+ 5.4853	+0.6344						
66.8646	+ 8	61.5342	+ 9		+ 3.6700	+0.6365						
65.3868	+16	63.0110	+ 9		+ 2.1931	+0.6351						
62.2079	+ 9	66.1904	+10		− 0.9864	+0.6376	+0.6347	$+0'.6306$	$+0'.0016$	$+0'.0004$	$-0'.0001$	$+0'.6325$
60.4998	+14	67.8970	+18		− 2.6940	+0.6304						
59.1100	+10	69.2828	+13		− 4.0817	+0.6343						
67.1110	+ 9	61.2848	+12		+ 3.9178	−0.9331						
65.2904	+17	63.1030	+11		+ 2.0988	−0.9347						
63.8191	+ 9	64.5777	+18		+ 0.6251	−0.9329						
60.6387	+11	67.7616	+20		− 2.5570	−0.9330	−0.9346	−0.9285	−0.0027	−0.0015	−0.0001	−0.9328
58.9310	+11	69.4668	+15		− 4.2632	−0.9388						
57.5442	+ 6	70.8550	+14		− 5.6510	−0.9350						
70.4493	+18	57.9510	+ 6		+ 7.2546	+2.4037						
68.6302	+15	59.7661	+15		+ 5.4369	+2.4034						
67.1609	+10	61.2389	+11		+ 3.9658	+2.4078						
63.9780	+10	64.4203	+ 9		+ 0.7838	+2.4078	+2.4042	+2.3885	+0.0069	−0.0010	−0.0001	+2.3943
62.2644	+11	66.1310	+11		− 0.9284	+2.3960						
60.8856	+12	67.5128	+19		− 2.3091	+2.4069						

Scheinbare Decldiff: M—Centrum $= +\ 3'.0030$
N— » $= +\ 3.4498$
Q— » $= -24.4298$
R— » $= -24.4658$

$f^\circ_\delta = 0.99347$ $\quad i^\circ_\delta = -0.00086$

$f_\delta = \mathbf{0.99294}$ $\quad i_\delta = \mathbf{-0.00073}$ $\quad \measuredangle\, i_\delta = -2'.5$

$f'_\delta = \mathbf{0.99347}$ $\quad J_\delta = \mathbf{-0.00085}$

$\delta_♃ = +19°\ 8'.1$

38. 1896. Januar 20.

Æ 106

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**64.2516**		**64.1361**							
M	64.2508	+ 8	64.1353	+ 8	0	0.0000				4
N	20.1194	+23	108.2077	+ 5	+25	—44.1285				3
Q	72.8796	+26	55.5084	+11	— 2	+ 8.6284		6^h 18^m 7^s		3—4
R	22.5768	+37	105.8086	+18	+29	—41.6698				
♃ a_w	66.9615	+ 9	61.4612	+10		+ 2.6924				
a_c	67.4163	+ 9	60.9950	+10		+ 3.1528				4—5
a_o	67.8970	+19	60.5288	+10		+ 3.6268	+ 3.1573	6 28 17		
♃ b_w	66.9990	+ 9	61.4098	+10		+ 2.7368				
b_c	67.4458	+ 9	60.9535	+10		+ 3.1884				4—5
b_o	67.9110	+19	60.5092	+10		+ 3.0436	+ 3.1896	29 59		
♃ c_w	66.9860	+ 8	61.4353	+10		+ 2.7175				
c_c	67.4218	+ 8	60.9905	+10		+ 3.1578				4—5
c_o	67.8806	+18	60.5352	+10		+ 3.6154	+ 3.1636	39 29		
♃ d_w	66.9900	+ 8	61.4378	+10		+ 2.7182			6^h 37^m 36^s	
d_c	67.4188	+ 8	60.9845	+10		+ 3.1593				4—5
d_o	67.8640	+18	60.5478	+10		+ 3.6008	+ 3.1594	41 32		
♃ e_w	66.9595	+ 8	61.4568	+11		+ 2.6934				
e_c	67.3913	+ 8	61.0095	+11		+ 3.1330				4
e_o	67.8451	+18	60.5657	+11		+ 3.5823	+ 3.1362	42 32		
♃ f_w	66.9735	+ 8	61.4478	+11		+ 2.7050				
f_c	67.4143	+ 8	60.9860	+11		+ 3.1562				4—5
f_o	67.8696	+18	60.5458	+11		+ 3.6045	+ 3.1552	43 44		

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	65.2878	+17	63.1050	+ 9		+ 1.0340	—2.1233						4
b	65.3118	+17	63.0790	+ 9		+ 1.0590	—2.1306						4 etwas ellipt.
c	65.2868	+16	63.1065	+ 9		+ 1.0328	—2.1308	—2.1344	—2′.1198	+0′.0009	0′.0000	**—2′.1189**	3—4
d	65.2724	+16	63.1194	+ 9		+ 1.0191	—2.1403						3—4
e	65.2508	+16	63.1444	+10		+ 0 9958	—2.1404						4
f	65.2708	+16	63.1270	+10		+ 1.0144	—2.1408						3—4
II a	70.8376	+13	57.5492	+ 5		+ 6.5868	+3.4295						4—5
b	70.8746	+13	57.5212	+ 5		+ 6.6194	+3.4298						4
c	70.8520	+12	57.5382	+ 5		+ 6.5995	+3.4359	+3.4309	+3.4075	—0.0015	0.0000	**+3.4060**	3—4
d	70.8426	+12	57.5502	+ 5		+ 6.5888	+3.4294						3—4
e	70.8206	+12	57.5782	+ 6		+ 6.5638	+3.4276						3—4
f	70.8431	+12	57.5512	+ 7		+ 6.5884	+3.4332						3—4
III a	61.8770	+11	66.5102	+ 9		— 2.3742	—5.5315						3—4
b	61.9036	+10	66.4842	+ 8		— 2.3480	—5.5376						4 etwas ellipt.
c	61.8920	+10	66.5008	+ 8		— 2.3620	—5.5256	—5.5324	—5.4947	+0.0024	0.0000	**—5.4923**	3—4
d	61.8820	+ 9	66.5162	+ 8		— 2.3748	—5.5342						3—4
e	61.8586	+ 9	66.5368	+ 8		— 2.3968	—5.5330						3—4
f	61.8780	+ 9	66.5172	+ 9		— 2.3774	—5.5326						3—4
IV a	66.1749	+11	62.2184	+ 9		+ 1.9206	—1.2367						4
b	66.2054	+11	62.1924	+ 9		+ 1.9488	—1.2408						4 etwas ellipt.
c	66.2089	+10	62.1839	+ 9		+ 1.9548	—1.2088	—1.2176	—1.2093	+0.0007	0.0000	**—1.2086**	3—4
d	66.2049	+10	62.1889	+ 9		+ 1.9503	—1.2091						3—4
e	66.1819	+10	62.2114	+10		+ 1.9275	—1.2087						3—4
f	66.2084	+10	62.1849	+10		+ 1.9540	—1.2012						3—4

Scheinbare Ædiff: N— Centrum = —46′.6757 $\quad f^\circ_\alpha = 0.99320 \quad -i^\circ_\alpha = +0.00118$

Q— » = + 9.0563

R— » = —43.9750 $\quad f_\alpha = \mathbf{0.99287} \quad -i_\alpha = \mathbf{+0.00125} \quad ∡\, i_\alpha = -\,4′.3$

Refr. = — 5

$Tx_♃$ = + 33

$\alpha_♃ = 8^h\ 28^m.6 \quad f'_\alpha = \mathbf{0.99318} \quad J_\alpha = \mathbf{+0.00153}$

1896. Januar 20.

Reihe. Decl.

Objt.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{y_n+y_c+y_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
Ct	63.7251		64.6674							
M	63.7243	+ 8	64.6658	+16	0	0.0000		0.0000	0.0000	Bilder 3—4, unruhig.
N	64.2189	+24	64.1704	+25	0	+ 0.4954		— 0.1022	+ 0.3932	
Q	36.1241	+24	92.2655	— 3	+ 7	—27.5975		— 0.0038	—27.6013	
R	36.0986	+37	92.2875	+11	+20	—27.6200		— 0.0890	—27.7090	
a_n	68.8760	+13	59.5527	+15		+ 5.1327				
a_c	68.4378	+18	59.9875	+15		+ 4.6964	+ 4.6890			
a_s	67.9790	+18	60.4458	+15		+ 4.2379				
b_n	67.2004	+ 8	61.2164	+11		+ 3.4630				
b_c	66.7681	+ 8	61.6447	+10		+ 3.0328	+ 3.0333			
b_s	66.3418	+10	62.0760	+10		+ 2.6040				
c_n	65.6636	+10	62.7422	+10		+ 1.9318				
c_c	65.2459	+16	63.1684	+10		+ 1.5102	+ 1.5084			
c_s	64.8191	+16	63.5957	+10		+ 1.0832				
d_n	63.9965	+ 8	64.4318	+ 9		+ 0.2534				
d_c	63.5722	+ 8	64.8331	+17		— 0.1598	— 0.1601			
d_s	63.1579	+ 9	65.2469	+17		— 0.5738				
e_n	62.3108	+ 9	66.0950	+11		— 1.4210				
e_c	61.8926	+ 9	66.5112	+ 9		— 1.8382	— 1.8383			
e_s	61.4842	+ 9	66.9380	+ 9		— 2.2558				
f_n	60.5807	+14	67.8206	+19		— 3.1490				
f_c	60.1499	+14	68.2519	+19		— 3.5801	— 3.5802			
f_s	59.7262	+14	68.6912	+14		— 4.0114				

Trabant — Jupiterscentrum.

Objt.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
a	69.0070	+13	59.3898	+11		+ 5.2798	+0.5908						
b	67.3613	+ 8	61.0350	+11		+ 3.6342	+0.6009						
c	65.8376	+10	62.5562	+10		+ 2.1118	+0.6034	+0.6001	+0.′5961	+0.′0028	+0.′0004	0.′0000	**+0.′5993**
d	64.1649	+ 8	64.2314	+ 9		+ 0.4378	+0.5979						
e	62.4928	+ 9	65.9036	+11		— 1.2344	+0.6039						
f	60.7511	+10	67.6457	+19		— 2.9766	+0.6036						
a	67.4323	+ 9	60.9620	+12		+ 3.7062	—0.9828						
b	65.7841	+11	62.6137	+11		+ 2.0564	—0.9769						
c	64.2548	+ 9	64.1410	+10		+ 0.5280	—0.9804	—0.9814	—0.9749	—0.0045	—0.0018	0.0000	**—0.9812**
d	62.5822	+10	65.8151	+12		— 1.1454	—0.9853						
e	60.9096	+11	67.4868	+10		— 2.8174	—0.9791						
f	59.1619	+11	69.2319	+15		— 4.5640	—0.9838						
a	69.9755	+17	58.4118	+ 5		+ 6.2536	+1.5646						
b	68.3294	+19	60.0594	+14		+ 4.6064	+1.5731						
c	66.8021	+ 9	61.5932	+ 9		+ 3.0756	+1.5672	+1.5678	+1.5574	+0.0073	+0.0002	0.0000	**+1.5649**
d	65.1344	+17	63.2644	+ 9		+ 1.4066	+1.5667						
e	63.4562	+10	64.9410	+16		— 0.2716	+1.5667						
f	61.7142	+10	66.6802	+ 8		— 2.0118	+1.5684						
a	68.8676	+13	59.5272	+15		+ 5.1412	+0.4522						
b	67.2234	+ 8	61.1749	+11		+ 3.4952	+0.4619						
c	65.6822	+10	62.7106	+10		+ 1.9570	+0.4486	+0.4513	+0.4483	+0.0016	+0.0003	0.0000	**+0.4502**
d	64.0150	+10	64.3838	+ 9		+ 0.2868	+0.4469						
e	62.3398	+ 9	66.0574	+11		— 1.3878	+0.4505						
f	60.5952	+10	67.8016	+19		— 3.1325	+0.4477						

Scheinbare Decldiff: N— Centrum = + 0.′4472 $f^0_\delta = 0.99343$ $i^0_\delta = -0.00135$
Q— » = —27.4338
R— » = —27.4695 f_δ = **0.99287** i_δ = **—0.00120** $\measuredangle\, i_\delta = -\ 4.′1$

f'_δ = **0.99340** J_δ = **—0.00132**

$\delta_♃ = +19°\ 45.′9$

40 A. 1896. Januar 27.

Æ 107

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**63.0401**		**65.3484**							
M	59.8560	+17	68.5308	+16	0	−3.1832				3
N	15.7262	+28	112.6613	+5	+32	−47.3090				2—3 ellipt.
T	63.0392	+9	65.3468	+16	0	0.0000		5^h 54^m 3^s		3
Q	68.4794	+27	59.9114	+20	−1	+5.4384				2—3
R	18.1810	+33	110.2052	+9	+31	−44.8536				2—3
♃ a_w	64.1294	+10	64.2834	+9		+1.0772				
a_c	64.5592	+18	63.8421	+9		+1.5132	+1.5126	6 2 45		3—4. Der Westr bei allen Aufna schärfer begre
a_o	65.0010	+18	63.4153	+9		+1.9474				
♃ b_w	64.1799	+9	64.2159	+8		+1.1362				[als der C
b_c	64.5907	+17	63.8081	+8		+1.5459	+1.5480	3 48		2—3
b_o	65.0150	+17	63.4003	+8		+1.9620			6^h 4^m 19^s	
♃ c_w	64.1664	+9	64.2389	+8		+1.1180				
c_c	64.5772	+17	63.8226	+8		+1.5319	+1.5343	4 48		2—3
c_o	65.0055	+17	63.4088	+8		+1.9530				
♃ d_w	64.1490	+8	64.2539	+8		+1.1017				
d_c	64.5752	+16	63.8211	+8		+1.5316	+1.5344	5 55		2—3
d_o	65.0220	+16	63.3913	+8		+1.9699				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	62.7766	+11	65.6182	+11	−0.2666	−1.7792						3
b	62.8066	+10	65.5892	+10	−0.2372	−1.7852	−1.7880	−1'.7760	+0'.0007	0'.0000	**−1'.7753**	2—3
c	62.7861	+10	65.6132	+10	−0.2594	−1.7937						3
d	62.7856	+9	65.6127	+10	−0.2594	−1.7938						3
II a	67.8590	+19	60.5338	+14	+4.8170	+3.3044						3
b	67.8990	+19	60.4982	+14	+4.8548	+3.3068	+3.3038	+3.2816	−0.0014	0.0000	**+3.2802**	2—3
c	67.8786	+18	60.5172	+14	+4.8350	+3.3007						2—3
d	67.8810	+18	60.5142	+15	+4.8377	+3.3033						2—3
III a	59.0485	+12	69.3478	+14	−3.9956	−5.5082						2—3
b	59.0810	+11	69.3124	+14	−3.9617	−5.5097	−5.5114	−5.4744	+0.0023	0.0000	**−5.4721**	2
c	59.0605	+11	69.3308	+13	−3.9811	−5.5154						3
d	59.0645	+11	69.3284	+13	−3.9779	−5.5123						3
IV a	70.2814	+17	58.1114	+5	+7.2398	+5.7272						2
b	70.3158	+17	58.0810	+5	+7.2722	+5.7242	+5.7207	+5.6823	−0.0025	0.0000	**+5.6798**	2—3
c	70.2928	+16	58.1010	+5	+7.2506	+5.7163						2—3
d	70.2928	+16	58.1034	+6	+7.2494	+5.7150						3

Scheinbare Ædiff: M — Centrum = −3'.3498
N — » = −50.0260
Q — » = +5.7065
R — » = −47.3255

$f^\circ_\alpha = 0.99331$ $\quad -i^\circ_\alpha = +0.00136$

$f_\alpha = $ **0.99296** $\quad -i_\alpha = $ **+0.00145** $\quad \measuredangle\, i_\alpha = -5'.0$

Refr. = −7

$Tx_♃$ = +16

$f'_\alpha = $ **0.99329** $\quad J_\alpha = $ **+0.00154**

$\alpha_♃ = 8^h\ 24^m.7$

1896. Januar 27.

eihe.

Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$(♃_n+♃_c+♃_s)/3$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.3747		64.0160							
72.7332	+14	55.6558	− 1	0	+ 8.3601		− 0.0006	+ 8.3595	Leichte Wolken.
73.2324	+30	55.1630	+16	− 6	+ 8.8554		− 0.1174	+ 8.7380	Bilder 2.
64.3738	+ 9	64.0152	+ 8	0	0.0000		0.0000	0.0000	
45.1393	+19	83.2534	+ 3	+ 2	−19.2354		− 0.0015	−19.2369	
45.1133	+35	83.2717	+19	+13	−19.2564		− 0.1030	−19.3594	
69.4233	+13	58.9805	+10		+ 5.0422				
69.0250	+13	59.3893	+10		+ 4.6386	+ 4.6395			
68.6262	+13	59.7921	+10		+ 4.2378				
67.8146	+18	60.5862	+10		+ 3.4352				
67.4258	+ 8	60.9870	+10		+ 3.0400	+ 3.0403			
67.0330	+ 8	61.3828	+10		+ 2.6456				
66.1320	+10	62.2714	+ 9		+ 1.7510				
65.7436	+10	62.6726	+ 9		+ 1.3562	+ 1.3559			
65.3503	+16	63.0710	+ 9		+ 0.9606				
64.4522	+ 8	63.9560	+ 8		+ 0.0688				
64.0400	+ 8	64.3708	+ 8		− 0.3448	− 0.3421			
63.6377	+ 8	64.7791	+16		− 0.7504				

Trabant — Jupiterscentrum.

P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$y_t-y_♃$	Mittel.	$f'_\delta\,(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x^2)_♃\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.5012	+14	58.8930	+10		+ 5.1250	+0.4855						
67.9060	+19	60.4938	+14		+ 3.5270	+0.4867	+0.4839	+0.'4808	+0.'0030	+0.'0001	0.'0000	**+0.'4839**
66.2159	+11	62.1819	+ 9		+ 1.8378	+0.4819						
64.5158	+ 9	63.8786	+ 8		+ 0.1393	+0.4814						
68.1090	+19	60.2858	+15		+ 3.7324	−0.9071						
66.5048	+11	61.8920	+10		+ 2.1271	−0.9132	−0.9117	−0.9058	−0.0055	−0.0011	0.0000	**−0.9124**
64.8191	+17	63.5757	+ 9		+ 0.4428	−0.9131						
63.1200	+10	65.2718	+17		− 1.2556	−0.9135						
70.5308	+14	57.8630	+ 6		+ 6.1550	+1.5155						
68.9330	+15	59.4628	+11		+ 4.5560	+1.5157	+1.5158	+1.5060	+0.0091	−0.0007	0.0000	**+1.5144**
67.2479	+10	61.1480	+11		+ 2.8706	+1.5147						
65.5502	+12	62.8411	+10		+ 1.1753	+1.5174						
67.3968	+ 8	60.9990	+12		+ 3.0194	−1.6201						
65.7936	+10	62.6007	+11		+ 1.4170	−1.6233	−1.6209	−1.6103	−0.0095	−0.0027	0.0000	**−1.6225**
64.1120	+ 8	64.2828	+10		− 0.2648	−1.6207						
62.4158	+ 9	65.9800	+12		− 1.9616	−1.6195						

Scheinbare Decldiff: M—Centrum $= + 8'.3180$ $\quad f^\circ_\delta = 0.99355 \quad i^\circ_\delta = -0.00168$

N— » $= + 8.7652$

Q— » $= -19.1165$ $\quad f_\delta = \mathbf{0.99297} \quad i_\delta = \mathbf{-0.00149} \quad ♃\ i_\delta = -\ 5'.1$

R— » $= -19.1518$

$f'_\delta = \mathbf{0.99352} \quad J_\delta = \mathbf{-0.00165}$

$\delta_♃ = +20^\circ\ 0'.0$

40 B. 1896. Januar 27.

Æ 10

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	Anhaltsterne wie 40 A.									
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
$♃ f_w$	mm 61.0020	+10	mm 67.4078	+ 9		mm − 2.0487	mm			
f_c	61.4348	+10	66.9615	+ 9		− 1.6092	− 1.6061	6^h 10^m 13^s		3
f_o	61.8930	+ 9	66.5222	+ 9		− 1.1604				
$♃ g_w$	61.0510	+10	67.2518	+ 8		− 2.0012				
g_c	61.4898	+10	66.9145	+ 8		− 1.5581	− 1.5637	11 48		2—3
g_o	61.9200	+ 9	66.4922	+ 8		− 1.1319				
$♃ h_w$	61.0130	+11	67.3943	+ 8		− 2.0364			6^h 12^m 7^s	
h_c	61.4328	+11	66.9635	+ 8		− 1.6110	− 1.6076	12 43		2—3
h_o	61.8760	+10	66.5352	+ 8		− 1.1754				
$♃ i_w$	61.0430	+11	67.3568	+ 8		− 2.0026				
i_c	61.4862	+11	66.9250	+ 8		− 1.5651	− 1.5675	13 45		2—3
i_o	61.9180	+10	66.4962	+ 8		− 1.1348				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	59.6292	+14	68.7671	+14		− 3.4148	−1.8087						3
g	59.6752	+14	68.7246	+13		− 3.3705	−1.8068	−1.8113	−1'.7992	+0'.0006	0'.0000	**−1'.7986**	3
h	59.6252	+15	68.7706	+13		− 3.4184	−1.8108						3
i	59.6566	+15	68.7376	+13		− 3.3862	−1.8187						2—3
II f	64.7456	+16	63.6477	+ 9		+ 1.7034	+3.3095						2—3
g	64.7981	+16	63.5972	+ 8		+ 1.7550	+3.3187	+3.3146	+3.2924	−0.0011	0.0000	**+3.2913**	2—3
h	64.7521	+16	63.6437	+ 8		+ 1.7088	+3.3164						2—3
i	64.7901	+17	63.6067	+ 8		+ 1.7463	+3.3138						2—3
III f	55.9266	− 1	72.4708	+11		− 7.1186	−5.5125						3
g	55.9720	0	72.4238	+11		− 7.0723	−5.5086	−5.5119	−5.4749	+0.0018	0.0000	**−5.4731**	2—3
h	55.9250	0	72.4672	+11		− 7.1175	−5.5099						2—3
i	55.9575	+ 1	72.4328	+12		− 7.0840	−5.5165						3
IV f	67.1450	+ 8	61.2508	+11		+ 4.1011	+5.7072						2
g	67.1899	+ 8	61.2069	+11		+ 4.1455	+5.7092	+5.7053	+5.6670	−0.0020	0.0000	**+5.6650**	2—3
h	67.1400	+ 8	61.2544	+10		+ 4.0968	+5.7044						2
i	67.1749	+ 9	61.2169	+10		+ 4.1331	+5.7006						2—3

Scheinbare Ædiff. wie 40 A.

$f^\circ_\alpha = 0.99331$ $\quad -i^\circ_\alpha = +0.00136$

$f_\alpha = \mathbf{0.99296}$ $\quad -i_\alpha = \mathbf{+0.00145}$ $\quad ♃ i_\alpha = -5'.0$

$Refr. = - \quad 7$

$Tx_♃ = - \quad 17$

$f'_\alpha = \mathbf{0.99329}$ $\quad J_\alpha = \mathbf{+0.00121}$

$x_♃ = 8^h\ 24^m.7$

1896. Januar 27.

Reihe. Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne	**wie**	**40 A.**							
	mm/10000		mm/10000	mm/10000					
mm 62.1040	+10	mm 66.3258	+10		mm − 2.2902				
62.5092	+10	65.9090	+10		− 1.8792	mm − 1.8754			
62.9290	+10	65.4838	+10		− 1.4568				
63.8670	+ 9	64.5457	+ 8		− 0.5186				
64.2734	+ 9	64.1440	+ 8		− 0.1146	− 0.1149			
64.6722	+17	63.7376	+ 8		+ 0.2884				
65.7561	+11	62.6642	+ 9		+ 1.3667				
66.1430	+11	62.2738	+ 9		+ 1.7554	+ 1.7619			
66.5448	+11	61.8590	+ 9		+ 2.1636				
67.5122	+19	60.9056	+10		+ 3.1244				
67.9210	+19	60.4892	+14		+ 3.5368	+ 3.5355			
68.3248	+19	60.0760	+14		+ 3.9453				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
62.9950	+10	65.3998	+17		− 1.3821	+0.4933						
64.7516	+17	63.6502	+ 9		+ 0.3718	+0.4867	+0.4900	+0.4868	+0.0031	−0.0005	0.0000	**+0.4894**
66.6327	+ 9	61.7691	+10		+ 2.2524	+0.4905						
68.4008	+19	59.9930	+15		+ 4.0248	+0.4893						
61.5877	+ 9	66.8071	+ 8		− 2.7890	−0.9136						
63.3418	+ 9	65.0510	+16		− 1.0343	−0.9194	−0.9178	−0.9118	−0.0055	0.0000	0.0000	**−0.9173**
65.2219	+16	63.1749	+ 9		+ 0.8445	−0.9174						
66.9945	+ 8	61.4063	+10		+ 2.6146	−0.9209						
64.0220	+11	64.3778	+11		− 0.3572	+1.5182						
65.7781	+13	62.6192	+12		+ 0.4002	+1.5151	+1.5174	+1.5076	+0.0091	−0.0026	0.0000	**+1.5141**
67.6566	+21	60.7382	+13		+ 3.2802	+1.5183						
69.4298	+16	58.9645	+13		+ 5.0534	+1.5179						
60.8860	+10	67.5112	+19		− 3.4924	−1.6170						
62.6442	+ 9	65.7552	+11		− 1.7350	−1.6201	−1.6186	−1.6081	−0.0094	−0.0008	0.0000	**−1.6183**
64.5218	+ 8	63.8746	+ 9		+ 0.1442	−1.6177						
66.2924	+10	62.1020	+10		+ 1.9158	−1.6197						

Scheinbare Decldiff. wie 40 A.

$f^\circ_\delta = 0.99355$ $\quad i^\circ_\delta = -0.00168$

$f_\delta = \mathbf{0.99297}$ $\quad i_\delta = \mathbf{-0.00149}$ $\quad \measuredangle\, i_\delta = -5'.1$

$f'_\delta = \mathbf{0.99352}$ $\quad J_\delta = \mathbf{-0.00165}$

$\delta_♃ = +20° \; 0'.0$

41 A. 1896. Februar 1.

Æ 109

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**62.8325** mm		**65.5532** mm							
S	62.8316	+ 9	65.5522	+10	0	0.0000				3
M	67.8101	+19	60.5722	+10	0	+ 4.9798				3
N	23.6768	+26	104.7060	+ 7	+17	−39.1516		$7^h\ 58^m\ 55^s$		2—3
Q	76.4476	+20	51.9410	+21	− 4	+13.6132				2—3
R	26.1406	+37	102.2396	+14	+21	−36.6859				3
♃ b_w	68.7072	+13	59.7096	+14		+ 5.8591				
b_c	69.1184	+13	59.2828	+10		+ 6.2783	+ 6.2839	8 6 0		
b_o	69.5537	+13	58.8461	+10		+ 6.7143				3
♃ c_w	68.7252	+13	59.6866	+14		+ 5.8796				
c_c	69.1584	+13	59.2429	+10		+ 6.3182	+ 6.3171	6 52		
c_o	69.5932	+13	58.8071	+10		+ 6.7536				3—4
♃ d_w	68.6882	+13	59.7166	+15		+ 5.8460			$8^h\ 7^m\ 24^s$	
d_c	69.1144	+13	59.2868	+11		+ 6.2742	+ 6.2760	8 0		
d_o	69.5498	+13	58.8550	+11		+ 6.7078				2
♃ e_w	68.6962	+14	59.7102	+15		+ 5.8533				
e_c	69.1330	+14	59.2798	+11		+ 6.2871	+ 6.2853	8 45		
e_o	69.5552	+14	58.8451	+11		+ 6.7156				2—3

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Geht du	rch	die Jupiter	sche	ibe.								
II b	66.4612	+11	61.9316	+ 9		+ 3.6252	−2.6587						2—3
c	66.4908	+10	61.9050	+ 9		+ 3.6533	−2.6638	−2.6647	−2′.6466	+0′.0011	−0′.0001	**−2′.6456**	2—3
d	66.4478	+10	61.9460	+10		+ 3.6112	−2.6648						2—3
e	66.4518	+10	61.9450	+10		+ 3.6138	−2.6715						3
III b	71.0770	+12	57.3148	+ 9		+ 8.2416	+1.9577						2—3
c	71.1100	+12	57.2828	+10		+ 8.2740	+1.9569	+1.9532	+1.9399	−0.0009	−0.0001	**+1.9389**	2—3
d	71.0640	+12	57.3258	+10		+ 8.2296	+1.9536						3
e	71.0650	+13	57.3258	+11		+ 8.2300	+1.9447						2—3
IV b	59.6692	+15	68.7246	+13		− 3.1672	−9.4511						3—4
c	59.6976	+15	68.6956	+13		− 3.1386	−9.4557	−9.4551	−9.3906	+0.0038	−0.0001	**−9.3869**	2—3
d	59.6632	+14	68.7352	+13		− 3.1756	−9.4516						3
e	59.6602	+14	68.7342	+14		− 3.1766	−9.4619						2—3

Scheinbare Ædiff: M— Centrum $= + 5'.2698$ $\quad f^\circ_\alpha = 0.99318$ $\quad -i^\circ_\alpha = +0.00088$

N— » $= -41.4067$ $\quad f_\alpha = \mathbf{0.99290}$ $\quad -i_\alpha = \mathbf{+0.00089}$ $\quad \sphericalangle\, i_\alpha = -3'.1$

Q— » $= +14.3263$ $\quad$ *Refr.* $=$ 0

R— » $= -38.7063$ $\quad Tx_♃ = +$ 67

$f'_\alpha = \mathbf{0.99318}$ $\quad J_\alpha = \mathbf{+0.00156}$

$\alpha_♃ = 8^h\ 21^m.9$

1896. Februar 1.

[R]eihe. Decl.

[Ob]je[ct].	Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
		mm/10000		mm/10000	mm/10000	mm	mm	mm	mm	
[Cen]tr	mm 63.4821		mm 61.9056							
S	63.4811	+10	64.9040	+16	0	0.0000		0.0000	0.0000	Mondschein. Bilder 4.
M	66.5092	+10	61.8762	+10	0	+ 3.0282		— 0.0013	+ 3.0269	
N	67.0004	+25	61.3854	+27	— 2	+ 3.5190		— 0.0805	+ 3.4385	
Q	38.9077	+29	89.4786	— 2	+ 5	—24.5716		— 0.0094	—24.5810	
R	38.8797	+41	89.5031	+ 9	+14	—24.5970		— 0.0693	—24.6663	
b_n	65.4108	+17	62.9930	+11		+ 1.9210				
b_c	65.0130	+17	63.4013	+11		+ 1.5179	+ 1.5192			
b_s	64.6132	+17	63.8001	+10		+ 1.1186				
c_n	63.6622	+ 9	64.7581	+18		+ 0.1634				
c_c	63.2508	+10	65.1649	+18		— 0.2457	— 0.2431			
c_s	62.8491	+10	65.5662	+12		— 0.6469				
d_n	61.9310	+10	66.4758	+10		— 1.5606				
d_c	61.5312	+10	66.8766	+10		— 1.9610	— 1.9607			
d_s	61.1324	+11	67.2768	+10		— 2.3604				
e_n	60.2024	+15	68.2089	+20		— 3.2918				
e_c	59.7971	+15	68.6117	+15		— 3.6956	— 3.6950			
e_s	59.3963	+15	69.0150	+15		— 4.0976				

[Ob]je[ct].	P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
	Geht du	rch	die Jupiter	sche	ibe.								
b	65.7152	+10	62.6806	+10		+ 2.2290	+0.7098						
c	63.9500	+ 8	64.4453	+ 9		+ 0.4640	+0.7071	+0.7093	+0′.7046	+0′.0024	+0′.0014	0′.0000	**+0′.7084**
d	62.2324	+ 9	66.1649	+11		— 1.2546	+0.7061						
e	60.5058	+14	67.8906	+19		— 2.9809	+0.7141						
b	64.4148	+ 9	63.9770	+10		+ 0.9306	—0.5886						
c	62.6552	+10	65.7392	+12		— 0.8304	—0.5873	—0.5853	—0.5814	—0.0018	—0.0015	0.0000	**—0.5847**
d	60.9360	+11	67.4578	+10		— 2.5491	—0.5884						
e	59.2109	+11	69.1789	+ 3		— 4.2718	—0.5768						
b	67.4688	+ 9	60.9356	+11		+ 3.9782	+2.4590						
c	65.7022	+11	62.6916	+10		+ 2.2171	+2.4602	+2.4599	+2.4434	+0.0086	+0.0016	0.0000	**+2.4536**
d	63.9855	+ 9	64.4178	+ 9		+ 0.4956	+2.4563						
e	62.2558	+10	66.1430	+11		— 1.2319	+2.4641						

Scheinbare Decldiff: M—Centrum = + 3′.0032 $\quad f^\circ_\delta = 0.99330 \quad i^\circ_\delta = -0.00093$

N— » = + 3.4505

Q— » = —24.4312 $\quad f_\delta =$ **0.99282** $\quad i_\delta =$ **—0.00090** $\quad ∡\ i_\delta = -\ 3'.1$

R— » = —24.4665

$f'_\delta =$ **0.99329** $\quad J_\delta =$ **—0.00091**

$\delta_♃ = +20°\ 9'.9$

41 B. 1896. Februar 1.

Æ 110

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 41 A.							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
♃ f_w	59.3484	+11	69.0600	+14		− 3.4956				
f_c	59.7482	+15	68.6572	+14		− 3.0941	− 3.0863	8^h 12^m 13^s		2—3
f_o	60.1699	+15	68.2284	+19		− 2.6691				
♃ g_w	59.3224	+10	69.0810	+14		− 3.5192				
g_c	59.7541	+14	68.6552	+14		− 3.0902	− 3.0908	13 11		2—3
g_o	60.1764	+14	68.2224	+19		− 2.6629			8^h 13^m 30^s	
♃ h_w	59.3728	+10	69.0315	+14		− 3.4692				
h_c	59.7731	+14	68.6297	+14		− 3.0680	− 3.0621	13 58		2
h_o	60.1909	+14	68.2094	+19		− 2.6492				
♃ i_w	59.3603	+11	69.0500	+13		− 3.4846				
i_c	59.7891	+15	68.6107	+13		− 3.0504	− 3.0507	14 40		2—3
i_o	60.2194	+15	68.1739	+18		− 2.6170				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Geht du	rch	die Jupiter	sche	ibe.								
II f	57.0754	+ 9	71.3238	+13		− 5.7640	−2.6777						2—3 unterexp.
g	57.0650	+ 9	71.3288	+13		− 5.7718	−2.6810	−2.6771	−2.6589	+0.0004	−0.0001	**−2.6586**	2—3
h	57.1040	+ 9	71.2964	+12		− 5.7360	−2.6739						unterexponiert.
i	57.1100	+10	71.2838	+12		− 5.7266	−2.6759						3
III f	61.6892	+10	66.7062	+10		− 1.1482	+1.9381						3
g	61.6796	+ 9	66.7166	+ 9		− 1.1582	+1.9326	+1.9345	+1.9213	−0.0003	−0.0001	**+1.9209**	3
h	61.7116	+ 9	66.6836	+ 9		− 1.1256	+1.9356						2—3
i	61.7172	+ 9	66.6776	+ 8		− 1.1198	+1.9309						3
IV f	50.2998	+ 5	78.1030	+ 9		−12.5414	−9.4551						unterexponiert.
g	50.2928	+ 5	78.1070	+ 8		−12.5469	−9.4561	−9.4540	−9.3895	+0.0014	−0.0001	**−9.3882**	2—3
h	50.3278	+ 6	78.0730	+ 8		−12.5124	−9.4503						2 unterexponiert
i	50.3364	+ 6	78.0670	+ 8		−12.5050	−9.4543						3

Scheinbare Ædiff. wie 41 A.

$f^\circ_\alpha = 0.99318$ $\quad -i^\circ_\alpha = +0.00088$

$f_\alpha = \mathbf{0.99290}$ $\quad -i_\alpha = \mathbf{+0.00089}$ $\quad \measuredangle\, i_\alpha = -3'.1$

$Refr. = 0$

$Tx_♃ = -33$

$f'_\alpha = \mathbf{0.99318}$ $\quad J_\alpha = \mathbf{+0.00056}$

$\alpha_♃ = 8^h\ 21^m.9$

1896. Februar 1.

Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 41 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
59.4298	+11	68.9770	+14		−4.0615				
59.8171	+15	68.5932	+14		−3.6762	−3.6739			
60.2089	+15	68.1999	+19		−3.2840				
61.2339	+11	67.1734	+9		−2.2579				
61.6362	+10	66.7791	+9		−1.8596	−1.8600			
62.0320	+10	66.3803	+11		−1.4624				
63.0060	+10	65.3973	+17		−0.4842				
63.3928	+10	65.0265	+17		−0.1054	−0.1021			
63.7751	+9	64.6312	+17		+0.2833				
64.7721	+17	63.6397	+9		+1.2784				
65.1759	+17	63.2374	+10		+1.6814	+1.6837			
65.5872	+11	62.8281	+10		+2.0914				

Trabant — Jupiterscentrum.

P.-Kr.90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht durch		die Jupiterscheibe.										
60.5252	+13	67.8720	+19		−2.9620	+0.7119						
62.3358	+12	66.0600	+11		−1.1503	+0.7097	+0.7108	+0.′7060	+0.′0024	−0.′0013	0.′0000	+0.′7071
64.0924	+11	63.1984	+9		+0.6088	+0.7109						
65.8786	+13	62.5138	+10		+2.3943	+0.7106						
59.2259	+11	69.1714	+13		−4.2611	−0.5872						
61.0355	+11	67.3568	+8		−2.4488	−0.5888	−0.5878	−0.5839	−0.0018	+0.0004	0.0000	−0.5853
62.7951	+10	65.5997	+10		−0.6906	−0.5885						
64.5812	+17	63.8121	+8		+1.0968	−0.5869						
62.2808	+14	66.1180	+16		−1.2070	+2.4669						
64.0930	+13	64.3088	+14		+0.6038	+2.4638	+2.4650	+2.4485	+0.0086	−0.0079	0.0000	+2.4492
65.8506	+15	62.5462	+15		+2.3640	+2.4661						
67.6332	+23	60.7636	+16		+4.1469	+2.4632						

Scheinbare Decldiff. wie 41 A.

$f^\circ_\delta = 0.99330$ $i^\circ_\delta = -0.00093$

$f_\delta = \mathbf{0.99282}$ $i_\delta = \mathbf{-0.00090}$ $\measuredangle\, i_\delta = -3.'1$

$f'_\delta = \mathbf{0.99329}$ $J_\delta = \mathbf{-0.00091}$

$\delta_♃ = +20°\ 9.'9$

42 A. 1896. Februar 3.

Æ

Object.	Scalenablesung. P.-Kr 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**64.1128**		**64.2738**							
U	64.1120	+ 8	64.2730	+ 8	0	0.0000				3
M	76.4498	+11	51.9337	+15	− 1	+12.3383				2—3
N	32.3094	+24	96.0730	+ 4	+10	−31.7993				2
Q	85.1176	+ 6	43.2688	+27	− 4	+21.0034		$8^h\ 18^m\ 4^s$		2
R	34.8074	+28	93.5776	+ 3	+10	−29.3024				2—3
V	71.2164	+17	57.1688	+13	0	+ 7.1045				2
W	72.2538	+28	56.1281	+15	− 5	+ 8.1435				3
♃ a_w	70.0075	+16	58.4018	+ 5		+ 5.8839				
a_c	70.4413	+16	57.9605	+ 5		+ 6.3214	+ 6.3236	8 25 29^s		2—3
a_o	70.8910	+12	57.5218	+ 5		+ 6.7654				
♃ b_w	69.9685	+16	58.4383	+ 5		+ 5.8462				
b_c	70.4028	+16	58.0010	+ 5		+ 6.2820	+ 6.2825	26 29	$8^h\ 26^m\ 58^s$	2—3
b_o	70.8476	+12	57.5707	+ 5		+ 6.7193				
♃ c_w	69.9970	+16	58.4143	+ 5		+ 5.8724				
c_c	70.4243	+16	57.9855	+ 5		+ 6.3004	+ 6.3049	27 29		2—3
c_o	70.8686	+12	57.5468	+ 5		+ 6.7418				
♃ d_w	70.0230	+16	58.3903	+ 6		+ 5.8974				
d_c	70.4578	+16	57.9430	+ 6		+ 6.3384	+ 6.3385	28 26		3
d_o	70.9060	+12	57.5082	+ 6		+ 6.7797				

Object.	P.-Kr 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	68.6322	+14	59.7611	+14		+ 4.5160	−1.8076						3—4
b	68.5802	+13	59.8101	+14		+ 4.4655	−1.8170	−1.8146	−1.′8020	+0.′0007	−0.′0001	**−1.′8014**	2—3
c	68.6062	+13	59.7876	+14		+ 4.4898	−1.8151						3
d	68.6352	+13	59.7566	+15		+ 4.5197	−1.8188						2—3
II a	73.7152	+13	54.6766	− 1		+ 9.6005	+3.2769						3—4
b	73.6702	+12	54.7226	− 1		+ 9.5550	+3.2725	+3.2764	+3.2536	−0.0014	−0.0001	**+3.2521**	3
c	73.6996	+12	54.6936	− 1		+ 9.5842	+3.2793						3
d	73.7306	+12	54.6616	0		+ 9.6156	+3.2771						2—3
III a	64.9845	+17	63.4128	+ 9		+ 0.8668	−5.4568						3
b	64.9326	+17	63.4588	+ 9		+ 0.8178	−5.4647	−5.4610	−5.4231	+0.0023	−0.0001	**−5.4209**	2—3
c	64.9615	+16	63.4303	+ 9		+ 0.8464	−5.4585						3
d	64.9890	+16	63.4013	+ 9		+ 0.8747	−5.4638						3
IV a	61.8191	+10	66.5802	+ 8		− 2.3000	−8.6236						3—4
b	61.7696	+10	66.6277	+ 8		− 2.3484	−8.6309	−8.6250	−8.5652	+0.0036	−0.0001	**−8.5617**	2—3
c	61.8011	+ 9	66.5947	+ 8		− 2.3162	−8.6211						3
d	61.8301	+ 9	66.5632	+ 8		− 2.2860	−8.6245						2—3

Scheinbare Ædiff: M—Centrum = +13.′0662 $\qquad f^\circ_\alpha = 0.99306 \qquad -i^\circ_\alpha = +0.00086$

N— » = −33.6105

Q— » = +22.1227 $\qquad f_\alpha = \mathbf{0.99278} \qquad -i_\alpha = \mathbf{+0.00086} \qquad \measuredangle\, i_\alpha = -3.′0$

R— » = −30.9100 $\qquad$ *Refr.* = 0

V— » = + 7.4778 $\qquad Tx_♃$ = + 68

W— » = + 8.6657 $\qquad f'_\alpha = \mathbf{0.99306} \qquad J\alpha = \mathbf{+0.00154}$

$\alpha_♃ = 8^h\ 20.^m9$

1896. Februar 3.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.6953		**64.6938**							
63.6945	+8	64.6922	+16	0	0.0000		0.0000	0.0000	Bilder 2—3. Starker Wind.
74.6030	+15	54.7874	+8	0	+10.9074		−0.0080	+10.8994	
75.0476	+22	53.3375	+23	−3	+11.3540		−0.0534	+11.3006	
47.0055	+19	81.3782	+21	+4	−16.6868		−0.0227	−16.7095	
46.9304	+20	81.4558	+29	+6	−16.7633		−0.0443	−16.8076	
52.1748	+13	76.8119	+9	+1	−11.5190		−0.0026	−11.5216	
102.5164	+8	25.8726	+27	−16	+38.8186		−0.0030	+38.8150	
67.2518	+9	61.1629	+12		+3.5436				
66.8401	+9	61.5732	+11		+3.1326	+3.1327			
66.4293	+9	61.9840	+11		+2.7218				
65.5158	+17	62.8950	+11		+1.8100				
65.1124	+17	63.3044	+11		+1.4036	+1.4047			
64.7052	+17	63.7032	+10		+1.0066				
63.8530	+9	64.5637	+18		+0.1434				
63.4478	+10	64.9690	+18		−0.2618	−0.2618			
63.0410	+10	65.3728	+18		−0.6670				
62.1000	+10	66.3098	+12		−1.6058				
61.6902	+10	66.7222	+10		−2.0168	−2.0177			
61.2728	+11	67.1324	+10		−2.4305				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
					mm	mm					
67.3078	+8	61.0554	+11	+3.6053	+0.4726						
65.5807	+10	62.8191	+10	+1.8800	+0.4753	+0.4764	+0.′4732	+0.′0021	+0.′0010	0.′0000	**+0.′4763**
63.9166	+8	64.4798	+9	+0.2176	+0.4794						
62.1604	+9	66.2379	+11	−1.5396	+0.4781						
65.9470	+13	62.4518	+12	+2.2469	−0.8858						
64.2219	+11	64.1769	+11	+0.5218	−0.8829	−0.8834	−0.8774	−0.0038	−0.0028	0.0000	**−0.8840**
62.5552	+12	65.8441	+13	−1.1452	−0.8834						
60.8001	+13	67.5967	+21	−2.8994	−0.8817						
68.2908	+18	60.1040	+14	+4.5928	+1.4601						
66.5652	+8	61.8326	+9	+2.8655	+1.4608	+1.4616	+1.4517	+0.0063	+0.0021	0.0000	**+1.4601**
64.9016	+16	63.4958	+9	+1.2025	+1.4643						
63.1390	+9	65.2499	+16	−0.5566	+1.4611						
69.1450	+14	59.2558	+10	+5.4440	+2.3113						
67.4148	+9	60.9840	+10	+3.7146	+2.3099	+2.3103	+2.2947	+0.0100	+0.0018	0.0000	**+2.3065**
65.7492	+11	62.6502	+9	+2.0488	+2.3106						
63.9910	+9	64.4063	+8	+0.2916	+2.3093						

Scheinbare Decldiff: M—Centrum $= +10.'8177$
N— » $= +11.2652$
Q— » $= -16.6170$
R— » $= -16.6523$
V— » $= -11.4497$
W— » $= +38.5452$

$\delta_♃ = +20° \; 13.'7$

$f^\circ_\delta = 0.99323$ $i^\circ_\delta = -0.00118$

$f_\delta = \mathbf{0.99275}$ $i_\delta = \mathbf{-0.00117}$ $\sphericalangle\, i_\delta = -4.'0$

$f'_\delta = \mathbf{0.99322}$ $J_\delta = \mathbf{-0.00118}$

42 B. 1896. Februar 3.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 42 A.							
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	62.1464	+10	66.2548	+12		−1.9738				
f_c	62.5702	+10	65.8216	+12		−1.5453	−1.5455	8^h 33^m 39^s		3
f_o	63.0070	+10	65.4018	+18		−1.1173				
♃ h_w	62.1669	+9	66.2329	+11		−1.9526				
h_c	62.6042	+9	65.7946	+11		−1.5148	−1.5168	35 19		3—4
h_o	63.0425	+9	65.3688	+17		−1.0830			8^h 35^m 32^s	
♃ i_w	62.1739	+9	66.2369	+10		−1.9510				
i_c	62.6082	+9	65.7946	+10		−1.5128	−1.5071	36 6		3—4
i_o	63.0710	+9	65.3464	+16		−1.0576				
♃ k_w	62.1729	+10	66.2158	+10		−1.9410				
k_c	62.6192	+10	65.7771	+10		−1.4984	−1.4945	37 6		3—4
k_o	63.0840	+10	65.3324	+16		−1.0440				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I f	60.7372	+10	67.6582	+19		−3.3804	−1.8349						2—3
h	60.7596	+10	67.6342	+19		−3.3572	−1.8404	−1.8392	−1′.8264	+0′.0003	−0′.0001	**−1′.8262**	2—3
i	60.7666	+10	67.6267	+18		−3.3500	−1.8429						3
k	60.7821	+11	67.6082	+18		−3.3329	−1.8384						3
II f	65.8540	+11	62.5408	+11		+1.7371	+3.2826						2
h	65.8866	+10	62.5118	+10		+1.7679	+3.2847	+3.2870	+3.2642	−0.0006	−0.0001	**+3.2635**	3
i	65.8950	+10	62.4972	+10		+1.7794	+3.2865						2—3
k	65.9150	+10	62.4768	+9		+1.7996	+3.2941						2—3
III f	57.1060	+9	71.2854	+13		−7.0094	−5.4639						2
h	57.1344	+9	71.2594	+12		−6.9822	−5.4654						3
i	57.1444	+9	71.2459	+12		−6.9704	−5.4633	−5.4634	−5.4255	+0.0010	−0.0001	**−5.4246**	2—3
k	57.1584	+10	71.2299	+12		−6.9554	−5.4609						
IV f	53.9580	+3	74.4388	+13		−10.1604	−8.6149						2
h	53.9825	+3	74.4138	+12		−10.1356	−8.6188						3
i	53.9940	+3	74.3988	+12		−10.1224	−8.6153	−8.6138	−8.5540	+0.0016	−0.0001	**−8.5525**	2—3
k	54.0150	+4	74.3763	+12		−10.1006	−8.6061						2—3

Scheinbare Ædiff. wie 42 A.

$f^\circ_\alpha = 0.99306$ $\quad -i^\circ_\alpha = +0.00086$

$f_\alpha = \mathbf{0.99278}$ $\quad -i_\alpha = \mathbf{+0.00086}$ $\quad \sphericalangle\, i_\alpha = -\,3'.0$

$Refr. = 0$

$Tx_♃ = -16$

$f'_\alpha = \mathbf{0.99306}$ $\quad J_\alpha = \mathbf{+0.00070}$

$\alpha_♃ = 8^h\ 20^m.9$

1896. Februar 3.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	erne	wie 42 A.							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
58.5902	+11	69.8171	+16		− 5.1144				
58.9965	+11	69.4198	+13		− 4.7125	− 4.7112			
59.3968	+11	69.0085	+13		− 4.3067				
61.9550	+10	66.4602	+10		− 1.7534				
62.3588	+10	66.0590	+10		− 1.3508	− 1.3513			
62.7581	+10	65.6562	+10		− 0.9498				
63.7162	+ 9	64.7002	+16		+ 0.0069				
64.1330	+ 9	64.2858	+ 8		+ 0.4229	+ 0.4240			
64.5458	+ 9	63.8600	+ 8		+ 0.8422				
65.3878	+17	63.0210	+ 9		+ 1.6830				
65.8081	+11	62.6067	+ 9		+ 2.1000	+ 2.0982			
66.2184	+11	62.1939	+ 9		+ 2.5116				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
59.4758	+11	68.9240	+13		− 4.2250	+0.4862						
62.8306	+10	65.5662	+10		− 0.8686	+0.4827	+0.4844	+0.′4811	+0.′0021	−0.′0005	0.′0000	+0.′4826
64.6087	+17	63.7881	+ 8		+ 0.9100	+0.4860						
66.2788	+11	62.1160	+ 9		+ 2.5808	+0.4826						
58.1020	+ 5	70.2948	+17		− 5.5978	−0.8866						
61.4518	+10	66.9430	+ 9		− 2.2463	−0.8950	−0.8912	−0.8852	−0.0037	−0.0001	0.0000	−0.8890
63.2319	+ 9	65.1589	+17		− 0.4646	−0.8886						
64.9000	+16	63.4918	+10		+ 1.2036	−0.8946						
60.4578	+16	67.9320	+20		− 3.2380	+1.4732						
63.8106	+10	64.5847	+18		+ 0.1118	+1.4631	+1.4678	+1.4578	+0.0063	−0.0025	0.0000	+1.4616
65.5917	+12	62.8021	+11		+ 1.8941	+1.4701						
67.2608	+10	61.1330	+12		+ 3.5630	+1.4648						
61.3074	+14	67.0910	+12		− 2.3924	+2.3188						
64.6536	+20	63.7422	+12		+ 0.9554	+2.3067	+2.3124	+2.2967	+0.0100	−0.0054	0.0000	+2.3013
66.4378	+14	61.9610	+13		+ 2.7377	+2.3137						
68.1080	+22	60.2894	+18		+ 4.4088	+2.3106						

Scheinbare Decldiff. wie 42 A.

$f^\circ_\delta = 0.99323$ $\quad i^\circ_\delta = -0.00118$

$f_\delta = \mathbf{0.99275}$ $\quad i_\delta = \mathbf{-0.00117}$ $\quad \measuredangle\, i_\delta = -4.'0$

$f'_\delta = \mathbf{0.99322}$ $\quad J_\delta = \mathbf{-0.00118}$

$\delta_♃ = +20^\circ\ 13.'7$

43. 1896. Februar 4.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	$\overset{mm}{\mathbf{62.2399}}$		$\overset{mm}{\mathbf{66.1490}}$							
M	Durch ein Jupitersbild verdeckt.									
S	62.2390	+9	66.1480	+10	0	0.0000				4
N	23.0836	+25	105.3010	+7	+17	−39.1516		$7^h\ 44^m\ 9^s$		4
Q	75.8686	+20	52.5231	+16	−3	+13.6273				3
R	25.5668	+37	102.8230	+14	+21	−36.6703				4
$♃\,a_w$	66.5012	+9	61.8870	+9		+4.2616				
a_c	66.9775	+9	61.4228	+10		+4.7318	+4.7312	$7^h\ 33^m\ 31^s$		4
a_o	67.4508	+9	60.9595	+10		+5.2002				
$♃\,b_w$	66.5487	+8	61.8730	+9		+4.2924				
b_c	66.9930	+8	61.4093	+10		+4.7463	+4.7428	34 34		4
b_o	67.4363	+8	60.9655	+10		+5.1898				
$♃\,c_w$	66.5222	+8	61.8850	+9		+4.2731				
c_c	66.9660	+8	61.4408	+10		+4.7170	+4.7179	35 34	$7^h\ 35^m\ 34^s$	3
c_o	67.4238	+8	61.0053	+10		+5.1636				
$♃\,d_w$	66.4788	+8	61.9340	+10		+4.2268				
d_c	66.9290	+8	61.4752	+11		+4.6813	+4.6762	36 34		4
d_o	67.3703	+8	61.0380	+11		+5.1206				
$♃\,e_w$	66.5302	+8	61.8870	+10		+4.2760				
e_c	66.9460	+8	61.4578	+11		+4.6985	+4.6995	37 37		3
e_o	67.3753	+8	61.0360	+11		+5.1240				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	69.0690	+14	59.3258	+5		+6.8266	+2.0954						3
b	69.0794	+13	59.3188	+5		+6.8352	+2.0924						3—4
c	69.0574	+13	59.3408	+5		+6.8132	+2.0953	+2.0951	+2.′0809	−0.′0011	−0.′0002	**+2.′0796**	3—4
d	69.0150	+13	59.3858	+6		+6.7695	+2.0933						4
e	69.0440	+13	59.3568	+6		+6.7985	+2.0990						2—3
II a	67.5042	+9	60.8930	+10		+5.2601	+0.5289						4
b	67.5082	+8	60.8916	+10		+5.2628	+0.5200						4—5
c	67.4828	+8	60.9146	+10		+5.2386	+0.5207	+0.5174	+0.5139	−0.0004	−0.0002	**+0.5133**	4
d	67.4293	+8	60.9655	+11		+5.1863	+0.5101						4
e	67.4518	+8	60.9470	+11		+5.2068	+0.5073						4
III a	62.7156	+10	65.6762	+10		+0.4742	−4.2570						4
b	62.7242	+10	65.6722	+10		+0.4806	−4.2622						4—5
c	62.7032	+9	65.6926	+10		+0.4598	−4.2581	−4.2575	−4.2287	+0.0023	−0.0002	**−4.2266**	4
d	62.6642	+9	65.7326	+11		+0.4202	−4.2560						4
e	62.6896	+9	65.7082	+11		+0.4452	−4.2543						3—4
IV a	60.5388	+11	67.8560	+18		−1.7044	−6.4356						3—4
b	60.5518	+11	67.8446	+18		−1.6922	−6.4350						unterexponiert
c	60.5282	+11	67.8676	+18		−1.7155	−6.4334	−6.4334	−6.3898	+0.0035	−0.0002	**−6.3865**	3—4
d	60.4862	+10	67.9086	+18		−1.7570	−6.4332						3—4
e	60.5148	+10	67.8840	+19		−1.7305	−6.4300						3

Scheinbare Ædiff.: N—Centrum = −41.′4067
Q— » = +14.3263
R— » = −38.7063

$f^\circ_\alpha = 0.99322$ $-i^\circ_\alpha = +0.00149$

f_α = **0.99293** $-i_\alpha$ = **+0.00147** $\measuredangle\ i_\alpha = -5.′0$

$Refr.$ = − 2

$Tx_♃$ = + 51

f'_α = **0.99322** J_α = **+0.00196**

$\alpha_♃ = 8^h\ 20.^m4$

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.7499		64.6420							
Durch e	in J	upitersbild	verd	eckt.					
63.7490	+ 9	64.6404	+16	0	0.0000		0.0000	0.0000	Bilder 3.
67.2418	+24	61.1426	+27	− 2	+ 3.4953		− 0.0805	+ 3.4148	
39.1718	+29	89.2070	− 3	+ 5	−24.5694		− 0.0097	−24.5791	
39.1248	+41	89.2587	+ 9	+13	−24.6180		− 0.0690	−24.6870	
67.3338	+ 8	61.0840	+11		+ 3.5708				
66.9080	+ 8	61.5008	+10		+ 3.1496	+ 3.1467			
66.4862	+ 8	61.9386	+10		+ 2.7198				
65.5537	+16	62.8560	+10		+ 1.7952				
65.1304	+16	63.2838	+10		+ 1.3696	+ 1.3706			
64.7092	+16	63.7082	+ 9		+ 0.9469				
63.7900	+ 8	64.6267	+17		+ 0.0273				
63.3708	+ 9	65.0400	+17		− 0.3890	− 0.3889			
62.9540	+ 9	65.4553	+17		− 0.8050				
62.1044	+ 9	66.3134	+11		− 1.6586				
61.6756	+ 9	66.7362	+ 9		− 2.0842	− 2.0817			
61.2544	+10	67.1509	+ 9		− 2.5022				
60.3418	+14	68.0740	+19		− 3.4203				
59.9406	+14	68.4738	+19		− 3.8208	− 3.8182			
59.5492	+14	68.8680	+14		− 4.2134				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{♃}$	Mittel.	$f'_\delta(y_t - y_{♃})$	$J_\delta(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.3424	+10	62.0540	+10		+ 2.5902	−0.5565						
64.5662	+16	63.8291	+ 9		+ 0.8150	−0.5556						
62.8101	+ 9	65.5882	+11		− 0.9431	−0.5542	−0.5539	−0'.5502	−0'.0030	−0'.0013	0'.0000	**−0'.5545**
61.1214	+10	67.2758	+ 9		− 2.6311	−0.5494						
59.3828	+10	69.0180	+14		− 4.3718	−0.5536						
66.6992	+ 8	61.7002	+10		+ 2.9454	−0.2013						
64.9250	+16	63.4718	+10		+ 1.1730	−0.1976						
63.1649	+ 9	65.2279	+17		− 0.5858	−0.1969	−0.1952	−0.1939	−0.0007	−0.0003	0.0000	**−0.1949**
61.4798	+10	66.9180	+ 9		− 2.2730	−0.1913						
59.7466	+14	68.6532	+14		− 4.0072	−0.1890						
68.0752	+19	60.3108	+14		+ 4.3285	+1.1818						
66.3058	+11	62.0910	+ 9		+ 2.5536	+1.1830						
64.5428	+17	63.8496	+ 8		+ 0.7931	+1.1820	+1.1837	+1.1758	+0.0061	+0.0012	0.0000	**+1.1831**
62.8560	+10	65.5368	+10		− 0.8944	+1.1873						
61.1180	+11	67.2778	+ 8		− 2.6337	+1.1845						
68.6596	+14	59.7372	+14		+ 4.9072	+1.7605						
66.8830	+ 9	61.5162	+ 9		+ 3.1294	+1.7588						
65.1210	+17	63.2764	+ 9		+ 1.3688	+1.7577	+1.7613	+1.7495	+0.0092	+0.0011	0.0000	**+1.7598**
63.4348	+10	64.9610	+16		− 0.3174	+1.7643						
61.7032	+10	66.7012	+ 8		− 2.0528	+1.7654						

Scheinbare Decldiff: N—Centrum $= + 3'.4510$ $\quad f^\circ_\delta = 0.99332 \quad i^\circ_\delta = -0.00144$

Q— » $= -24.4312$

R— » $= -24.4665$ $\quad f_\delta = \mathbf{0.99283} \quad i_\delta = \mathbf{-0.00139} \quad \measuredangle\, i_\delta = -4'.8$

$f'_\delta = \mathbf{0.99331} \quad J_\delta = \mathbf{-0.00144}$

$\delta_{♃} = +20^\circ\ 15'.4$

44 A.

1896. Februar 6.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**65.5304**		**62.8562**							
M	65.5294	+10	62.8552	+10	0	0.0000				2
N	21.3892	+23	106.9944	+ 5	+25	−44.1363				2
Q	74.1336	+26	54.2538	+15	− 2	+ 8.6032				2—3
R	23.8220	+39	104.5592	+19	+30	−41.7017		7^h 23^m 39^s		2 etwas ellipt.
V	60.2396	+26	68.1383	+26	+ 1	− 5.2864				1—2
W	61.4032	+20	66.9847	+21	+ 1	− 4.1278				1—2
♃ a_w	69.8650	+16	58.5350	+ 5		+ 4.3284				
a_c	70.2978	+16	58.1065	+ 5		+ 4.7591	+ 4.7620	7 9 34		2—3
a_o	70.7386	+12	57.6680	+ 5		+ 5.1986				
♃ b_w	69.8546	+16	58.5580	+ 5		+ 4.3118				
b_c	70.2848	+16	58.1160	+ 5		+ 4.7478	+ 4.7485	11 34		2—3
b_o	70.7256	+12	57.6800	+ 5		+ 5.1860			7^h 11^m 56^s	
♃ c_w	69.8161	+16	58.5880	+ 6		+ 4.2774				
c_c	70.2449	+16	58.1560	+ 6		+ 4.7078	+ 4.7059	12 49		2
c_o	70.6746	+12	57.7360	+ 6		+ 5.1325				
♃ d_w	69.8550	+16	58.5560	+ 6		+ 4.3129				
d_c	70.2794	+16	58.1160	+ 6		+ 4.7451	+ 4.7457	13 52		2—3
d_o	70.7226	+12	57.6905	+ 6		+ 5.1792				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	71.0290	+12	57.3655	+ 9		+ 5.4948	+0.7328						2—3
b	71.0020	+12	57.3900	+ 9		+ 5.4690	+0.7205	+0.7226	+0′.7176	−0′.0001	−0′.0002	**+0′.7173**	2—3
c	70.9650	+12	57.4310	+10		+ 5.4300	+0.7241						2
d	70.9940	+12	57.4025	+10		+ 5.4588	+0.7131						3
II a	72.2049	+11	56.1895	− 1		+ 6.6712	+1.9092						2—3
b	72.1879	+11	56.2065	0		+ 6.6542	+1.9057	+1.9115	+1.8982	−0.0003	−0.0002	**+1.8977**	2—3
c	72.1539	+11	56.2435	0		+ 6.6186	+1.9127						2—3
d	72.2004	+11	56.1990	0		+ 6.6642	+1.9185						3
III a	74.5362	+10	53.8545	+ 3		+ 9.0041	+4.2421						2—3
b	74.5162	+10	53.8745	+ 4		+ 8.9840	+4.2355	+4.2376	+4.2081	−0.0007	−0.0002	**+4.2072**	2—3
c	74.4802	+10	53.9150	+ 4		+ 8.9458	+4.2399						2—3
d	74.5152	+11	53.8840	+ 4		+ 8.9788	+4.2331						3
IV	Verfinstert.												

Scheinbare Ædiff: N— Centrum = −46′.6767
Q— » = + 9.0565
R— » = −43.9762
V— » = − 5.5883
W— » = − 4.3838

$f^\circ_\alpha = 0.99306$ $\quad -i^\circ_\alpha = +0.00011$
$f_\alpha = \mathbf{0.99276}$ $\quad -i_\alpha = \mathbf{+0.00014}$ $\quad ♃\ i_\alpha = -\ 0′.5$
Refr. = − 3
$Tx_♃$ = + 51
$f'_\alpha = \mathbf{0.99305}$ $\quad J_\alpha = \mathbf{+0.00062}$

$\alpha_♃ = 8^h\ 19^m.4$

1896. Februar 6.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.8058		65.5818							
62.8049	+ 9	65.5807	+11	0	0.0000		0.0000	0.0000	Bilder 2. Undurchsichtige Luft.
63.3510	+25	65.0356	+33	0	+ 0.5453		— 0.1022	+ 0.4431	
35.1936	+23	93.1992	0	+ 7	—27.6130		— 0.0038	—27.6168	
35.2170	+37	93.1618	+13	+21	—27.5811		— 0.0889	—27.6700	
40.3881	+26	87.9974	— 6	+ 3	—22.4148		— 0.0014	—22.4162	
90.7330	— 6	37.6573	+23	— 6	+27.9238		— 0.0009	+27.9229	
65.3095	+17	63.1030	+11		+ 2.4916				
64.9000	+17	63.5092	+10		+ 2.0838	+ 2.0816			
64.4820	+17	63.9200	+10		+ 1.6694				
63.6315	+10	64.7776	+18		+ 0.8146				
63.2230	+10	65.1974	+18		+ 0.4004	+ 0.4030			
62.8130	+10	65.6007	+12		— 0.0060				
61.8650	+10	66.5478	+10		— 0.9534				
61.4660	+11	66.9510	+10		— 1.3544	— 1.3549			
61.0620	+11	67.3518	+10		— 1.7568				
60.1740	+15	68.2354	+20		— 2.6430				
59.7675	+15	68.6472	+15		— 3.0518	— 3.0500			
59.3610	+11	69.0460	+15		— 3.4552				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta\,(y_t - y_♃)$	$J_\delta\,(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.7465	+17	63.6502	+11		+ 1.9364	—0.1452						
63.0690	+10	65.3268	+19		+ 0.2586	—0.1444	—0.1439	—0.′1429	—0.′0002	—0.′0004	0.′0000	—0.′1435
61.3120	+11	67.0860	+11		— 1.4990	—0.1441						
59.6185	+15	68.7781	+16		— 3.1918	—0.1418						
64.3740	+10	64.0240	+11		+ 1.5630	—0.5186						
62.6935	+11	65.7016	+13		— 0.1162	—0.5192	—0.5205	—0.5169	—0.0005	—0.0012	0.0000	—0.5186
60.9330	+12	67.4628	+11		— 1.8768	—0.5219						
59.2395	+12	69.1594	+16		— 3.5722	—0.5222						
63.7940	+12	64.5967	+20		+ 0.9862	—1.0954						
62.1190	+13	66.2708	+14		— 0.6880	—1.0910	—1.0926	—1.0851	—0.0011	—0.0031	0.0000	—1.0893
60.3580	+18	68.0330	+22		— 2.4497	—1.0948						
58.6690	+14	69.7232	+20		— 4.1394	—1.0894						
Verfinst	ert.											

Scheinbare Decldiff: N— Centrum = + 0.′4473 $\quad f^\circ_\delta = 0.99317 \quad i^\circ_\delta = -0.00026$

Q— » = —27.4348

R— » = —27.4702 $\quad f_\delta = 0.99268 \quad i_\delta = -0.00019 \quad ∡\, i_\delta = -\,0.′7$

V— » = —22.2673

W— » = +27.7277 $\quad f'_\delta = 0.99317 \quad J_\delta = -0.00026$

$\delta_♃ = +20^\circ\ 19.′0$

44 B. 1896. Februar 6.

Æ **115.**

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 44 A.							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
♃ g_w	mm 62.7896	+ 9	mm 65.6145	+10		mm − 3.5712				
g_c	62.3668	+ 9	66.0190	+10		− 3.1632	mm − 3.1613	$7^h\ 37^m\ 5^s$		2
g_o	61.9700	+ 9	66.4380	+10		− 2.7496				
♃ h_w	62.8021	+ 9	65.6040	+10		− 3.5996				
h_c	62.3663	+ 9	66.0355	+10		− 3.1718	− 3.1698	38 55		2
h_o	61.9400	+ 9	66.4650	+10		− 2.7381			$7^h\ 39^m\ 20^s$	
♃ i_w	62.7956	+ 9	65.6040	+11		− 3.6047				
i_c	62.3563	+ 9	66.0360	+11		− 3.1770	− 3.1744	40 4		2—3
i_o	61.9370	+ 9	66.4720	+11		− 2.7414				
♃ k_w	62.7756	+ 9	65.6340	+11		− 3.6262				
k_c	62.3428	+ 9	66.0635	+11		− 3.1976	− 3.1967	41 14		3
k_o	61.9170	+ 9	66.4950	+11		− 2.7664				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I g	62.9895	+ 9	65.4050	+16		− 2.5452	+0.6161						unterexponiert.
h	62.9760	+ 9	65.4150	+16		− 2.5570	+0.6128	+0.6096	+0.′6054	0.′0000	−0.′0002	**+0.′6052**	2—3
i	62.9660	+ 9	65.4255	+17		− 2.5672	+0.6072						3
k	62.9400	+ 9	65.4540	+17		− 2.5945	+0.6022						3—4
II g	64.3518	+ 8	64.0460	+ 8		− 1.1843	+1.9770						unterexponiert.
h	64.3398	+ 8	64.0510	+ 9		− 1.1928	+1.9770	+1.9809	+1.9671	+0.0001	−0.0002	**+1.9670**	2—3
i	64.3428	+ 8	64.0525	+ 9		− 1.1920	+1.9824						3
k	64.3234	+ 8	64.0681	+ 9		− 1.2095	+1.9872						2—3
III g	66.5567	+ 8	61.8400	+ 9		+ 1.0212	+4.1825						3
h	66.5418	+ 8	61.8500	+10		+ 1.0087	+4.1785	+4.1790	+4.1499	+0.0002	−0.0002	**+4.1499**	3
i	66.5392	+ 8	61.8550	+10		+ 1.0049	+4.1793						2—3
k	66.5152	+ 9	61.8830	+10		+ 0.9790	+4.1757						2—3
IV	Verfinst	ert.											

Scheinbare Ædiff. wie 44 A.

$f^\circ_\alpha = 0.99306$ $\quad -i^\circ_\alpha = +0.00011$

$f_\alpha = \mathbf{0.99276}$ $\quad -i_\alpha = \mathbf{+0.00014}$ $\quad ♃\ i_\alpha = -0.\!'5$

$Refr. = -\ 1$

$Tx_♃ = -\ 34$

$f'_\alpha = \mathbf{0.99304}$ $\quad J_\alpha = \mathbf{-0.00021}$

$\alpha_♃ = 8^h\ 19.^m3$

1896. Februar 6.

Decl.

Scalenablesung.				s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$						
Anhaltsterne		**wie 44 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
65.1890	+17	63.2099	+ 9		+ 2.3780				
64.8150	+17	63.6002	+ 8		+ 1.9958	+ 1.9925			
64.4220	+ 9	63.9905	+ 8		+ 1.6038				
63.4670	+10	64.9330	+16		+ 0.6547				
63.0665	+10	65.3438	+16		+ 0.2490	+ 0.2495			
62.6645	+10	65.7511	+10		— 0.1553				
61.6755	+10	66.7282	+ 8		— 1.1382				
61.2785	+11	67.1380	+ 8		— 1.5416	— 1.5430			
60.8720	+11	67.5468	+ 8		— 1.9492				
60.0500	+15	68.3513	+18		— 2.7628				
59.6515	+15	68.7656	+13		— 3.1690	— 3.1664			
59.2530	+11	69.1634	+13		— 3.5673				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.6815	+17	63.7152	+ 8		+ 1.8716	—0.1209						
62.9465	+10	65.4478	+16		+ 0.1370	—0.1125	—0.1147	—0.′1140	—0.′0001	+0.′0001	0.′0000	**—0.′1140**
61.1510	+11	67.2469	+ 8		— 1.6598	—0.1168						
59.5350	+15	68.8610	+13		— 3.2749	—0.1085						
64.2640	+ 8	64.1354	+ 8		+ 1.4523	—0.5402						
62.5210	+ 9	65.8756	+10		— 0.2894	—0.5389	—0.5391	—0.5354	—0.0004	+0.0004	0.0000	**—0.5354**
60.7260	+10	67.6672	+18		— 2.0830	—0.5400						
59.1055	+10	69.2888	+13		— 3.7038	—0.5374						
63.7200	+ 8	64.6802	+17		+ 0.9074	—1.0851						
61.9770	+ 9	66.4158	+ 9		— 0.8314	—1.0809	—1.0811	—1.0740	—0.0009	+0.0004	0.0000	**—1.0745**
60.1840	+14	68.2119	+19		— 2.6262	—1.0832						
58.5660	+10	69.8246	+17		— 4.2416	—1.0752						
Verfinstert.												

Scheinbare Decldiff. wie 44 A.

$f^\circ_\delta = 0.99317$ $i^\circ_\delta = -0.00026$

$f_\delta = \mathbf{0.99268}$ $i_\delta = \mathbf{-0.00019}$ $\measuredangle\ i_\delta = -0.'7$

$f'_\delta = \mathbf{0.99315}$ $J_\delta = \mathbf{-0.00023}$

$\delta_♃ = +20°\ 19.'0$

45 A. 1896. Februar 7.

Æ **116.**

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	(♃w + ♃c + ♃o)/3	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**65.2716**		**63.1174**							
S	65.2700	+16	63.1165	+ 9	0	0.0000				2—3. Steht dicht neben
M	70.2494	+17	58.1328	+ 5	0	+ 4.9818				2 [einem Trabanten
N	26.1208	+25	102.2645	+ 4	+17	—39.1462				2
Q	78.8617	+18	49.5264	+15	— 4	+13.5903		$9^h\ 40^m\ 9^s$		2
R	28.5597	+31	99.8217	+12	+21	—36.7050				2—3
V	64.9689	+25	63.4123	+16	0	— 0.2984				2—3
W	66.1081	+22	62.2711	+14	0	+ 0.8413				1—2
♃ a_w	68.0400	+19	60.3695	+14		+ 2.7584				
a_c	68.4700	+19	59.9415	+14		+ 3.1874	+ 3.1901	9 29 54		3
a_o	68.9045	+14	59.5015	+14		+ 3.6244				
♃ b_w	68.0455	+19	60.3625	+14		+ 2.7646				
b_c	68.4685	+18	59.9365	+14		+ 3.1891	+ 3.1888	31 14		3
b_o	68.8955	+13	59.5155	+14		+ 3.6128			$9^h\ 31^m\ 48^s$	
♃ c_w	68.0110	+18	60.3925	+14		+ 2.7324				
c_c	68.4255	+18	59.9715	+14		+ 3.1501	+ 3.1520	32 34		2—3
c_o	68.8525	+13	59.5510	+14		+ 3.5736				
♃ d_w	68.0460	+18	60.3630	+15		+ 2.7646				
d_c	68.4695	+18	59.9265	+15		+ 3.1946	+ 3.1936	33 31		2—3
d_o	68.8985	+13	59.5010	+15		+ 3.6216				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	67.6640	+19	60.7260	+10		+ 2.3924	—0.7977						3
b	67.6690	+19	60.7205	+10		+ 2.3976	—0.7912	—0.7861	—0'.7808	+0'.0001	—0'.0002	**—0'.7809**	2
c	67.6430	+18	60.7480	+10		+ 2.3708	—0.7812						2
d	67.6920	+18	60.7000	+11		+ 2.4192	—0.7744						2—3
II a	71.3495	+13	57.0425	+ 9		+ 6.0766	+2.8865						3
b	71.3450	+12	57.0485	+ 9		+ 6.0713	+2.8825	+2.8827	+2.8633	—0.0002	—0.0002	**+2.8629**	2—3
c	71.3065	+12	57.0860	+10		+ 6.0332	+2.8812						2
d	71.3475	+12	57.0450	+10		+ 6.0742	+2.8806						2—3
III a	73.8220	+13	54.5700	— 1		+ 8.5496	+5.3595						2—3
b	73.8180	+12	54.5730	— 1		+ 8.5460	+5.3572	+5.3586	+5.3225	—0.0004	—0.0002	**+5.3219**	2—3
c	73.7830	+12	54.6060	0		+ 8.5120	+5.3600						2
d	73.8210	+12	54.5650	0		+ 8.5515	+5.3579						2
IV a	72.5360	+14	55.8590	— 1		+ 7.2622	+4.0721						2—3
b	72.5385	+13	55.8560	— 1		+ 7.2648	+4.0760	+4.0774	+4.0498	—0.0003	—0.0002	**+4.0493**	1—2
c	72.5040	+13	55.8890	0		+ 7.2310	+4.0790						1—2
d	72.5485	+13	55.8430	0		+ 7.2763	+4.0827						1—2

Scheinbare Ædiff: M— Centrum = + 5'.2698 $f^\circ_\alpha = 0.99326$ $-i^\circ_\alpha = -0.00005$
N— » = —41.4068
Q— » = +14.3263 $f_\alpha = \mathbf{0.99297}$ $-i_\alpha = \mathbf{-0.00008}$ ∡ $i_\alpha = +$ 0'.3
R— » = —38.7063 Refr. = + 3
V— » = — 0.3185 $Tx_♃$ = + 34
W— » = + 0.8860 $f'_\alpha = \mathbf{0.99326}$ $J_\alpha = \mathbf{+0.00029}$

$\alpha_♃ = 8^h\ 18^m.8$

1896. Februar 7.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.7422		**64.6517**							
63.7414	+ 8	64.6500	+17	0	0.0000		0.0000	0.0000	Bilder 1—2. Recht durchsichtige Luft.
66.7567	+ 9	61.6264	+11	0	+ 3.0198		— 0.0013	+ 3.0185	
67.2965	+25	61.0913	+26	— 1	+ 3.5572		— 0.0805	+ 3.4767	
39.1532	+30	89.2370	— 2	+ 5	—24.5850		— 0.0094	—24.5944	
39.1725	+38	89.2081	+ 9	+13	—24.5603		— 0.0689	—24.6292	
44.3455	+19	84.0385	— 6	+ 2	—19.3903		0.0000	—19.3903	
94.6730	— 2	33.7182	+21	— 8	+30.9302		0.0000	+30.9302	
67.2400	+ 8	61.1710	+11		+ 3.4891				
66.8400	+ 8	61.5710	+10		+ 3.0392	+ 3.0887			
66.4360	+ 8	61.9695	+10		+ 2.6879				
65.6700	+10	62.7410	+10		+ 1.9192				
65.2760	+16	63.1370	+10		+ 1.5246	+ 1.5239			
64.8730	+16	63.5270	+10		+ 1.1280				
64.0820	+ 8	64.3290	+ 9		+ 0.3312				
63.7005	+ 8	64.7220	+17		— 0.0564	— 0.0590			
63.3000	+ 9	65.1125	+17		— 0.4519				
62.2770	+ 9	66.1370	+11		— 1.4754				
61.8705	+ 9	66.5380	+ 9		— 1.8790	— 1.8784			
61.4710	+ 9	66.9420	+ 9		— 2.2808				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.0665	+ 8	61.3320	+11		+ 3.3218	+0.2331						
65.4990	+10	62.8960	+10		+ 1.7562	+0.2323	+0.2312	+0.′2297	—0.′0001	+0.′0003	0.′0000	**+0.′2999**
63.9135	+ 8	64.4875	+ 9		+ 0.1677	+0.2267						
62.0960	+ 9	66.2970	+11		— 1.6458	+0.2326						
66.0160	+11	62.3810	+12		+ 2.2722	—0.8165						
64.4540	+ 9	63.9420	+11		+ 0.7106	—0.8133	—0.8134	—0.8081	+0.0003	—0.0015	0.0000	**—0.8093**
62.8690	+10	65.5250	+13		— 0.8734	—0.8144						
61.0540	+11	67.3390	+11		— 2.6878	—0.8094						
65.3850	+19	63.0060	+12		+ 1.6446	—1.4441						
63.8150	+11	64.5715	+19		+ 0.0761	—1.4478	—1.4451	—1.4358	+0.0006	—0.0034	0.0000	**—1.4386**
62.2370	+12	66.1540	+13		— 1.5038	—1.4448						
60.4170	+17	67.9700	+21		— 3.3220	—1.4436						
65.8885	+13	62.5085	+12		+ 2.1448	—0.9439						
64.3215	+11	64.0745	+11		+ 0.5782	—0.9457	—0.9444	—0.9383	+0.0004	—0.0023	0.0000	**—0.9402**
62.7385	+12	65.6550	+13		— 1.0036	—0.9446						
60.9205	+13	67.4740	+11		— 2.8219	—0.9435						

Scheinbare Decldiff: M—Centrum = + 3.′0045 $f^0_\delta = 0.99353$ $i^0_\delta = +0.00010$

N— » = + 3.4510

Q— » = —24.4312 f_δ = **0.99304** i_δ = **+0.00004** $\measuredangle\, i_\delta = +\,0.'1$

R— » = —24.4665

V— » = —19.2638 f'_δ = **0.99353** J_δ = **+0.00011**

W— » = +30.7310

$\delta_♃ = +20°\ 21.'0$

45 B. 1896. Februar 7.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne	wie 45 A.								
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	62.0595	+10	66.3530	+10		— 3.2238				
f_c	62.4615	+10	65.9380	+10		— 2.8154	— 2.8083	$9^h\ 46^m\ 44^s$		3
f_o	62.8935	+10	65.5110	+10		— 2.3858				
♃ g_w	62.0235	+ 9	66.3820	+10		— 3.2564				
g_c	62.4465	+ 9	65.9570	+10		— 2.8324	— 2.8320	48 11		3—4
g_o	62.8750	+ 9	65.5350	+10		— 2.4072			$9^h\ 48^m\ 28^s$	
♃ h_w	62.0555	+ 9	66.3570	+11		— 3.2280				
h_c	62.4680	+ 9	65.9410	+11		— 2.8137	— 2.8090	49 4		2—3
h_o	62.8960	+ 9	65.5120	+11		— 2.3852				
♃ i_w	62.0200	+ 9	66.3800	+11		— 3.2572				
i_c	62.4430	+ 9	65.9510	+11		— 2.8312	— 2.8315	49 54		2—3
i_o	62.8755	+ 9	65.5330	+11		— 2.4060				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	61.7580	+10	66.6365	+ 8		— 3.5162	—0.7079						2—3
g	61.7390	+ 9	66.6555	+ 8		— 3.5353	—0.7033	—0.7010	—0′.6963	—0′.0001	—0′.0002	**—0′.6966**	3
h	61.7670	+ 9	66.6265	+ 9		— 3.5068	—0.6978						3
i	61.7475	+ 9	66.6465	+ 9		— 3.5266	—0.6951						2—3
II f	65.3155	+17	63.0750	+ 9		+ 0.0436	+2.8519						2—3
g	65.2855	+16	63.1030	+ 9		+ 0.0145	+2.8465	+2.8461	+2.8270	+0.0003	—0.0002	**+2.8271**	2 berührt Stern
h	65.3065	+16	63.0820	+10		+ 0.0354	+2.8444						3
i	65.2820	+16	63.1080	+10		+ 0.0102	+2.8417						2
III f	67.8120	+18	60.5795	+10		+ 2.5396	+5.3479						2—3
g	67.7840	+18	60.6030	+10		+ 2.5138	+5.3458	+5.3459	+5.3099	+0.0005	—0.0002	**+5.3102**	2—3
h	67.8105	+18	60.5800	+11		+ 2.5385	+5.3475						2
i	67.7820	+18	60.6065	+11		+ 2.5110	+5.3425						3
IV f	66.5790	+ 9	61.8170	+ 9		+ 1.3039	+4.1122						2
g	66.5545	+ 8	61.8370	+ 9		+ 1.2816	+4.1136	+4.1154	+4.0877	+0.0003	—0.0002	**+4.0878**	2—3
h	66.5835	+ 8	61.8105	+10		+ 1.3093	+4.1183						2—3
i	66.5610	+ 8	61.8340	+10		+ 1.2863	+4.1178						2

Scheinbare Ædiff. wie 45 A.

$f^\circ_\alpha = 0.99326$ $\quad -i^\circ_\alpha = -0.00005$

$f_\alpha = \mathbf{0.99297}$ $\quad -i_\alpha = \mathbf{-0.00008}$ $\quad ∡\, i_\alpha = +0'.3$

$Refr. = + \quad 4$

$Tx_♃ = - \quad 30$

$f'_\alpha = \mathbf{0.99327}$ $\quad J_\alpha = \mathbf{-0.00034}$

$\alpha_♃ =$ [illegible]^h $18^m.8$

ühe.

1896. Februar 7.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{\psi_n + \psi_c + \psi_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne wie 45 A.									
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
66.4590	+11	61.9395	+ 9		+ 2.7146				
66.0690	+11	62.3365	+ 9		+ 2.3211	+ 2.3214			
65.6750	+11	62.7280	+ 9		+ 1.9284				
64.8610	+17	63.5535	+ 8		+ 1.1090				
64.4590	+ 9	63.9520	+ 8		+ 0.7083	+ 0.7082			
64.0600	+ 9	64.3550	+ 8		+ 0.3073				
63.1090	+10	65.3000	+16		— 0.6410				
62.7210	+10	65.6900	+10		— 1.0298	— 1.0304			
62.3320	+10	66.0825	+10		— 1.4205				
61.3390	+11	67.0690	+ 8		— 2.4101				
60.9450	+11	67.4690	+ 8		— 2.8071	— 2.8047			
60.5535	+11	67.8560	+18		— 3.1968				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.2825	+11	62.1140	+ 9		+ 2.5391	+0.2177						
64.6610	+17	63.7350	+ 8		+ 0.9182	+0.2100	+0.2098	+0'.2084	—0'.0001	—0'.0003	0'.0000	**+0'.2080**
62.9190	+10	65.4820	+16		— 0.8270	+0.2034						
61.1490	+11	67.2515	+ 8		— 2.5964	+0.2083						
65.2580	+16	63.1355	+10		+ 1.5163	—0.8051						
63.6425	+ 8	64.7500	+17		— 0.0994	—0.8076	—0.8068	—0.8016	+0.0004	+0.0004	0.0000	**—0.8008**
61.9035	+ 9	66.4935	+11		— 1.8404	—0.8100						
60.1335	+14	68.2605	+19		— 3.6090	—0.8043						
64.6135	+16	63.7750	+ 9		+ 0.8744	—1.4470						
63.0020	+ 9	65.3850	+17		— 0.7372	—1.4454	—1.4467	—1.4374	+0.0007	0.0000	0.0000	**—1.4367**
61.2600	+10	67.1310	+ 9		— 2.4807	—1.4503						
59.4925	+14	68.8995	+14		— 4.2488	—1.4441						
65.1075	+16	63.2875	+10		+ 1.3650	—0.9564						
63.4950	+ 8	64.9010	+17		— 0.2487	—0.9569	—0.9581	—0.9519	+0.0005	+0.0003	0.0000	**—0.9511**
61.7500	+ 9	66.6440	+ 9		— 1.9922	—0.9618						
59.9800	+14	68.4130	+19		— 3.7620	—0.9573						

Scheinbare Decldiff. wie 45 A.

$f^0_\delta = 0.99353.$ $\quad i^0_\delta = +0.00010$

$f_\delta = \mathbf{0.99304}$ $\quad i_\delta = \mathbf{+0.00004}$ $\quad ∡\ i_\delta = +\ 0'.1$

$f'_\delta = \mathbf{0.99354}$ $\quad J_\delta = \mathbf{+0.00013}$

$\delta_{♃} = +20°\ 21'.0$

46 A. 1896. Februar 19.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	62.9528		65.4299							
T	62.9519	+ 9	65.4283	+16	0	0.0000				3
M	66.7005	+12	61.6820	+13	0	+ 3.7478				2—3
N	22.5694	+28	105.8160	+11	+20	—40.3819				2—3
Q	75.3152	+18	53.0753	+13	— 1	+12.3586		9^h 4^m 54^s		2
R	25.0108	+33	103.3736	+11	+18	—37.9400				3
V	61.4244	+15	66.9602	+12	0	— 1.5292				3—4
W	62.5600	+26	65.8258	+26	0	— 0.3944				1—2
♃ a_w	68.8311	+14	59.5772	+14		+ 5.8655				
a_c	69.2429	+14	59.1550	+10		+ 6.2827	+ 6.2842	8 55 21		3
a_o	69.6682	+17	58.7372	+10		+ 6.7044				
♃ b_w	68.8211	+14	59.5842	+14		+ 5.8570				
b_c	69.2369	+14	59.1659	+10		+ 6.2742	+ 6.2700	56 39		2—3
b_o	69.6422	+17	58.7626	+10		+ 6.6787			8^h 56^m 56^s	
♃ c_w	68.8346	+13	59.5732	+14		+ 5.8692				
c_c	69.2419	+13	59.1564	+10		+ 6.2814	+ 6.2815	57 29		3
c_o	69.6582	+16	58.7482	+10		+ 6.6938				
♃ d_w	68.8426	+13	59.5672	+14		+ 5.8762				
d_c	69.2578	+13	59.1510	+10		+ 6.2921	+ 6.2892	58 14		2—3
d_o	69.6612	+16	58.7406	+10		+ 6.6992				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_{♃}$	Mittel.	$f'_\alpha(x_t - x_{♃})$	$J_\alpha(y_t - y_{♃})$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	67.2429	+ 9	61.1470	+10		+ 4.2864	—1.9978						2
b	67.2269	+ 9	61.1674	+10		+ 4.2682	—2.0018	—2.0002	+1.′9866	+0.′0004	—0.′0008	**—1.′9870**	2
c	67.2414	+ 8	61.1529	+10		+ 4.2827	—1.9988						2—3
d	67.2459	+ 8	61.1490	+11		+ 4.2868	—2.0024						2
II a	65.9390	+11	62.4532	+ 9		+ 2.9816	—3.3026						2
b	65.9190	+11	62 4738	+ 9		+ 2.9612	—3.3088	—3.3069	—3.2845	+0.0008	—0.0008	**—3.2845**	2—3
c	65.9330	+10	62.4612	+ 9		+ 2.9745	—3.3070						2
d	65.9386	+10	62.4562	+10		+ 2.9798	—3.3094						1—2
III a	67.9935	+19	60.3953	+14		+ 5.0379	—1.2463						3—4
b	67.9845	+19	60.4063	+14		+ 5.0279	—1.2421	—1.2408	—1.2324	+0.0003	—0.0008	**—1.2329**	3
c	67.9990	+18	60.3903	+14		+ 5.0431	—1.2384						2—3
d	68.0090	+18	60.3808	+15		+ 5.0528	—1.2364						2
IV a	59.9595	+16	68.4298	+19		— 2.9968	—9.2810						1—2
b	59.9430	+15	68.4498	+18		— 3.0150	—9.2850	—9.2827	—9.2199	+0.0021	—0.0008	**—9.2186**	2
c	59.9570	+15	68.4358	+18		— 3.0010	—9.2825						2
d	59.9655	+14	68.4283	+18		— 2.9930	—9.2822						2

Scheinbare Ædiff: M— Centrum $= + 3.'9698$ $f^\circ_\alpha = 0.99324$ $-i^\circ_\alpha = +0.00019$
N— » $= -42.7097$
Q— » $= +13.0262$ $f_\alpha = \mathbf{0.99296}$ $-i_\alpha = \mathbf{+0.00018}$ $\measuredangle\, i_\alpha = -0.'6$
R— » $= -40.0077$ *Refr.* $= +$ 1
V— » $= -1.6190$ $Tx_{♃} = +$ 69
W— » $= -0.4140$ $f'_\alpha = \mathbf{0.99324}$ $J_\alpha = \mathbf{+0.00088}$

$\alpha_{♃} = 8^h\ 13^m.2$

1896. Februar 19.

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
64.1159		**64.2683**							
64.1150	+ 9	64.2675	+ 8	0	0.0000		0.0000	0.0000	Bilder 2.
74.6858	+10	53.6988	+ 4	0	+10.5700		— 0.0007	+10.5693	
75.2220	+26	53.1699	+24	— 6	+11.1018		— 0.0856	+11.0162	
47.0870	+13	81.3064	+18	+ 2	—17.0336		— 0.0078	—17.0414	
47.0956	+25	81.2860	+31	+ 8	—17.0185		— 0.0737	—17.0922	
52.2727	+12	76.1098	+ 7	0	—11.8421		— 0.0001	—11.8422	
102.6100	+ 6	25.7818	+24	—17	+38.4877		0.0000	+38.4877	
67.6327	+19	60.7751	+12		+ 3.5054				
67.2379	+ 9	61.1764	+12		+ 3.1068	+ 3.1081			
66.8421	+ 9	61.5702	+11		+ 2.7120				
66.0320	+11	62.3723	+11		+ 1.9060				
65.6502	+11	62.7601	+11		+ 1.5212	+ 1.5226			
65.2698	+17	63.1414	+11		+ 1.1407				
64.3598	+ 9	64.0430	+10		+ 0.2346				
63.9785	+ 9	64.4293	+10		— 0.1492	— 0.1509			
63.5902	+ 9	64.8182	+18		— 0.5382				
62.5972	+10	65.8011	+12		— 1.5258				
62.2164	+10	66.1939	+12		— 1.9126	— 1.9094			
61.8431	+10	66.5752	+10		— 2.2898				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.7332	+18	60.6612	+11		+ 3.6126	+0.5045						
66.1499	+10	62.2479	+10		+ 2.0272	+0.5046	+0.5057	+0'.5023	+0'.0004	+0'.0012	0'.0000	**+0'.5039**
64.4772	+ 8	63.9190	+ 9		+ 0.3552	+0.5061						
62.7202	+ 9	65.6762	+11		— 1.4019	+0.5075						
68.0840	+18	60.3058	+15		+ 3.9634	—0.8553						
66.5012	+ 8	61.8976	+10		+ 2.3779	—0.8553	+0.8559	+0.8502	+0.0006	+0.0017	0.0000	**+0.8525**
64.8261	+16	63.5702	+ 9		+ 0.7045	—0.8554						
63.0690	+ 9	65.3244	+17		— 1.0519	—0.8575						
67.6172	+18	60.7791	+11		+ 3.4956	+0.3875						
66.0290	+10	62.3658	+10		+ 1.9078	+0.3852	+0.3861	+0.3835	+0.0002	+0.0008	0.0000	**+0.3845**
64.3558	+ 8	64.0405	+ 9		+ 0.2338	+0.3847						
62.5992	+ 9	65.7961	+11		— 1.5224	+0.3870						
69.5717	+17	58.8221	+10		+ 5.4514	+2.2433						
67.9905	+19	60.4058	+14		+ 3.8688	+2.3462	+2.3445	+2.3289	+0.0016	+0.0017	0.0000	**+2.3322**
66.3150	+11	62.0810	+ 9		+ 2.1933	+2.3442						
64.5577	+17	63.8411	+ 8		+ 0.4350	+2.3444						

Scheinbare Decldiff: M— Centrum $= +10'.5022$ $\qquad f^\circ_\delta = 0.99337 \qquad i^\circ_\delta = -0.00019$

N— » $= +10.9497$

Q— » $= -16.9332$ $\qquad f_\delta = \mathbf{0.99289} \qquad i_\delta = \mathbf{-0.00022} \qquad \measuredangle\, i_\delta = -0'.8$

R— » $= -16.9683$

V— » $= -11.7655$ $\qquad f'_\delta = \mathbf{0.99336} \qquad J_\delta = \mathbf{-0.00018}$

W— » $= +38.2307$

$\delta_♃ = +20^\circ\ 39'.7$

46 B. 1896. Februar 19.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 46 A.									
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ g_w	56.2828	0	72.1330	+11		−6.6871				
g_c	56.6252	+10	71.7022	+11		−6.2650	−6.2665	$9^h\ 20^m\ 44^s$		3
g_o	57.1140	+10	71.2858	+12		−5.8474				
♃ h_w	56.2954	−1	72.1124	+11		−6.6706				
h_c	56.7072	+9	71.6922	+11		−6.2540	−6.2566	21 39		3
h_o	57.1180	+9	71.2854	+12		−5.8453			$9^h\ 22^m\ 20^s$	
♃ i_w	56.3168	−1	72.0884	+11		−6.6478				
i_c	56.7306	+9	71.6776	+11		−6.2350	−6.2349	22 49		3—4
i_o	57.1430	+9	71.2638	+12		−5.8220				
♃ k_w	56.2878	−1	72.1260	+12		−6.6812				
k_c	56.7112	+9	71.6962	+12		−6.2541	−6.2543	24 6		3—4
k_o	57.1344	+9	71.2664	+13		−5.8276				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I g	54.6612	0	73.7372	+12		−8.3000	−2.0335						2—3
h	54.6622	0	73.7326	+12		−8.2972	−2.0406	−2.0383	−2.0244	−0.0003	−0.0008	**−2.0255**	2
i	54.6892	−1	73.7066	+12		−8.2708	−2.0359						2—3
k	54.6616	−1	73.7326	+13		−8.2976	−2.0433						3—4
II g	53.3648	+8	75.0280	+10		−9.5932	−3.3267						2
h	53.3728	+8	75.0225	+10		−9.5864	−3.3298	−3.3288	−3.3063	−0.0004	−0.0008	**−3.3075**	2
i	53.3988	+7	74.9960	+10		−9.5602	−3.3253						2—3
k	53.3698	+7	75.0220	+11		−9.5878	−3.3335						3
III g	55.5312	0	72.8580	+13		−7.4255	−1.1590						3—4
h	55.5392	0	72.8540	+13		−7.4195	−1.1629	−1.1566	−1.1488	−0.0002	−0.0008	**−1.1498**	3 etwas ellipt.
i	55.5702	−1	72.8191	+13		−7.3866	−1.1517						2—3
k	55.5502	−1	72.8401	+14		−7.4072	−1.1529						3—4
IV g	47.4268	+10	80.9650	+15		−15.5307	−9.2642						2
h	47.4333	+9	80.9600	+14		−15.5250	−9.2684	−9.2641	−9.2015	−0.0012	−0.0008	**−9.2037**	1—2
i	47.4662	+9	80.9300	+14		−15.4935	−9.2586						2
k	47.4378	+8	80.9535	+14		−15.5195	−9.2652						3

Scheinbare Ædiff. wie 46 A.

$f^\circ_\alpha = 0.99324$ $\quad -i^\circ_\alpha = +0.00019$

$f_\alpha = \mathbf{0.99296}$ $\quad -i_\alpha = \mathbf{+0.00018}$ $\quad \measuredangle\, i_\alpha = -0.'6$

$Refr. = +\ 2$

$Tx_♃ = -\ 69$

$f'_\alpha = \mathbf{0.99325}$ $\quad J_\alpha = \mathbf{-0.00049}$

$\alpha_♃ = 8^h\ 13^m.2$

1896. Februar 19.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 46 A.**							
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
67.5028	+11	60.9106	+12		+ 3.3722				
67.1030	+11	61.3058	+12		+ 2.9748	+ 2.9787			
66.7202	+11	61.6942	+11		+ 2.5892				
65.7216	+13	62.6842	+11		+ 1.5950				
65.3388	+19	63.0640	+11		+ 1.2140	+ 1.2137			
64.9590	+19	63.4478	+11		+ 0.8322				
63.9960	+11	64.4148	+10		— 0.1332				
63.6177	+11	64.7901	+18		— 0.5104	— 0.5137			
63.2279	+12	65.1749	+18		— 0.8976				
62.2928	+12	66.1149	+12		— 1.8348				
61.8970	+12	66.5142	+10		— 2.2323	— 2.2310			
61.5036	+12	66.9080	+10		— 2.6259				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.6182	+21	60.7816	+13		+ 3.4949	+0.5162						
65.8520	+13	62.5392	+12		+ 1.7326	+0.5189	+0.5192	+0'.5158	+0'.0003	—0'.0016	0.0000	**+0'.5145**
64.1300	+11	64.2708	+11		+ 0.0058	+0.5195						
62.4148	+12	65.9850	+13		— 1.7090	+0.5220						
67.9670	+21	60.4288	+18		+ 3.8154	+0.8667						
66.2059	+13	62.1934	+13		+ 2.0824	+0.8687	+0.8686	+0.8628	+0.0005	—0.0029	0'.0000	**+0.8604**
64.4798	+11	63.9216	+12		+ 0.3552	+0.8689						
62.7611	+12	65.6352	+14		— 1.3610	+0.8700						
67.4648	+11	60.9320	+13		+ 3.3425	+0.3638						
65.6952	+13	62.6952	+12		+ 1.5762	+0.3625	+0.3639	+0.3615	+0.0002	—0.0009	0.0000	**+0.3608**
63.9740	+11	64.4220	+11		— 0.1478	+0.3659						
62.2538	+12	66.1414	+13		— 1.8676	+0.3634						
69.4518	+19	58.9460	+17		+ 5.3292	+2.3505						
67.6892	+24	60.7072	+17		+ 3.5676	+2.3539	+2.3534	+2.3378	+0.0013	—0.0111	0.0000	**+2.3280**
65.9640	+16	62.4358	+16		+ 1.8403	+2.3540						
64.2459	+14	64.1499	+15		+ 0.1242	+2.3552						

Scheinbare Decldiff. wie 46 A.

$f^\circ_\delta = 0.99337$ $\quad i^\circ_\delta = -0.00019$

$f_\delta = \mathbf{0.99289}$ $\quad i_\delta = \mathbf{-0.00022}$ $\quad \measuredangle\, i_\delta = -0'.8$

$f'_\delta = \mathbf{0.99337}$ $\quad J_\delta = \mathbf{-0.00015}$

$\delta_♃ = +20^\circ\ 39'.7$

47 A. 1896. Februar 22.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.4834**		**66.8973**							
Z	64.4824	+10	66.8964	+ 9	0	0.0000				2
M	75.8559	+ 8	52.5243	+ 8	0	+14.3728				2—3
N	31.7204	+19	96.6611	+ 1	+ 7	—29.7618				2—3 ellipt. in
Q	84.4810	+ 9	43.9049	+31	—11	+22.9928		7^h 50^m 6^s		3—4
R	34.1728	+36	94.2093	+ 9	+13	—27.3086				2—3
V	70.5868	+25	57.7929	+16	— 4	+ 9.1040				3
W	71.7068	+19	56.6750	+21	— 2	+10.2226				3
♃ a_w	65.7785	+11	62.6216	+ 9		+ 4.2855				
a_c	66.1895	+11	62.2110	+ 9		+ 4.6963	+ 4.6991	7 39 51^s		2
a_o	66.6051	+ 9	61.7880	+ 9		+ 5.1155				
♃ b_w	65.7560	+10	62.6436	+ 9		+ 4.2632				
b_c	66.1824	+10	62.2230	+ 9		+ 4.6867	+ 4.6824	41 2	7^h 41^m 20^s	2
b_o	66.5951	+ 8	61.8140	+ 9		+ 5.0974				
♃ c_w	65.7815	+10	62.6196	+10		+ 4.2879				
c_c	66.1890	+10	62.2115	+10		+ 4.6957	+ 4.6988	41 52		1—2
c_o	66.6051	+ 8	61.7930	+10		+ 5.1129				
♃ d_w	65.8050	+10	62.5951	+10		+ 4.3119				
d_c	66.2025	+10	62.2025	+10		+ 4.7070	+ 4.7081	42 34		1
d_o	66.5971	+ 8	61.8000	+10		+ 5.1054				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder
							mm	mm					
I a	67.8815	+19	60.5038	+14		+ 6.3960	+1.6969						2
b	67.8600	+18	60.5284	+14		+ 6.3730	+1.6906	+1.6921	+1'.6805	0'.0000	—0'.0010	**+1'.6795**	3—4 verwasc
c	67.8780	+18	60.5084	+15		+ 6.3919	+1.6931						2—3
d	67.8840	+18	60.5064	+15		+ 6.3959	+1.6878						3
II a	65.4019	+17	62.9860	+ 9		+ 3.9153	—0.7838						2—3
b	65.3819	+16	63.0100	+ 9		+ 3.8932	—0.7892	—0.7890	—0.7836	0.0000	—0.0010	**—0.7846**	3—4 verwasc
c	65.3989	+16	62.9900	+10		+ 3.9117	—0.7871						2
d	65.4004	+16	62.9910	+10		+ 3.9120	—0.7961						2—3
III a	70.0475	+17	58.3364	+ 5		+ 8.5631	+3.8640						2
b	70.0270	+16	58.3609	+ 6		+ 8.5405	+3.8581	+3.8591	+3.8326	+0.0001	—0.0010	**+3.8317**	3
c	70.0445	+16	58.3414	+ 6		+ 8.5590	+3.8602						2—3
d	70.0485	+16	58.3389	+ 6		+ 8.5622	+3.8541						2
IV a	64.1734	+ 9	64.2170	+ 8		+ 2.6852	—2.0139						2—3
b	64.1595	+ 9	64.2315	+ 8		+ 2.6710	—2.0114	—2.0084	—1.9946	—0.0001	—0.0010	**—1.9957**	3—4 unterex
c	64.1840	+ 8	64.2075	+ 9		+ 2.6952	—2.0036						2—3
d	64.1905	+ 8	64.1980	+ 9		+ 2.7032	—2.0049						2—3 unterex

Scheinbare Ædiff: M—Centrum = +15'.2108 $f^\circ_\alpha = 0.99316$ $-i^\circ_\alpha = -0.00062$
N— » = —31.4672
Q— » = +24.2673 f_α = **0.99288** $-i_\alpha$ = **—0.00060** ∡ $i_\alpha = +2'.1$
R— » = —28.7667 $Refr.$ = — 1
V— » = + 9.6225 $Tx_♃$ = + 52
W— » = +10.8272 f'_α = **0.99316** $J\alpha$ = **—0.00009**

$\alpha_♃ = 8^h 12^m.0$

1896. Februar 22.

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.2971		**65.0854**							
63.2961	+10	65.0838	+16	0	0.0000		0.0000	— 3.4606	Bilder 3—4. Mondschein.
59.8472	+19	68.5352	+17	0	— 3.4498		— 0.0471	— 2.9831	
60.3628	+26	68.0226	+34	+ 1	— 2.9360		— 0.0274	—31.0802	
32.2440	+28	96.1430	+ 6	+15	—31.0528		— 0.0387	—31.0995	
32.2335	+31	96.1480	+13	+14	—31.0608		— 0.0043	—25.8711	
37.4279	+23	90.9555	— 5	+15	—25.8668		— 0.0057	+24.4611	
87.7687	— 4	40.6194	+27	— 4	+24.4668				
66.8305	+ 8	61.5702	+10		+ 3.5242				
66.4488	+10	61.9570	+10		+ 3.1400	+ 3.1376			
66.0540	+10	62.3449	+10		+ 2.7487				
65.1955	+16	63.2040	+10		+ 1.8902				
64.8120	+16	63.5962	+ 9		+ 1.5024	+ 1.5020			
64.4181	+16	63.9805	+ 9		+ 1.1133				
63.4284	+ 9	64.9745	+17		+ 0.1207				
63.0525	+ 9	65.3639	+17		— 0.2620	— 0.2645			
62.6541	+ 9	65.7466	+11		— 0.6522				
61.6691	+ 9	66.7261	+ 9		— 1.6344				
61.3009	+10	67.1050	+ 9		— 2.0078	— 2.0063			
60.9290	+10	67.4708	+ 9		— 2.3767				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
65.9940	+10	62.3949	+10		+ 2.6937	—0.4439						
64.3629	+ 8	64.0305	+ 9		+ 1.0603	—0.4417	—0.4444	—0'.4414	+0'.0008	—0'.0011	+0'.0001	**—0'.4416**
62.5901	+ 9	65.7995	+11		— 0.7106	—0.4461						
60.8500	+10	67.5416	+19		— 2.4521	—0.4458						
66.5831	+ 8	61.7975	+10		+ 3.2868	+0.1492						
64.9630	+16	63.4289	+10		+ 1.6615	+0.1595	+0.1545	+0.1535	—0.0004	+0.0004	+0.0001	**+0.1536**
63.1925	+ 9	65.1980	+17		— 0.1090	+0.1555						
61.4508	+10	66.9445	+ 9		— 1.8526	+0.1537						
65.4024	+17	62.9840	+11		+ 2.1036	—1.0340						
63.7736	+ 9	64.6176	+18		+ 0.4717	—1.0303	—1.0341	—1.0272	+0.0019	—0.0028	+0.0001	**—1.0280**
62.0000	+10	66.3909	+12		— 1.3014	—1.0369						
60.2594	+15	68.1300	+20		— 3.0414	—1.0351						
57.0605	+ 8	61.3339	+10		+ 3.7574	+0.6198						
55.4278	+16	62.9690	+ 9		+ 2.1239	+0.6219	+0.6200	+0.6158	—0.0010	+0.0008	+0.0001	**+0.6157**
53.6576	+ 8	64.7351	+16		+ 0.3550	+0.6195						
51.9170	+ 9	66.4798	+10		— 1.3873	+0.6190						

Scheinbare Decldiff:
M—Centrum = — 3'.4292 $f^\circ_\delta = 0.99332$ $i^\circ_\delta = +0.00047$
N— » = — 2.9820
Q— » = —30.8648 f_δ = **0.99283** i_δ = **+0.00051** $\measuredangle\, i_\delta = +1'.8$
R— » = —30.9002
V— » = —25.6970 f'_δ = **0.99330** J_δ = **+0.00048**
W— » = +24.2990

$\delta_♃ = +20^\circ\ 43'.6$

47 B. 1896. Februar 22.

Æ **121**

Object.	Scalenablesuug. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	Anhaltsterne		**wie 47 A.**							
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
$♃ f_w$	56.3849	0	72.0185	+11		— 5.1104				
f_c	56.7840	+10	71.6061	+11		— 4.7042	— 4.7001	$7^h\ 58^m\ 41^s$		2
f_o	57.2050	+10	71.1900	+12		— 4.2856				
$♃ g_w$	56.3974	0	72.0055	+11		— 5.0976				
g_c	56.8160	+10	71.5846	+11		— 4.6774	— 4.6793	59 51		2
g_o	57.2290	+10	71.1685	+12		— 4.2629			$8^h\ 0^m\ 19^s$	
$♃ h_w$	56.3524	— 1	72.0520	+11		— 5.1434				
h_c	56.7610	+ 9	71.6356	+11		— 4.7304	— 4.7246	8 0 52		2
h_o	57.1940	+ 9	71.2075	+12		— 4.3000				
$♃ i_w$	56.3844	— 1	72.0155	+12		— 5.1092				
i_c	56.7950	+ 9	71.6051	+12		— 4.6982	— 4.6965	1 52		1—2
i_o	57.2120	+ 9	71.1900	+13		— 4.2822				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	Δα cos δ	Bilder.
						mm	mm					
I f	58.4299	+ 6	69.9590	+16	— 3.0581	+1.6420						2
g	58.4394	+ 6	69.9495	+16	— 3.0486	+1.6307	+1.6318	+1′.6206	+0′.0005	—0′.0010	**+1′.6201**	3
h	58.3964	+ 5	69.9970	+16	— 3.0939	+1.6307						3—4 verwasche
i	58.4154	+ 5	69.9735	+17	— 3.0727	+1.6238						2—3
II f	55.9350	0	72.4508	+11	— 5.5515	—0.8514						2
g	55.9450	0	72.4418	+11	— 5.5420	—0.8627	—0.8616	—0.8557	—0.0002	—0.0010	**—0.8569**	2—3
h	55.9030	— 1	72.4898	+11	— 5.5870	—0.8624						3—4 verwasche
i	55.9210	— 1	72.4664	+12	— 5.5664	—0.8699						3
III f	60.6111	+11	67.7740	+18	— 0.8748	+3.8253						2—3
g	60.6211	+10	67.7606	+18	— 0.8632	+3.8161	+3.8177	+3.7915	+0.0012	—0.0010	**+3.7917**	2—3
h	60.5811	+10	67.8056	+18	— 0.9057	+3.8187						3—4
i	60.6006	+10	67.7856	+18	— 0.8860	+3.8105						3
IV f	54.8280	0	73.5602	+13	— 6.6598	—1.9597						2
g	54.8490	0	73.5456	+12	— 6.6420	—1.9627	—1.9592	—1.9458	—0.0007	—0.0010	**—1.9475**	3
h	54.8100	— 1	73.5832	+12	— 6.6803	—1.9557						3—4 unterexp.
i	54.8335	— 1	73.5566	+12	— 6.6552	—1.9587						3

Scheinbare Ædiff. wie 47 A.

$f^\circ_\alpha = 0.99316$ $\quad -i^\circ_\alpha = -0.00062$

$f_\alpha = \mathbf{0.99288}$ $\quad -i_\alpha = \mathbf{-0.00060}$ $\quad ∢\, i_\alpha = +2'.1$

$Refr. = 0$

$Tx_♃ = -\ 52$

$f'_\alpha = \mathbf{0.99316}$ $\quad J_\alpha = \mathbf{-0.00112}$

$\alpha_♃ = 8^h\ 12^m.0$

1896. Februar 22.

…eihe. Decl.

Objt.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	Anhaltsterne		**wie 47 A.**							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
	68.4964	+21	59.9050	+16		+ 5.1901				
	68.1090	+21	60.2904	+16		+ 4.8037	+ 4.8028			
	67.7191	+21	60.6791	+12		+ 4.4146				
	66.8240	+11	61.5831	+11		+ 3.5146				
	66.4279	+13	61.9745	+11		+ 3.1210	+ 3.1205			
	66.0350	+13	62.3714	+11		+ 2.7260				
	65.1270	+19	63.2764	+11		+ 1.8198				
	64.7351	+19	63.6651	+10		+ 1.4296	+ 1.4265			
	64.3389	+11	64.0670	+10		+ 1.0302				
	63.3534	+12	65.0510	+18		+ 0.0450				
	62.9740	+12	65.4354	+18		— 0.3368	— 0.3390			
	62.5791	+12	65.8180	+12		— 0.7253				

Objt.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
I	67.6751	+20	60.7161	+11		+ 4.3741	—0.4287						
	65.9935	+12	62.3979	+10		+ 2.6920	—0.4285	—0.4284	—0'.4255	+0'.0008	+0'.0007	+0'.0001	**—0'.4239**
	64.2994	+10	64.0925	+ 9		+ 0.9976	—0.4289						
	62.5352	+11	65.8565	+11		— 0.7665	—0.4275						
	68.2819	+21	60.1080	+17		+ 4.9813	+0.1785						
	66.6001	+11	61.7900	+12		+ 3.2992	+0.1787	+0.1782	+0.1770	—0.0004	—0.0005	+0.0001	**+0.1762**
	64.9015	+19	63.4824	+12		+ 1.6040	+0.1775						
	63.1410	+12	65.2500	+19		— 0.1607	+0.1783						
	67.0755	+ 9	61.3104	+10		+ 3.7766	—1.0262						
	65.3974	+17	62.9915	+ 9		+ 2.0975	—1.0230	—1.0246	—1.0177	+0.0019	+0.0012	+0.0001	**—1.0145**
	63.7031	+ 9	64.6861	+16		+ 0.4023	—1.0242						
	61.9370	+10	66.4538	+10		— 1.3642	—1.0252						
	68.7181	+16	59.6711	+17		+ 5.4176	+0.6148						
	67.0400	+11	61.3539	+13		+ 3.7371	+0.6166	+0.6140	+0.6099	—0.0010	—0.0012	+0.0001	**+0.6078**
	65.3419	+19	63.0510	+12		+ 2.0400	+0.6135						
	63.5751	+11	64.8180	+19		+ 0.2723	+0.6113						

Scheinbare Decldiff. wie 47 A.

$f^\circ_\delta = 0.99332$ $\quad i^\circ_\delta = +0.00047$

$f_\delta = \mathbf{0.99283}$ $\quad i_\delta = \mathbf{+0.00051}$ $\quad \measuredangle\, i_\delta = +1'.8$

$f'_\delta = \mathbf{0.99330}$ $\quad J_\delta = \mathbf{+0.00050}$

$\delta_{♃} = +20^\circ\ 43'.6$

48 A. 1896. Februar 23.

AR

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr.180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.5491**		**66.8325**							
T	61.5482	+9	66.8317	+8	0	0.0000				3 *)
M	58.3645	+8	70.0155	+19	0	− 3.1844				3
N	14.2381	+28	114.1428	+5	+32	−47.3063				3
Q	66.9817	+17	61.4032	+16	−1	+ 5.4309		7^h 18^m 30^s		3—4
R	16.6803	+34	111.7000	+9	+32	−44.8637				3—4
V	53.0875	+13	75.2939	+15	+1	− 8.4615				3—4
W	54.5321	+18	74.1518	+28	+4	− 7.3182				3
♃ a_w	65.8610	+11	62.5394	+9		+ 4.3026				
a_c	66.2750	+11	62.1320	+9		+ 4.7133	+ 4.7163	7 5 12		4
a_o	66.6961	+9	61.7136	+9		+ 5.1330				
♃ b_w	65.8296	+11	62.5863	+9		+ 4.2634				
b_c	66.2405	+11	62.1650	+9		+ 4.6796	+ 4.6789	6 45		4
b_o	66.6601	+9	61.7560	+9		+ 5.0938			**7^h 7^m 48^s**	
♃ d_w	65.8396	+10	62.5663	+10		+ 4.2784				
d_c	66.2684	+10	62.1325	+10		+ 4.7096	+ 4.7135	8 52		4—5
d_o	66.7141	+8	61.6921	+10		+ 5.1526				
♃ e_w	65.8410	+10	62.5683	+10		+ 4.2780				
e_c	66.2564	+10	62.1495	+10		+ 4.6952	+ 4.6965	10 25		4
e_o	66.6771	+8	61.7276	+10		+ 5.1164				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr.180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	65.1070	+17	63.2894	+9		+ 3.5509	−1.1654						3—4
b	65.0740	+17	63.3194	+9		+ 3.5194	−1.1595	−1.1553	−1'.1474	+0'.0004	−0'.0010	**−1'.1480**	3
d	65.1180	+16	63.2759	+10		+ 3.5630	−1.1505						4
e	65.1065	+16	63.2894	+10		+ 3.5506	−1.1459						4 unterexponiert
II a	63.0900	+10	65.3039	+16		+ 1.5344	−3.1819						3—4
b	63.0545	+10	65.3379	+16		+ 1.4997	−3.1792	−3.1783	−3.1571	+0.0011	−0.0010	**−3.1570**	3
d	63.0930	+9	65.2979	+17		+ 1.5388	−3.1747						4
e	63.0745	+9	65.3189	+17		+ 1.5191	−3.1774						4
III	Geht du	rch	die Jupiter	sche	ibe.								
IV a	67.6981	+19	60.6901	+10		+ 6.1462	+1.4299						3 **)
b	67.6726	+18	60.7171	+10		+ 6.1198	+1.4409	+1.4440	+1.4344	−0.0003	−0.0010	**+1.4331**	4—5
d	67.7121	+18	60.6746	+11		+ 6.1608	+1.4473						4
e	67.7076	+18	60.6826	+11		+ 6.1546	+1.4581						4 unterexponiert

Scheinbare ARdiff: M—Centrum $= -\ 3'.3502$ $\qquad f^\circ_\alpha = 0.99335 \qquad -i^\circ_\alpha = +0.00075$

N— » $= -50.0278$

Q— » $= +\ 5.7067$ $\qquad f_\alpha = \mathbf{0.99305} \qquad -i_\alpha = +\mathbf{0.00078} \qquad \measuredangle\, i_\alpha = -\ 2'.7$

R— » $= +47.3277$ $\qquad Refr. = -\ 2$

V— » $= -\ 8.9385$ $\qquad Tx_♃ = +\ 52$

W— » $= -\ 7.7338$ $\qquad f'_\alpha = \mathbf{0.99334} \qquad J_\alpha = +\mathbf{0.00128}$

$\alpha_♃ = 8^h\ 11^m.6$

*) Auf dieser Platte sind alle Bilder grau, wahrscheinlich zu kurze Zeit entwickelt.
**) Alle Bilder des Trabanten IV fallen auf einen Netzstrich.

1896. Februar 23.

[R]eihe. Decl.

[Ob]jet.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
[c]t	**64.1355**		**64.2521**							
T	64.1346	+ 9	64.2513	+ 8	0	0.0000		0.0000	0.0000	Bilder 4. Leichte Wolk. ziehen über den Himmel. Im Ganzen sind 3 Trabant. zu sehen, um $7^h 20^m$ erschien der vierte am Ostr. des Jupiter.
M	72.4998	+15	55.8875	0	0	+ 8.3652		— 0.0005	+ 8.3647	
N	73.0266	+32	55.3564	+16	— 7	+ 8.8935		— 0.1174	+ 8.7761	
Q	44.8950	+18	83.4910	— 6	+ 2	—19.2383		— 0.0015	—19.2398	
R	44.9092	+35	83.4705	+19	+15	—19.2200		— 0.1031	—19.3231	
V	50.0910	+ 9	78.2956	+12	+ 1	—14.0441		— 0.0037	—14.0478	
W	100.4154	+ 5	27.9777	+24	—14	+36.2748		— 0.0029	+36.2719	
a_r	67.6056	+18	60.8035	+11		+ 3.4597				
a_c	67.2150	+ 8	61.1940	+11		+ 3.0686	+ 3.0701			
a_s	67.8290	+ 8	61.5812	+10		+ 2.6821				
b_r	65.8016	+10	62.6031	+10		+ 1.6576				
b_c	65.4139	+16	62.9930	+10		+ 1.2690	+ 1.2703			
b_s	65.0290	+16	63.3779	+10		+ 0.8842				
d_r	62.2809	+ 9	66.1400	+11		— 1.8714				
d_c	61.8660	+ 9	66.5366	+ 9		— 2.2770	— 2.2785			
d_s	61.4602	+ 9	66.9510	+ 9		— 2.6871				
e_r	60.6311	+10	67.7820	+19		— 3.5176				
e_c	60.2260	+14	68.1800	+19		— 3.9190	— 3.9205			
e_s	59.8170	+14	68.5831	+14		— 4.3248				

Trabant — Jupiterscentrum.

[Ob]jet.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta\,(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
[c]	67.5272	+18	60.8700	+11		+ 3.3872	+0.3171	+0.3123	+0.′3103	+0.′0010	+0.′0005	+ 0.′0001	**+0.3119**
[l]	65.7211	+10	62.6766	+10		+ 1.5806	+0.3103						
[c]	62.1710	+ 9	66.2244	+11		— 1.9685	+0.3100						
[e]	60.5326	+10	67.8660	+19		— 3.6088	+0.3117						
[c]	68.0560	+19	60.3390	+14		+ 3.9170	+0.8469	+0.8451	+0.8397	+0.0026	+0.0011	+0.0001	**+0.′8435**
[l]	66.2549	+11	62.1420	+ 9		+ 2.1148	+0.8445						
[c]	62.7011	+10	65.6921	+10		— 1.4372	+0.8413						
[e]	61.0675	+11	67.3299	+ 8		— 3.0728	+0.8477						
	Geht du	rch	die Jupiter	sche	ibe.								
[c]	66.9815	+ 8	61.4149	+11		+ 2.8414	—0.2287	—0.2320	—0.2305	—0.0012	—0.0009	+0.0001	**—0.2325**
[l]	65.1760	+16	63.2200	+10		+ 1.0366	—0.2337						
[c]	61.6236	+ 9	67.7680	+ 9		— 2.5139	—0.2354						
[e]	59.9905	+14	68.4079	+19		— 4.1506	—0.2301						

Scheinbare Decldiff: M— Centrum $= +\ 8.'3183$ $\quad f^\circ_\delta = 0.99358 \quad i^\circ_\delta = -0.00088$
N— » $= +\ 8.7655$
Q— » $= -19.1173$ $\quad f_\delta = \mathbf{0.99308} \quad i_\delta = \mathbf{-0.00080} \quad \measuredangle\ i_\delta = -\ 2.'7$
R— » $= -19.1527$
V— » $= -13.9495$ $\quad f'_\delta = \mathbf{0.99356} \quad J_\delta = \mathbf{-0.00086}$
W— » $= +36.0465$

$\delta_♃ = +20^\circ\ 44.'8$

48 B. 1896. Februar 23.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 48 A.							
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	56.5212	+11	71.8870	+12		— 5.0412				
f_c	56.9250	+11	71.4748	+13		— 4.6333	— 4.6316	9^h 33^m 12^s		4
f_o	57.3434	+11	71.0670	+13		— 4.2202				
♃ g_w	56.5062	+10	71.8970	+11		— 5.0538				
g_c	56.9140	+10	71.4928	+12		— 4.6478	— 4.6464	34 35		4
g_o	57.3244	+10	71.0830	+12		— 4.2377			9^h 34^m 54^s	
♃ h_w	56.5356	+10	71.8665	+11		— 5.0238				
h_c	56.9450	+10	71.4538	+12		— 4.6128	— 4.6116	35 25		3—4
h_o	57.3654	+10	71.0450	+12		— 4.1982				
♃ i_w	56.5691	+ 9	71.8450	+11		— 4.9964				
i_c	56.9750	+ 9	71.4294	+12		— 4.5856	— 4.5837	36 25		4—5
i_o	57.3894	+ 9	71.0105	+12		— 4.1690				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I f	56.4674	+ 1	71.9270	+12		— 5.0886	—0.4570						3 unterexp.
g	56.4554	0	71.9385	+11		— 5.1004	—0.4540	—0.4516	—0.′4486	0.′0000	—0.′0010	**—0.′4496**	3—4 unterexp.
h	56.4984	0	71.8915	+11		— 5.0554	—0.4438						Schimmer
i	Nicht ei	nstel	lbar.										
II f	54.0150	+ 4	74.3799	+13		— 7.5412	—2.9096						2—3
g	54.0015	+ 4	74.3939	+12		— 7.5549	—2.9085	—2.9074	—2.8881	+0.0002	—0.0010	**—2.8889**	3
h	54.0445	+ 3	74.3599	+12		— 7.5164	—2.9048						4—5 unterexp.
i	54.0665	+ 3	74.3299	+12		— 7.4904	—2.9067						4
III f	56.1025	+ 1	72.2954	+12		— 5.4553	—0.8237						3—4 verwaschen
g	56.0795	0	72.3149	+11		— 5.4766	—0.8302	—0.8318	—0.8263	0.0000	—0.0010	**—0.8273**	3—4 »
h	56.1090	0	72.2814	+11		— 5.4450	—0.8334						4 »
i	56.1315	— 1	72.2614	+11		— 5.4238	—0.8401						4 »
IV f	58.7221	+11	69.6691	+17		— 2.8321	+1.7995						3
g	58.7071	+11	69.6836	+16		— 2.8468	+1.7996	+1.7992	+1.7873	—0.0001	—0.0010	**+1.7862**	3—4 unterexp.
h	58.7416	+11	69.6506	+16		— 2.8130	+1.7986						3 »
i	58.7731	+10	69.6246	+16		— 2.7844	+1.7993						3—4 »

Scheinbare Ædiff. wie 48 A.

$f^\circ_\alpha = 0.99335$ $\qquad -i^\circ_\alpha = +0.00075$

$f_\alpha = \mathbf{0.99305}$ $\qquad -i_\alpha = \mathbf{+0.00078}$ $\qquad \sphericalangle\, i_\alpha = -\,2.'7$

$Refr. = +\ \ 3$

$Tx_♃ = -\ \ 51$

$f'_\alpha = \mathbf{0.99335}$ $\qquad J_\alpha = \mathbf{+0.00030}$

$\alpha_♃ = 8^h\ 11^m.6$

1896. Februar 23.

eihe.

Decl.

	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	Anhaltsterne		**wie 48 A.**							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
f_n	69.5443	+16	58.8710	+12		+ 5.3952				Bilder 3.
f_c	69.1530	+16	59.2589	+12		+ 5.0056	+ 5.0069			
f_s	68.7710	+16	59.6481	+16		+ 4.6198				
g_n	67.7830	+21	60.6326	+12		+ 3.6340				
g_c	67.3939	+11	61.0085	+12		+ 3.2510	+ 3.2535			
g_s	67.0215	+11	61.3869	+12		+ 2.8756				
h_n	66.0660	+13	62.3479	+11		+ 1.9174				
h_c	65.6751	+13	62.7246	+11		+ 1.5336	+ 1.5334			
h_s	65.2899	+19	63.1090	+11		+ 1.1491				
i_n	64.2769	+11	64.1420	+10		+ 0.1258				
i_c	63.8840	+11	64.5212	+18		— 0.2606	— 0.2617			
i_s	63.4906	+11	64.9070	+18		— 0.6502				

	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
f	69.2859	+16	59.1130	+12		+ 5.1450	+0.1381						
g	67.5312	+21	60.8640	+12		+ 3.3924	+0.1389	+0.1357	+0'1348	+0'0003	—0'0002	+0'0001	**+0'1350**
h	65.8046	+13	62.5946	+11		+ 1.6634	+0.1300						
i	Nicht einstellbar.												
f	69.9400	+20	58.4578	+ 9		+ 5.8000	+0.7931						
g	68.1860	+22	60.2085	+18		+ 4.0472	+0.7937	+0.7903	+0.7852	+0.0021	—0.0019	+0.0001	**+0.7855**
h	66.4604	+14	61.9375	+13		+ 2.3198	+0.7864						
i	64.6656	+20	63.7301	+12		+ 0.5264	+0.7881						
f	69.2929	+16	59.0970	+12		+ 5.1564	+0.1495						
g	67.5422	+21	60.8525	+12		+ 3.4036	+0.1501	+0.1498	+0.1488	+0.0006	—0.0004	+0.0001	**+0.1491**
h	65.8190	+13	62.5741	+11		+ 1.6808	+0.1474						
i	64.0275	+11	64.3634	+10		— 0.1096	+0.1521						
f	68.8255	+15	59.5701	+15		+ 4.6860	—0.3209						
g	67.0660	+10	61.3249	+11		+ 2.9288	—0.3247	—0.3254	—0.3233	—0.0013	+0.0008	+0.0001	**—0.3237**
h	65.3419	+18	63.0500	+10		+ 1.2046	—0.3288						
i	63.5552	+10	64.8485	+17		— 0.5887	—0.3270						

Scheinbare Decldiff. wie 48 A.

$f^\circ_\delta = 0.99358$ $\quad i^\circ_\delta = -0.00088$

$f_\delta = \mathbf{0.99308}$ $\quad i_\delta = \mathbf{-0.00080}$ $\quad \sphericalangle\, i_\delta = -2'7$

$f'_\delta = \mathbf{0.99357}$ $\quad J_\delta = \mathbf{-0.00072}$

$\delta_♃ = +20^\circ\ 44'9$

49 A. 1896. Februar 24.

Æ 12.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**66.7737**		**61.6154**							
Z	66.7729	+ 8	61.6144	+10	0	0.0000				2—3
M	81.1443	+15	47.2398	+ 9	— 1	+14.3733				1—2
N	37.0163	+23	91.3738	— 6	+ 6	—29.7558				1—2
Q	89.7445	+ 8	38.6441	+36	—10	+22.9686		7^h 30^m 5^s		2—3
R	39.4435	+40	88.9409	+ 5	+15	—27.3246				1—2
V	75.8579	+21	52.5306	+18	— 2	+ 9.0844				2
W	77.0183	+17	51.3731	+22	— 2	+10.2430				2
♃ a_w	61.7101	+ 9	66.6866	+ 8		— 5.0674				
a_c	62.1210	+ 9	66.2839	+10		— 4.6606	— 4.6604	7 12 27		2—3
a_o	62.5228	+ 9	65.8710	+10		— 4.2533				
♃ b_w	61.7976	+10	66.6041	+ 8		— 4.9823				
b_c	62.1844	+10	66.2155	+10		— 4.5947	— 4.5920	13 50		2
b_o	62.5813	+10	65.8210	+10		— 4.1990			7^h 14^m 40^s	
♃ c_w	61.6671	+10	66.7256	+ 8		— 5.1083				
c_c	62.0825	+10	66.3150	+10		— 4.6954	— 4.6976	15 12		2—3
c_o	62.4874	+10	65.9075	+10		— 4.2892				
♃ d_w	61.7151	+10	66.6840	+ 9		— 5.0636				
d_c	62.1080	+10	66.2830	+11		— 4.6667	— 4.6630	17 11		2
d_o	62.5188	+10	65.8780	+11		— 4.2588				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_{♃}$	Mittel.	$f'_\alpha(x_t - x_{♃})$	$J_\alpha(y_t - y_{♃})$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
I	Als Erh	öhun	g am Ostra	nde	bei	Aufnahme	c und d	zu erken	nen.				
							mm	mm					
II a	63.9090	+ 8	64.4809	+ 9		— 2.8652	+1.7952						2—3
b	63.9875	+ 8	64.4049	+ 8		— 2.7878	+1.8042	+1.8051	+1'.7930	+0'.0008	—0'.0010	**+1'.7928**	1—2
c	63.8875	+ 9	64.5064	+ 8		— 2.8886	+1.8090						2—3
d	63.9240	+ 9	64.4674	+ 8		— 2.8508	+1.8122						2
III a	57.7381	+ 5	70.6501	+12		— 9.0355	—4.3751						2—3
b	57.8060	+ 6	70.5851	+12		— 8.9690	—4.3770	—4.3780	—4.3487	—0.0021	—0.0010	**—4.3518**	1—2
c	57.6986	+ 6	70.6906	+12		— 9.0754	—4.3778						3
d	57.7291	+ 7	70.6601	+13		— 9.0450	—4.3820						2
IV a	66.8955	+ 8	61.4998	+11		+ 0.1186	+4.7790						2
b	66.9715	+ 8	61.4239	+10		+ 0.1946	+4.7866	+4.7866	+4.7545	+0.0021	—0.0010	**+4.7556**	2
c	66.8660	+ 9	61.5248	+10		+ 0.0914	+4.7890						2—3
d	66.9045	+ 9	61.4888	+10		+ 0.1286	+4.7916						2

Scheinbare Ædiff: M— Centrum = +15'.2108 $f^\circ_\alpha = 0.99330$ $-i^\circ_\alpha = -0.00142$

N— » = —31.4672

Q— » = +24.2673 f_α = **0.99301** $-i_\alpha$ = **—0.00140** ♃ i_α = + 4'.8

R— » = —28.7667 *Refr.* = — 2

V— » = + 9.6225 $Tx_{♃}$ = — 51

W— » = +10.8272 f'_α = **0.99330** J_α = **—0.00193**

$\alpha_{♃} = 8^h\ 11^m.1$

1896. Februar 24.

Reihe. Decl.

Object.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
tr.	**62.9374**		**65.4474**							
	62.9365	+ 9	65.4457	+17	0	0.0000		0.0000	0.0000	Um $7^h\ 21^m$ Eintritt
M	59.4774	+17	68.9095	+19	0	− 3.4612		− 0.0108	− 3.4720	des ersten Trabanten in die Jupiterscheibe am
	60.0278	+25	68.3614	+32	+ 1	− 2.9120		− 0.0471	− 2.9591	Ostrande.
	31.8737	+33	96.5158	+10	+15	−31.0634		− 0.0274	−31.0908	Bilder 2—3
	31.8997	+29	96.4838	+11	+14	−31.0348		− 0.0387	−31.0735	
	37.0656	+27	91.3200	− 3	+ 6	−25.8701		− 0.0043	−25.8744	
V	87.3938	+ 1	40.9959	+29	− 4	+24.4522		− 0.0057	+24.4465	
n	63.6876	+ 9	64.7101	+16		+ 0.7434				
c	63.3114	+10	65.0950	+16		+ 0.3629	+ 0.3625			
s	62.9250	+10	65.4718	+16		− 0.0187				
n	65.4918	+17	62.9140	+ 9		+ 2.5443				
c	65.1300	+17	63.2779	+ 9		+ 2.1814	+ 2.1786			
s	64.7531	+17	63.6436	+ 8		+ 1.8101				
n	67.2539	+ 9	61.1450	+10		+ 4.3094				
c	66.8800	+ 9	61.5312	+ 9		+ 3.9294	+ 3.9290			
s	66.4952	+ 9	61.9090	+ 9		+ 3.5481				
n	68.9705	+14	59.4302	+14		+ 6.0252				
c	68.5986	+14	59.8080	+14		+ 5.6503	+ 5.6487			
s	68.2130	+19	60.1825	+14		+ 5.2705				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta\,(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
	Als Erh	öhun	g am Ostra	nde	bei	Aufnahme	a und b zu	erkennen.					
							mm	mm					
a	62.8780	+ 9	65.5152	+10		− 0.0636	−0.4261						
b	64.6956	+16	63.6996	+ 8		+ 1.7534	−0.4252	−0.4263	−0.′4235	+0.′0023	+0.′0007	+0.′0001	**−0.′4204**
c	66.4469	+10	61.9480	+ 9		+ 3.5045	−0.4245						
d	68.1605	+18	60.2320	+14		+ 5.2194	−0.4293						
a	64.3884	+10	64.0010	+ 9		+ 1.4488	+1.0863						
b	66.2050	+12	62.1890	+10		+ 3.2631	+1.0845	+1.0847	+1.0776	−0.0055	−0.0033	+0.0001	**+1.0689**
c	67.9580	+20	60.4339	+15		+ 5.0173	+1.0883						
d	69.6771	+18	58.7151	+11		+ 6.7364	+1.0877						
a	62.2215	+ 9	66.1750	+11		− 0.7118	−1.0743						
b	64.0370	+ 8	64.3599	+ 9		+ 1.0935	−1.0851	−1.0804	−1.0733	+0.0060	+0.0012	+0.0001	**−1.0660**
c	65.7935	+10	62.6031	+10		+ 2.8502	−1.0788						
d	67.5092	+18	60.8890	+11		+ 4.5654	−1.0833						

Scheinbare Decldiff: M— Centrum $= -\ 3'.4292$ $\quad f^\circ_\delta = 0.99352$ $\quad i^\circ_\delta = +0.00124$

N— » $= -\ 2.9820$

Q— » $= -30.8648$ $\quad f_\delta = \mathbf{0.99303}$ $\quad i_\delta = \mathbf{+0.00130}$ $\quad \measuredangle\, i_\delta = +\ 4'.5$

R— » $= -30.9002$

V— » $= -25.6970$ $\quad f'_\delta = \mathbf{0.99351}$ $\quad J_\delta = \mathbf{+0.00125}$

W— » $= +24.2990$

$\delta_♃ = +20^\circ\ 46'.0$

49 B. 1896. Februar 24.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 49 A.							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
♃ h_w	71.2085	+13	57.2005	+10		+ 4.4250				
h_c	71.5916	+12	56.8006	+10		+ 4.8164	+ 4.8195	$9^h\ 24^m\ 5^s$		1—2
h_o	71.9930	+12	56.4019	0		+ 5.2170				
♃ i_w	71.1560	+13	57.2440	+10		+ 4.3770				
i_c	71.5591	+12	56.8460	+10		+ 4.7775	+ 4.7765	25 0		2—3
i_o	71.9550	+12	56.4479	0		+ 5.1750			$9^h\ 25^m\ 30^s$	
♃ k_w	71.1725	+13	57.2315	+ 9		+ 4.3916				
k_c	71.5701	+12	56.8270	+ 9		+ 4.7926	+ 4.7963	25 57		2
k_o	71.9820	+12	56.4159	— 1		+ 5.2046				
♃ l_w	71.2115	+14	57.1900	+ 9		+ 4.4318				
l_c	71.6061	+13	57.7925	+ 9		+ 4.8278	+ 4.8307	26 57		2
l_o	72.0090	+13	56.3869	— 1		+ 5.2326				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
I	Als Erh	öhun	g am Westr	ande	bei	Aufnahme	m, n und o	zu erken	nen.				
							mm	mm					
II h	73.8215	+12	54.5741	0		+ 7.0452	+2.2257						1—2
i	73.7780	+13	54.6206	0		+ 7.0002	+2.2237	+2.2276	+2′.2127	+0′.0004	—0′.0010	**+2′.2121**	2
k	73.8010	+13	54.5921	— 1		+ 7.0260	+2.2297						2—3
l	73.8385	+14	54.5576	— 1		+ 7.0620	+2.2313						2
III h	66.9935	+ 9	61.4004	+11		+ 0.2173	—4.6022						2
i	66.9420	+ 9	61.4489	+10		+ 0.1674	—4.6091	—4.6071	—4.5761	—0.0009	—0.0010	**—4.5780**	2—3
k	66.9645	+10	61.4279	+10		+ 0.1892	—4.6071						3
l	66.9950	+11	61.3954	+10		+ 0.2207	—4.6100						2
IV h	76.6526	+ 9	51.7440	+13		+ 9.8750	+5.0555						2
i	76.6061	+10	51.7915	+12		+ 9.8280	+5.0515	+5.0554	+5.0215	+0.0010	—0.0010	**+5.0215**	2—3
k	76.6291	+10	51.7730	+12		+ 9.8538	+5.0575						3
l	76.6641	+11	51.7300	+11		+ 9.8879	+5.0572						1—2

Scheinbare Ædiff. wie 49 A.

$f^\circ_\alpha = 0.99330$ $\quad -i^\circ_\alpha = -0.00142$

$f_\alpha = \mathbf{0.99301}$ $\quad -i_\alpha = \mathbf{-0.00140}$ $\quad ∡\ i_\alpha = +\ 4'.8$

Refr. $= +\ \ 3$

$Tx_♃ = +\ 53$

$f'_\alpha = \mathbf{0.99330}$ $\quad J_\alpha = \mathbf{-0.00084}$

$\alpha_♃ = 8^h\ 11^m.2$

1896. Februar 24.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃n + ♃c + ♃s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	**erne**	**wie 49 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		*mm*			*mm*	*mm*			
59.5551	+16	68.8405	+16		− 3.3877				Trabant I tritt aus am Westr. um $9^h\,35^m$. Bilder 3.
59.9305	+16	68.4808	+21		− 3.0204	− 3.0187			
60.2974	+16	68.1030	+21		− 2.6480				
61.3209	+12	67.0765	+11		− 1.6228				
61.6966	+11	66.7081	+11		− 1.2508	− 1.2511			
62.0660	+11	66.3349	+13		− 0.8796				
63.1290	+11	65.2689	+19		+ 0.1846				
63.5102	+10	64.8975	+19		+ 0.5609	+ 0.5644			
63.8910	+10	64.5046	+19		+ 0.9478				
64.9066	+18	63.4988	+12		+ 1.9592				
65.2840	+18	63.1210	+12		+ 2.3368	+ 2.3354			
65.6551	+12	62.7446	+12		+ 2.7102				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{♃}$	Mittel.	$f'_\delta(y_t - y_{♃})$	$J_\delta\,(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
Als Erh	öhun	g am Westr	ande	bei	Aufnahme	m, n und o zu	erkennen.					
						mm	*mm*					
59.3829	+13	69.0105	+16		− 3.5590	−0.5403						
61.1500	+13	67.2450	+11		− 1.7924	−0.5413	− 0.5418	−0'.5383	+0'.0030	−0'.0014	+0'.0001	**−0'.5366**
62.9650	+12	66.4289	+19		+ 0.0227	−0.5417						
64.7331	+19	63.6606	+11		+ 1.7916	−0.5438						
61.0710	+10	67.3219	+11		− 1.8706	+1.1481						
62.8360	+ 9	65.5581	+13		− 0.1062	+1.1449	+1.1465	+1.1391	−0.0063	+0.0013	+0.0001	**+1.1342**
64.6521	+16	63.7391	+11		+ 1.7117	+1.1473						
66.4219	+10	61.9695	+12		+ 3.4811	+1.1457						
58.7770	+15	69.6161	+21		− 4.1648	−1.1461						
60.5396	+15	67.8560	+23		− 2.4036	−1.1525	−1.1501	−1.1426	+0.0069	−0.0041	+0.0001	**−1.1455**
62.3579	+14	66.0370	+15		− 0.5846	−1.1490						
64.1255	+13	64.2704	+13		+ 1.1826	−1.1528						

Scheinbare Decldiff. wie 49 A.

$f^\circ_\delta = 0.99352$ $\quad i^\circ_\delta = +0.00124$

$f_\delta = \mathbf{0.99303}$ $\quad i_\delta = \mathbf{+0.00130}$ $\quad \measuredangle\, i_\delta = +\,4'.5$

$f'_\delta = \mathbf{0.99351}$ $\quad J_\delta = \mathbf{+0.00137}$

$\delta_{♃} = +20°\ 46'.1$

50 A. 1896. Februar 25.

Æ 12

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**66.2984**		**62.0929**							
S	66.2974	+10	62.0920	+ 9	0	0.0000				2—3
M	Durch ei	n Ju	pitersbild	verd	eckt.					
N	27.1456	+23	101.2404	+ 3	+17	—39.1474				2
Q	79.8360	+21	48.5540	+23	— 4	+13.5378		$8^h\ 49^m\ 35^s$		2 eiförmig.
R	29.5320	+31	98.8564	+11	+22	—36.7618				2
V	65.9560	+20	62.4298	+16	0	— 0.3394				2—3
W	67.2001	+20	61.1823	+25	0	+ 0.9059				2
♃ b_w	70.6451	+12	57.7531	+ 5		+ 4.3436				
b_c	71.0345	+12	57.3609	+ 9		+ 4.7342	+ 4.7375	8 40 10		2
b_o	71.4394	+12	56.9645	+ 9		+ 5.1348				
♃ c_w	70.5861	+12	57.8090	+ 5		+ 4.2862				
c_c	70.9875	+12	57.4139	+ 9		+ 4.6842	+ 4.6827	41 0		2—3
c_o	71.3784	+12	57.0180	+ 9		+ 5.0776			$8^h\ 41^m\ 28^s$	
♃ d_w	70.6176	+12	57.7866	+ 6		+ 4.3130				
d_c	71.0075	+12	57.3929	+10		+ 4.7046	+ 4.7059	41 50		2
d_o	71.4044	+12	56.9990	+10		+ 5.1000				
♃ e_w	70.6321	+13	57.7656	+ 6		+ 4.3308				
e_c	71.0360	+13	57.3699	+10		+ 4.7304	+ 4.7299	42 50		2—3
e_o	71.4324	+13	56.9700	+10		+ 5.1286				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I b	71.9650	+11	56.4274	— 1		+ 5.6666	+0.9291						2
c	71.9160	+11	56.4778	0		+ 5.6169	+0.9342	+0.9352	+0′.9288	+0′.0004	—0′.0011	**+0′.9281**	2
d	71.9440	+11	56.4518	0		+ 5.6439	+0.9380						1—2
e	71.9685	+12	56.4259	0		+ 5.6692	+0.9393						2—3
II b	73.1405	+13	55.2514	— 1		+ 6.8425	+2.1050						1—2
c	73.0845	+13	55.3089	0		+ 6.7857	+2.1030	+2.1010	+2.0866	+0.0010	—0.0011	**+2.0865**	2
d	73.1060	+13	55.2854	0		+ 6.8082	+2.1023						2—3
e	73.1220	+14	55.2709	+ 1		+ 6.8234	+2.0935						2—3
III b	65.9345	+11	62.4558	+ 9		— 0.3633	—5.1008						1—2
c	65.8805	+10	62.5088	+ 9		— 0.4168	—5.0995	—5.0991	—5.0641	—0.0022	—0.0011	**—5.0674**	2 dicht neben
d	65.9060	+10	62.4828	+10		— 0.3912	—5.0971						2
e	65.9255	+10	62.4584	+10		— 0.3692	—5.0991						2—3
IV b	78.5921	+ 6	49.8020	+ 6		+12.2923	+7.5548						2
c	78.5392	+ 6	49.8550	+ 6		+12.2394	+7.5567	+7.5552	+7.5034	+0.0029	—0.0011	**+7.5052**	1—2
d	78.5626	+ 6	49.8330	+ 6		+12.2620	+7.5561						2
e	78.5846	+ 7	49.8125	+ 7		+12.2833	+7.5534						2—3

Scheinbare Ædiff.: N— Centrum $= -41'.4085$
Q— » $= +14.3267$
R— » $= -38.7078$
V— » $= -\ 0.3188$
W— » $= +\ 0.8860$

$f^\circ_\alpha = 0.99314$ $\quad -i^\circ_\alpha = -0.00214$

$f_\alpha = \mathbf{0.99286}$ $\quad -i_\alpha = \mathbf{-0.00215}$ $\quad \sphericalangle\ i_\alpha = +\ 7'.4$

$Refr. = +\ 1$

$Tx_♃ = +\ 51$

$f'_\alpha = \mathbf{0.99314}$ $\quad J_\alpha = \mathbf{-0.00163}$

$\alpha_♃ = 8^h\ 10^m.8$

1896. Februar 25.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.4139		**64.9836**							
63.4130	+ 9	64.9819	+17	0	0.0000		0.0000	0.0000	Bilder 2. Mond sehr nahe.
Durch ein Jupitersbild verdeckt.									
67.0541	+24	61.3399	+26	− 1	+ 3.6418		− 0.0805	+ 3.5613	
38.7966	+31	89.5985	− 3	+ 6	−24.6138		− 0.0094	−24.6232	
38.9224	+37	89.4698	+ 9	+ 9	−24.4866		− 0.0689	−24.5555	
44.0230	+19	84.3732	− 6	+ 2	−19.3888		0.0000	−19.3888	
94.3549	− 3	34.0433	+21	− 8	+30.9386		0.0000	+30.9386	
65.2249	+17	63.1840	+11		+ 1.8056				
64.8615	+17	63.5472	+10		+ 1.4424	+ 1.4404			
64.4902	+17	63.9140	+10		+ 1.0733				
63.5088	+10	64.8940	+18		+ 0.0918				
63.1454	+10	65.2644	+18		− 0.2750	− 0.2740			
62.7810	+10	65.6281	+12		− 0.6388				
61.7111	+10	66.6941	+10		− 1.7066				
61.3489	+11	67.0600	+10		− 2.0706	− 2.0735			
60.9725	+11	67.4289	+10		− 2.4433				
59.9225	+15	68.4822	+15		− 3.4950				
59.5506	+15	68.8550	+15		− 3.8674	− 3.8663			
59.1854	+11	69.2280	+15		− 4.2366				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.6356	+18	63.7640	+11		+ 1.2210	−0.2194						
62.9255	+11	65.4708	+19		− 0.4882	−0.2142	−0.2167	−0.′2153	+0.′0020	−0.′0006	+0.′0001	**−0.′2138**
61.1235	+12	67.2749	+11		− 2.2908	−0.2173						
59.3329	+12	69.0665	+16		− 4.0822	−0.2159						
64.2579	+11	64.1350	+11		+ 0.8443	−0.5961						
62.5512	+12	65.8476	+13		− 0.8634	−0.5894	−0.5906	−0.5867	+0.0046	−0.0014	+0.0001	**−0.5900**
60.7491	+13	67.6471	+21		− 2.6646	−0.5911						
58.9610	+13	69.4344	+16		− 4.4520	−0.5857						
66.1834	+10	62.2124	+10		+ 2.7704	+1.3300						
64.4698	+ 8	63.9255	+ 9		+ 1.0570	+1.3310	+1.3304	+1.3216	−0.0111	+0.0012	+0.0001	**+1.3118**
62.6691	+ 9	65.7281	+11		− 0.7448	+1.3287						
60.8785	+10	67.5156	+19		− 2.5342	+1.3321						
63.0595	+15	65.3419	+21		− 0.3566	−1.7954						
61.3454	+16	67.0535	+13		− 2.0690	−1.7950	−1.7954	−1.7835	+0.0165	−0.0071	+0.0001	**−1.7740**
59.5452	+20	68.8550	+18		− 3.8700	−1.7965						
57.7551	+11	70.6431	+17		− 5.6594	−1.7931						

Scheinbare Decldiff: N—Centrum $= + 3'.4510$ $\quad f^\circ_\delta = 0.99338 \quad i^\circ_\delta = +0.00214$

Q— » $= -24.4322$

R— » $= -24.4675$ $\quad f_\delta = \mathbf{0.99290} \quad i_\delta = +\mathbf{0.00213} \quad \measuredangle\, i_\delta = +7'.3$

V— » $= -19.2643$

W— » $= +30.7322$ $\quad f'_\delta = \mathbf{0.99337} \quad J_\delta = +\mathbf{0.00216}$

$\delta_♃ = +20^\circ\ 47'.2$

50 B. 1896. Februar 25.

Æ

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Anhaltsterne wie 50 A.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	61.1964	+11	67.2070	+ 8		− 5.1079				
f_c	61.5926	+10	66.8110	+ 8		− 4.7118	− 4.7101	9^h 5^m 30^s		2
f_o	61.9930	+10	66.4089	+10		− 4.3107				
♃ g_w	61.2354	+11	67.1695	+ 8		− 5.0696				
g_c	61.6371	+10	66.7750	+ 8		− 4.6716	− 4.6722	6 30		2
g_o	62.0290	+10	66.3744	+10		− 4.2754			**9^h 6^m 50^s**	
♃ h_w	61.2389	+10	67.1595	+ 8		− 5.0630				
h_c	61.6311	+ 9	66.7745	+ 8		− 4.6744	− 4.6696	7 10		1—2
h_o	62.0335	+ 9	66.3709	+10		− 4.2715				
♃ i_w	61.1030	+10	67.3044	+ 9		− 5.2034				
i_c	61.5062	+ 9	66.9020	+ 9		− 4.8006	− 4.7991	8 12		2—3
i_o	61.9125	+ 9	66.4934	+11		− 4.3933				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	62.6391	+10	65.7551	+10		− 3.6608	+1.0493						1—2
g	62.6741	+10	65.7211	+10		− 3.6262	+1.0460	+1.0519	+1′.0447	+0′.0007	−0′.0011	**+1′.0443**	2
h	62.6851	+ 9	65.7096	+10		− 3.6150	+1.0546						2
i	62.5581	+ 9	65.8350	+11		− 3.7413	+1.0578						2—3
II f	63.6166	+ 9	64.7746	+16		− 2.6821	+2.0280						2
g	63.6431	+ 9	64.7496	+16		− 2.6564	+2.0158	+2.0200	+2.0061	+0.0015	−0.0011	**+2.0065**	1—2
h	63.6491	+ 8	64.7406	+16		− 2.6489	+2.0207						2
i	63.5152	+ 8	64.8760	+17		− 2.7836	+2.0155						2
III f	56.5168	+ 1	71.8745	+12		− 9.7822	−5.0721						2
g	56.5498	0	71.8456	+11		− 9.7512	−5.0790	−5.0741	−5.0393	−0.0035	−0.0011	**−5.0439**	2
h	56.5568	0	71.8346	+11		− 9.7422	−5.0726						1—2
i	56.4269	− 1	71.9640	+11		− 9.8719	−5.0728						2
IV f	69.1839	+14	59.2095	+10		+ 2.8846	+7.5947						2
g	69.2169	+13	59.1790	+10		+ 2.9164	+7.5886	+7.5932	+7.5412	+0.0048	−0.0011	**+7.5449**	1—2
h	69.2249	+13	59.1700	+11		+ 2.9248	+7.5944						2
i	69.0960	+13	59.2984	+11		+ 2.7962	+7.5953						2

Scheinbare Ædiff. wie 50 A.

$f^\circ_\alpha = 0.99314$ $\quad -i^\circ_\alpha = -0.00214$

f_α = **0.99286** $\quad -i_\alpha$ = **−0.00215** $\quad ∡\, i_\alpha = +\, 7'.4$

Refr. $= +\ 2$

$Tx_♃ = -\ 51$

f'_α = **0.99315** $\quad J_\alpha$ = **−0.00264**

$\alpha_♃ = 8^h\ 10^m.8$

1896. Februar 25.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	**erne**	**wie 50 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm 68.5648	+19	mm 59.8421	+14		mm +5.1464	mm			
68.2020	+19	60.2104	+14		+4.7809	+4.7782			
67.8225	+19	60.5786	+10		+4.4072				
66.7790	+9	61.6271	+9		+3.3608				
66.4079	+11	62.0005	+9		+2.9886	+2.9916			
66.0415	+11	62.3604	+9		+2.6255				
65.0380	+17	63.3629	+9		+1.6228				
64.6821	+17	63.7316	+8		+1.2606	+1.2566			
64.3034	+17	64.1010	+8		+0.8865				
63.3359	+10	65.0710	+16		−0.0830				
62.9635	+10	65.4569	+16		−0.4622	−0.4605			
62.5806	+10	65.8226	+10		−0.8362				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.9430	+19	60.4559	+14		+4.5286	−0.2496						
66.1590	+11	62.2384	+9		+2.7452	−0.2464	−0.2482	−0'2466	+0'0023	+0'0004	+0.0001	**−0'2438**
64.4219	+9	63.9776	+8		+1.0070	−0.2496						
62.7066	+10	65.6916	+10		−0.7076	−0.2471						
67.6251	+18	60.7821	+10		+4.2068	−0.5714						
65.8385	+10	62.5611	+9		+2.4236	−0.5680	−0.5704	−0.5666	+0.0044	+0.0008	+0'0001	**−0.5613**
64.0960	+8	64.3019	+8		+0.6819	−0.5747						
62.3859	+9	66.0110	+10		−1.0278	−0.5673						
69.5202	+19	58.8775	+12		+6.1066	+1.3284						
67.7381	+21	60.6581	+12		+4.3253	+1.3337	+1.3306	+1.3218	−0.0111	−0.0041	+0.0001	**+1.3067**
65.9995	+13	62.3979	+11		+2.5858	+1.3292						
64.2839	+11	64.1110	+10		+0.8708	+1.3313						
66.3759	+11	62.0270	+11		+2.9593	−1.8189						
64.5951	+17	63.8046	+10		+1.1804	−1.8112	−1.8145	−1.8025	+0.0167	+0.0007	+0.0001	**−1.7850**
62.8550	+10	65.5456	+12		−0.5606	−1.8172						
61.1425	+11	67.2549	+10		−2.2713	−1.8108						

Scheinbare Decldiff. wie 50 A.

$f^0_\delta = 0.99338$ $\quad i^0_\delta = +0.00214$

$f_\delta = \mathbf{0.99290}$ $\quad i_\delta = \mathbf{+0.00213}$ $\quad \sphericalangle\, i_\delta = +7'.3$

$f'_\delta = \mathbf{0.99338}$ $\quad J_\delta = \mathbf{+0.00218}$

$\delta_♃ = +20°\ 47'.2$

51 A. 1896. Februar 26.

Æ

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.6386**		**63.7508**							
S	64.6370	+16	63.7500	+ 8	0	0.0000				3
M	Durch e	in J	upitersbild	verd	eckt.					
N	25.4968	+25	102.8929	+ 5	+18	−39.1392				3—4
Q	78.2449	+21	50.1435	+15	− 3	+13.6068		8^h 47^m 39^s		3
R	27.9462	+34	100.4432	+12	+22	−36.6891				3—4
V	64.3545	+17	64.0341	+14	0	− 0.2836				3
W	65.4608	+28	62.9284	+24	0	+ 0.8225				3
♃ a_w	68.9900	+14	59.4169	+10		+ 4.3428				
a_c	69.3908	+14	59.0045	+10		+ 4.7494	+ 4.7514	8 35 46		4—5
a_o	69.8020	+17	58.5901	+10		+ 5.1624				
♃ b_w	69.0080	+13	59.3954	+10		+ 4.3626				
b_c	69.3948	+13	59.0080	+10		+ 4.7496	+ 4.7518	36 54	8^h 37^m 17^s	3—4
b_o	69.7826	+16	58.6091	+10		+ 5.1432				
♃ c_w	69.0085	+13	59.3934	+10		+ 4.3638				
c_c	69.3964	+13	59.0045	+10		+ 4.7522	+ 4.7554	37 44		3—4
c_o	69.7906	+16	58.6031	+10		+ 5.1502				
♃ d_w	68.9670	+13	59.4379	+11		+ 4.3208				
d_c	69.3598	+13	59.0480	+11		+ 4.7121	+ 4.7149	38 44		4
d_o	69.7571	+16	58.6461	+11		+ 5.1118				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	67.8370	+19	60.5542	+10		+ 3.1980	−1.5534						3—4
b	67.8335	+18	60.5606	+10		+ 3.1930	−1.5588	−1.5588	−1'.5482	+0'.0004	−0'.0011	**−1'.5489**	3
c	67.8370	+18	60.5556	+10		+ 3.1973	−1.5581						3
d	67.7900	+18	60.6032	+11		+ 3.1498	−1.5651						3
II a	66.4204	+11	61.9775	+ 9		+ 1.7776	−2.9738						3—4
b	66.4198	+10	61.9750	+ 9		+ 1.7786	−2.9732	−2.9741	−2.9540	+0.0008	−0.0011	**−2.9543**	3
c	66.4254	+10	61.9710	+ 9		+ 1.7834	−2.9720						2—3
d	66.3784	+10	62.0155	+10		+ 1.7376	−2.9773						3—4
III a	67.3848	+ 9	61.0090	+10		+ 2.7440	−2.0074						3—4
b	67.3878	+ 8	61.0050	+10		+ 2.7474	−2.0044	−2.0027	−1.9891	+0.0006	−0.0011	**−1.9896**	2—3
c	67.3984	+ 8	60.9945	+10		+ 2.7580	−1.9974						3—4
d	67.3538	+ 8	61.0390	+11		+ 2.7134	−2.0015						3
IV a	78.4898	+ 8	49.9080	+ 5		+13.8472	+9.0958						3—4 unterexp
b	78.4898	+ 8	49.9050	+ 6		+13.8486	+9.0968	+9.0964	+9.0347	−0.0025	−0.0011	**+9.0311**	2
c	78.4978	+ 8	49.8995	+ 6		+13.8554	+9.1000						2
d	78.4494	+ 8	49.9460	+ 6		+13.8079	+9.0930						4 unterexponi

Scheinbare Ædiff. wie 50 A.

$f^\circ_\alpha = 0.99322$ $\quad -i^\circ_\alpha = +0.00062$

$f_\alpha = \mathbf{0.99294}$ $\quad -i_\alpha = \mathbf{+0.00061}$ $\quad ⚹\ i_\alpha = -2'.1$

$Refr. = +\ \ 1$

$Tx_♃ = +\ 51$

$f'_\alpha = \mathbf{0.99322}$ $\quad J\alpha = \mathbf{+0.00113}$

$\alpha_♃ = 8^h\ 10^m.5$

Das Sternpaar NS giebt einen stark abweichenden Wert für f°_α, daher ist der aus dem Bogen QR abgeleitete Scalenwert b corrigiert um die halbe mittlere Differenz $f^\circ_\alpha\ (NS) - f^\circ_\alpha\ (QR)$.

1896. Februar 26.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.6698		**64.7272**							
63.6690	+ 8	64.7256	+16	0	0.0000		0.0000	0.0000	Mond sehr nahe.
Durch e	in J	upitersbild	verd	eckt.					
67.1880	+25	61.2033	+26	— 1	+ 3.5209		— 0.0805	+ 3.4404	
39.0945	+30	89.2999	— 2	+ 6	—24.5718		— 0.0094	—24.5812	
39.0776	+39	89.3147	+ 9	+14	—24.5870		— 0.0689	—24.6559	
44.2743	+19	84.1166	— 7	+ 2	—19.3912		0.0000	—19.3912	
94.6123	— 2	33.7852	+21	—20	+30.9391		0.0000	+30.9391	
67.1995	+ 9	61.203	+12		+ 3.5266				
66.8230	+ 9	61.5872	+11		+ 3.1465	+ 3.1466			
66.4399	+11	61.9640	+11		+ 2.7666				
65.4059	+17	62.9980	+11		+ 1.7330				
65.0405	+17	63.3728	+11		+ 1.3628	+ 1.3655			
64.6701	+17	63.7266	+10		+ 1.0008				
63.6611	+ 9	64.7401	+18		— 0.0112				
63.3049	+10	65.1160	+18		— 0.3772	— 0.3758			
62.9310	+10	65.4654	+18		— 0.7389				
61.9026	+10	66.5092	+10		— 1.7746				
61.5286	+10	66.8800	+10		— 2.1470	— 2.1443			
61.1640	+11	67.2444	+10		— 2.5114				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.1940	+ 8	61.2055	+11		+ 3.5228	+0.3762						
65.4159	+16	62.9840	+10		+ 1.7450	+0.3795	+0.3790	+0.'3765	+0.'0012	+0.'0006	+0.'0001	**+0.'3784**
63.6751	+ 8	64.7246	+17		+ 0.0035	+0.3793						
61.9090	+ 9	66.4928	+11		— 1.7633	+0.3810						
67.5586	+18	60.8420	+11		+ 3.8874	+0.7408						
65.7815	+10	62.6196	+10		+ 2.1096	+0.7441	+0.7427	+0.7378	+0.0023	+0.0011	+0.0001	**+0.7413**
64.0360	+ 8	64.3619	+ 9		+ 0.3657	+0.7415						
62.2709	+ 9	66.1275	+11		— 1.3997	+0.7446						
67.3839	+ 8	61.0120	+11		+ 3.7145	+0.5679						
65.6055	+10	62.7896	+10		+ 1.9366	+0.5711	+0.5695	+0.5657	+0.0016	+0.0008	+0.0001	**+0.5682**
63.8620	+ 8	64.5316	+17		+ 0.1934	+0.5692						
62.0960	+ 9	66.3019	+11		— 1.5744	+0.5699						
64.6271	+22	63.7700	+13		+ 0.9577	—2.1889						
62.8510	+15	65.5492	+15		— 0.8204	—2.1859	—2.1872	—2.1728	—0.0073	—0.0093	+0.0001	**—2.1893**
61.1070	+16	67.2944	+13		— 2.5648	—2.1890						
59.3414	+16	69.0570	+18		— 4.3292	—2.1849						

Scheinbare Decldiff. wie 50 A.

$f^\circ_\delta = 0.99339$ $\quad i^\circ_\delta = -0.00082$

$f_\delta = \mathbf{0.99291}$ $\quad i_\delta = \mathbf{-0.00083}$ $\quad \measuredangle\, i_\delta = -2'.9$

$f'_\delta = \mathbf{0.99338}$ $\quad J_\delta = \mathbf{-0.00080}$

$\delta_♃ = +20^\circ\ 48'.3$

51 B. 1896. Februar 26.

Æ

12

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 51 A.									
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	59.5992	+15	68.8025	+13		− 5.0454				
f_c	60.0020	+15	68.4019	+18		− 4.6440	− 4.6448	$9^h\ 52^m\ 46^s$		3—4
f_o	60.3939	+15	67.9960	+18		− 4.2451				
♃ g_w	59.5772	+14	68.8240	+13		− 5.0672				
g_c	59.9660	+14	68.4344	+18		− 4.6783	− 4.6782	53 34		2—3
g_o	60.3509	+14	68.0410	+18		− 4.2892			$9^h\ 54^m\ 7^s$	
♃ h_w	59.5896	+14	68.8110	+13		− 5.0546				
h_c	59.9795	+14	68.4129	+18		− 4.6608	− 4.6572	54 34		3—4
h_o	60.3839	+14	68.0080	+18		− 4.2562				
♃ i_w	59.5526	+14	68.8570	+14		− 5.0961				
i_c	59.9415	+14	68.4628	+19		− 4.7048	− 4.7045	55 34		3—4
i_o	60.3279	+14	68.0650	+19		− 4.3127				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	58.3789	+ 6	70.0135	+16		− 6.2617	−1.6169						2—3
g	58.3459	+ 6	70.0450	+16		− 6.2940	−1.6158	−1.6186	−1′.6076	+0′.0001	−0′.0011	**−1′.6086**	3
h	58.3639	+ 5	70.0290	+16		− 6.2770	−1.6198						3—4
i	58.3149	+ 5	70.0790	+17		− 6.3266	−1.6221						2—3
II f	56.9890	+10	71.4039	+12		− 7.6514	−3.0066						2—3
g	56.9550	+10	71.4389	+12		− 7.6860	−3.0078	−3.0080	−2.9876	+0.0001	−0.0011	**−2.9886**	2—3
h	56.9760	+ 9	71.4189	+12		− 7.6655	−3.0083						3
i	56.9290	+ 9	71.4688	+13		− 7.7140	−3.0095						2
III f	58.0395	+ 6	70.3534	+16		− 6.6014	−1.9566						3
g	58.0075	+ 6	70.3854	+16		− 6.6334	−1.9552	−1.9519	−1.9386	+0.0001	−0.0011	**−1.9396**	3
h	58.0340	+ 5	70.3589	+16		− 6.6067	−1.9495						3
i	57.9915	+ 5	70.4039	+17		− 6.6507	−1.9462						3
IV f	69.0955	+13	59.2994	+10		+ 4.4543	+9.0991						2
g	69.0645	+13	59.3294	+11		+ 4.4238	+9.1020	+9.1004	+9.0387	−0.0003	−0.0011	**+9.0373**	2—3
h	69.0800	+13	59.3129	+11		+ 4.4398	+9.0970						2—3
i	69.0405	+13	59.3544	+12		+ 4.3992	+9.1037						2

Scheinbare Ædiff. wie 51 A.

$f^0_\alpha = 0.99322$*). $\quad -i^0_\alpha = +0.00062$

$f_\alpha = \mathbf{0.99294}$ $\quad -i_\alpha = \mathbf{+0.00061}$ $\quad \measuredangle\ i_\alpha = -2'.1$

$Refr. = +\quad 4$

$Tx_♃ = -\quad 51$

$f'_\alpha = \mathbf{0.99322}$ $\quad J_\alpha = \mathbf{+0.00014}$

$\alpha_♃ = 8^h\ 10^m.5$

*) Siehe Anmerkung zu 51 A.

1896. Februar 26.

...Reihe. Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 51 A.**							
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
67.2475	+ 9	61.1480	+11		+ 3.5784				
66.8815	+ 9	61.5332	+10		+ 3.2028	+ 3.2003			
66.4962	+ 9	61.9140	+10		+ 2.8198				
65.4734	+17	62.9255	+10		+ 1.8030				
65.1100	+17	63.3014	+10		+ 1.4334	+ 1.4356			
64.7396	+17	63.6571	+ 9		+ 1.0704				
63.6831	+ 9	64.7176	+17		+ 0.0110				
63.3204	+10	65.0880	+17		— 0.3554	— 0.3601			
62.9345	+10	65.4628	+17		— 0.7358				
61.9020	+10	66.4982	+ 9		— 1.7694				
61.5392	+10	66.8745	+ 9		— 2.1389	— 2.1369			
61.1715	+11	67.2340	+ 9		— 2.5024				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.2680	+10	61.1320	+11		+ 3.5966	+0.3963						
65.5006	+12	62.8960	+10		+ 1.8311	+0.3955	+0.3968	+0'.3942	+0'.0011	—0'.0010	+0'.0001	**+0'.3944**
63.7051	+10	64.6911	+17		+ 0.0354	+0.3955						
61.9325	+11	66.4634	+11		— 1.7368	+0.4001						
67.6211	+21	60.7735	+12		+ 3.9530	+0.7527						
65.8580	+13	62.5392	+11		+ 2.1882	+0.7526	+0.7541	+0.7491	+0.0021	—0.0020	+0.0001	**+0.7493**
64.0640	+11	64.3339	+10		+ 0.3938	+0.7539						
62.2904	+12	66.1070	+12		— 1.3796	+0.7573						
67.4324	+10	60.9650	+11		+ 3.7624	+0.5621						
65.6656	+12	62.7301	+10		+ 1.9966	+0.5610	+0.5597	+0.5560	+0.0014	—0.0012	+0.0001	**+0.5563**
63.8655	+10	64.5292	+17		+ 0.1965	+0.5566						
62.0900	+11	66.3029	+11		— 1.5778	+0.5591						
64.6751	+17	63.7246	+ 9		+ 1.0044	—2.1959						
62.9065	+10	65.4914	+17		— 0.7641	—2.1997	—2.1998	—2.1853	—0.0065	+0.0011	+0.0001	**—2.1906**
61.1085	+11	67.2884	+ 9		— 2.5612	—2.2011						
59.3319	+11	69.0680	+14		— 4.3395	—2.2026						

Scheinbare Decldiff. wie 51 A.

$f^\circ_\delta = 0.99339$ $i^\circ_\delta = -0.00082$

$f_\delta = \mathbf{0.99291}$ $i_\delta = \mathbf{-0.00083}$ $\angle\, i_\delta = -2'.9$

$f'_\delta = \mathbf{0.99341}$ $J_\delta = \mathbf{-0.00072}$

$\delta_♃ = +20^\circ\ 48'.3$

52ª A. 1896. März 8.

ÆR 13

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**63.7259**		**64.6592**							
S	63.7251	+8	64.6576	+16	0	0.0000				3
M	Durch e	in J	upitersbild	verd	eckt.					
N	24.5596	+26	103.8244	+6	+17	−39.1630				2—3
Q	77.3628	+21	51.0206	+20	−4	+13.6374		$8^h\ 31^m\ 37^s$		3
R	27.0522	+34	101.3272	+13	+22	−36.6676				2
V	63.4607	+18	64.9160	+22	0	−0.2612				1—2
W	64.5073	+28	63.8697	+24	0	+0.7856				3—4
♃ a_w	68.0780	+19	60.3179	+14		+4.3470				
a_c	68.4668	+19	59.9295	+14		+4.7356	+4.7380	8 13 14		2
a_o	68.8595	+14	59.5302	+14		+5.1313				
♃ b_w	08.0965	+19	60.3048	+14		+4.3628				
b_c	68.4708	+19	59.9280	+14		+4.7383	+4.7420	14 32		1—2
b_o	68.8555	+14	59.5392	+14		+5.1248			$8^h\ 15^m\ 18^s$	
♃ d_w	68.0690	+18	60.3294	+15		+4.3366				
d_c	68.4508	+18	59.9610	+15		+4.7117	+4.7164	16 12		2
d_o	68.8310	+13	59.5626	+15		+5.1008				
♃ e_w	68.0640	+18	60.3329	+15		+4.3324				
e_c	68.4464	+18	59.9540	+15		+4.7130	+4.7117	17 13		2
e_o	68.8206	+13	59.5746	+15		+5.0896				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	66.6571	+9	61.7346	+9		+2.9279	−1.8101						3
b	66.6651	+8	61.7286	+9		+2.9348	−1.8072	−1.8044	−1'.7919	+0'.0010	−0'.0017	**−1'.7926**	2—3
d	66.6441	+8	61.7451	+9		+2.9161	−1.8003						3 unterexponie
e	66.6381	+8	61.7476	+10		+2.9118	−1.7999						Schimmer.
II a	65.1700	+17	63.2170	+9		+1.4436	−3.2944						3
b	65.1780	+17	63.2155	+9		+1.4483	−3.2937	−3.2950	−3.2722	+0.0019	−0.0017	**−3.2720**	2—3
d	65.1495	+16	63.2429	+9		+1.4203	−3.2961						3—4 unterexp.
e	65.1440	+16	63.2459	+10		+1.4160	−3.2957						3 unterexponie
III a	69.4224	+14	58.9625	+10		+5.6968	+0.9588						3
b	69.4219	+13	58.9665	+10		+5.6945	+0.9525	+0.9504	+0.9438	−0.0007	−0.0017	**+0.9414**	3
d	69.3929	+13	58.9940	+11		+5.6662	+0.9498						3—4
e	69.3784	+13	59.0080	+11		+5.6520	+0.9403						3
IV	Bei der	Mes	sung über	sehe	n.								

Scheinbare ÆRdiff: N— Centrum $=-41'.4093$
Q— » $=+13.3270$
R— » $=-38.7087$
V— » $=-0.3187$
W— » $=+0.8860$

$f^\circ_\alpha = 0.99308$ $\quad -i^\circ_\alpha = +0.00180$

$f_\alpha =$ **0.99280** $\quad -i_\alpha =$ **+0.00180** $\quad ∡\ i_\alpha = -6'.2$

$Refr. = 0$

$Tx_♃ = +51$

$f'_\alpha =$ **0.99308** $\quad J_\alpha =$ **+0.00231**

$\alpha_♃ = 8^h\ 7^m.4$

1896. März 8.

eihe. **Decl.**

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.0728		**64.3166**							
64.0720	+ 8	64.3158	+ 8	0	0.0000		0.0000	0.0000	Bilder 4. Die Luft wird dunstig.
Durch e	in J	upitersbild	verd	eckt.					
67.5541	+35	60.8319	+10	− 1	+ 3.4842		− 0.0805	+ 3.4037	
39.5086	+30	88.8769	− 2	+ 6	−24.5600		− 0.0094	−24.5694	
39.4280	+40	88.9470	+ 9	+15	−24.6346		− 0.0689	−24.7035	
44.6741	+19	83.7078	− 7	+ 2	−19.3934		0.0000	−19.3934	
95.0171	− 2	33.3712	+19	− 8	+30.9430		0.0000	+30.9430	
67.5976	+18	60.8040	+11		+ 3.5190				
67.2365	+ 8	61.1790	+11		+ 3.1505	+ 3.1511			
66.8620	+ 8	61.5378	+11		+ 2.7838				
65.9720	+10	62.4289	+10		+ 1.8934				
65.6171	+10	62.7900	+10		+ 1.5354	+ 1.5370			
65.2590	+16	63.1390	+10		+ 1.1822				
62.5831	+ 9	65.8240	+11		− 1.4986				
62.2349	+ 9	66.1810	+11		− 1.8512	− 1.8543			
61.8660	+ 9	66.5358	+11		− 2.2131				
60.8580	+10	67.5416	+19		− 3.2204				
60.5076	+10	67.9045	+19		− 3.5770	− 3.5760			
60.1460	+14	68.2504	+19		− 3.9306				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.6801	+18	60.7161	+11		+ 3.6042	+0.4531						
66.0660	+10	62.3289	+10		+ 1.9904	+0.4534	+0.4523	+0.′4492	+0.′0034	+0.′0007	+0.′0001	**+0.4534**
62.6711	+ 9	65.7256	+17		− 1.4058	+0.4485						
60.9540	+10	67.4414	+ 9		− 3.1218	+0.4542						
68.0570	+18	60.3359	+15		+ 3.9826	+0.8315						
66.4419	+10	61.9550	+10		+ 2.3654	+0.8284	+0.8298	+0.8242	+0.0062	+0.0011	+0.0001	**+0.′8316**
63.0515	+ 9	65.3474	+17		− 1.0264	+0.8279						
61.3319	+10	67.0650	+ 9		− 2.7446	+0.8314						
66.9250	+ 9	61.4678	+12		+ 2.8504	−0.3007						
65.3094	+17	63.0850	+11		+ 1.2344	−0.3026	−0.3002	−0.2982	−0.0018	−0.0006	+0.0001	**−0.3005**
61.9200	+10	66.4738	+12		− 2.1551	−0.3008						
60.2010	+15	68.1895	+20		− 3.8726	−0.2966						
Bei der	Mes	sung überse	hen.									

Scheinbare Decldiff.: N— Centrum $= + 3.'4510$ $\quad f^\circ_\delta = 0.99327 \quad i^\circ_\delta = -0.00188$

Q— » $= -24.4325$

R— » $= -24.4680$ $\quad f_\delta = \mathbf{0.99279} \quad i_\delta = \mathbf{-0.00188} \quad \measuredangle\, i_\delta = -\ 6.'5$

V— » $= -19.2648$

W— » $= +30.7327$ $\quad f'_\delta = \mathbf{0.99325} \quad J_\delta = \mathbf{-0.00187}$

$\delta_♃ = +20^\circ\ 57.'9$

52ª B. 1896. März 8.

Æ **131.**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne		**wie 52ª A.**							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
♃ f_w	58.6151	+11	69.7760	+16		— 5.1140				
f_c	59.0380	+11	69.3749	+13		— 4.7019	— 4.6990	9^h 38^m 57^s		2—3
f_o	59.4499	+11	68.9450	+13		— 4.2810				
♃ g_w	58.5751	+11	69.8195	+16		— 5.1558				
g_c	58.9960	+11	69.4139	+13		— 4.7424	— 4.7445	40 9		1—2
g_o	59.3954	+11	68.9990	+13		— 4.3352				
♃ h_w	58.5882	+10	69.8080	+16		— 5.1436			9^h 40^m 34^s	
h_c	58.9940	+10	69.4129	+13		— 4.7430	— 4.7403	41 7		1—2
h_o	59.4004	+10	69.0020	+13		— 4.3343				
♃ i_w	58.5911	+10	69.8105	+16		— 5.1434				
i_c	59.0065	+10	69.4079	+13		— 4.7342	— 4.7365	42 2		2—3
i_o	59.4004	+10	68.9975	+13		— 4.3320				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I f	57.4604	+11	70.9250	+12		— 6.2657	—1.5667						3
g	57.4209	+10	70.9690	+12		— 6.3075	—1.5630	—1.5608	—1′.5500	+0′.0005	—0′.0017	**—1′.5512**	3—4
h	57.4294	+10	70.9590	+12		— 6.2982	—1.5579						3 unterexponiert.
i	57.4359	+ 9	70.9530	+12		— 6.2920	—1.5555						3 unterexponiert.
II f	55.7690	+ 1	72.6201	+14		— 7.9596	—3.2606						2—3
g	55.7231	0	72.6631	+13		— 8.0040	—3.2595	—3.2604	—3.2378	+0.0011	—0.0017	**—3.2384**	2
h	55.7246	0	72.6621	+13		— 8.0028	—3.2625						3 unterexponiert.
i	55.7336	— 1	72.6561	+13		— 7.9953	—3.2588						3
III f	59.7101	+15	68.6751	+13		— 4.0158	+0.6832						2
g	59.6611	+15	68.7196	+13		— 4.0625	+0.6820	+0.6800	+0.6753	—0.0003	—0.0017	**+0.6733**	2
h	59.6641	+14	68.7211	+13		— 4.0618	+0.6785						2—3
i	59.6651	+14	68.7191	+13		— 4.0603	+0.6762						3—4
IV	Bei der	Mes	sung über	sehen.									

Scheinbare Ædiff. wie 52ª A.

$f^\circ_\alpha = 0.99308$ $\quad -i^\circ_\alpha = +0.00180$

$f_\alpha = \mathbf{0.99280}$ $\quad -i_\alpha = \mathbf{+0.00180}$ $\quad ♃\ i_\alpha = -\ 6'.2$

$Refr. = +\ 4$

$Tx_♃ = -\ 51$

$f'_\alpha = \mathbf{0.99310}$ $\quad J_\alpha = \mathbf{+0.00138}$

$\alpha_♃ = 8^h\ 7^m.4$

1896. März 8.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne wie 52ª A.									
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm 69.1985	+15	mm 59.2040	+10		mm + 5.1194	mm			Bilder 3.
68.8110	+15	59.5966	+14		+ 4.7292	+ 4.7275			
68.4119	+20	59.9885	+14		+ 4.3339				
67.5308	+10	60.8680	+10		+ 3.4533				
67.1585	+10	61.2580	+10		+ 3.0722	+ 3.0702			
66.7635	+10	61.6371	+ 9		+ 2.6852				
65.7510	+12	62.6506	+ 9		+ 1.6722				
65.3769	+18	63.0415	+ 9		+ 1.2900	+ 1.2907			
64.9870	+18	63.4119	+ 9		+ 0.9099				
64.0540	+10	64.3449	+ 8		— 0.0234				
63.6691	+10	64.7350	+16		— 0.4114	— 0.4060			
63.2969	+10	65.1065	+16		— 0.7832				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.2055	+15	59.1855	+11		+ 5.1322	+0.4047						
67.5482	+21	60.8475	+11		+ 3.4728	+0.4026	+0.4017	+0.′3990	+0.′0028	—0.′0010	+0.′0001	**+0.′4009**
65.7630	+13	62.6311	+10		+ 1.6880	+0.3973						
64.0745	+11	64.3259	+ 9		— 0.0037	+0.4023						
69.6331	+16	58.7540	+13		+ 5.5616	+0.8341						
67.9755	+21	60.4099	+17		+ 3.9049	+0.8347	+0.8332	+0.8276	+0.0058	—0.0023	+0.0001	**+0.8312**
66.1905	+13	62.1965	+12		+ 2.1190	+0.8283						
64.5042	+19	63.8890	+11		+ 0.4299	+0.8359						
68.5621	+14	59.8225	+14		+ 4.4917	—0.2358						
66.9120	+ 9	61.4748	+10		+ 2.8404	—0.2298	—0.2331	—0.2315	—0.0012	+0.0003	+0.0001	**—0.2323**
65.1270	+17	63.2599	+ 9		+ 1.0558	—0.2349						
63.4349	+10	64.9540	+16		— 0.6380	—0.2320						
Bei der Messung übersehen.												

Scheinbare Decldiff. wie 52ª A.

$f^0{}_\delta = 0.99327$ $i^0{}_\delta = -0.00188$

$f_\delta = \mathbf{0.99279}$ $i_\delta = \mathbf{-0.00188}$ $\sphericalangle\, i_\delta = -6.'5$

$f'_\delta = \mathbf{0.99328}$ $J_\delta = \mathbf{-0.00179}$

$\delta_♃ = +20^\circ\ 57.'9$

52b A. 1896. März 9.

Æ 13

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	64.3334		64.0468							
M	64.3326	+8	64.0460	+8	0	0.0000				2
N	20.1966	+23	108.1853	+5	+25	−44.1342				2 etwas ellipt. i
Q	72.9526	+27	55.4345	+11	−2	+8.6214		10^h 25^m 5^s		2
R	22.6392	+38	105.7332	+17	+32	−41.6860				2
V	59.0541	+21	69.3203	+25	+1	−5.2765				1—2
W	60.1918	+25	68.1908	+32	+1	−4.1430				2
♃ a_w	68.6421	+14	59.7600	+14		+4.2978				
a_c	69.0710	+14	59.3359	+10		+4.7244	+4.7234	10 12 45		2—3
a_o	69.4924	+14	58.9100	+10		+5.1481				
♃ b_w	68.6186	+14	59.7820	+14		+4.2750				
b_c	69.0340	+14	59.3689	+10		+4.6894	+4.6887	14 7		2—3
b_o	69.4444	+14	58.9550	+10		+5.1016			10^h 15^m 13^s	
♃ d_w	68.6486	+13	59.7580	+15		+4.3019				
d_c	69.0445	+13	59.3584	+11		+4.6998	+4.7016	16 20		2—3
d_o	69.4469	+13	58.9540	+11		+5.1032				
♃ e_w	68.6411	+13	59.7600	+15		+4.2972				
e_c	69.0530	+13	59.3574	+11		+4.7046	+4.7028	17 40		2—3
e_o	69.4509	+13	58.9515	+11		+5.1065				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
						mm	mm					
I a	69.8740	+17	58.5202	+10	+5.5340	+0.8106						3
b	69.8300	+17	58.5616	+10	+5.4912	+0.8025	+0.7989	+0′.7934	−0′.0002	−0′.0017	+0′.7915	3
d	69.8355	+16	58.5541	+11	+5.4976	+0.7960						3
e	69.8290	+16	58.5641	+11	+5.4894	+0.7866						3
II a	70.2335	+17	58.1550	+5	+5.8966	+1.1732						3
b	70.2030	+16	58.1905	+5	+5.8635	+1.1748	+1.1806	+1.1725	−0.0003	−0.0017	+1.1705	3
d	70.2260	+16	58.1670	+6	+5.8867	+1.1851						3
e	70.2290	+16	58.1590	+6	+5.8922	+1.1894						3
III a	65.4339	+17	62.9520	+9	+1.0980	−3.6254						3
b	65.3954	+17	62.9920	+9	+1.0588	−3.6299	−3.6313	−3.6064	+0.0009	−0.0017	−3.6072	3
d	65.4094	+16	62.9835	+10	+1.0700	−3.6316						3
e	65.4029	+16	62.9880	+10	+1.0644	−3.6384						3
IV a	65.2584	+17	63.1290	+9	+0.9218	−3.8016						4
b	65.2270	+17	63.1620	+9	+0.8896	−3.7991	−3.7960	−3.7700	+0.0011	−0.0017	−3.7706	3
d	65.2480	+16	63.1420	+10	+0.9100	−3.7916						3—4
e	65.2500	+16	63.1420	+10	+0.9110	−3.7918						unterexponiert

Scheinbare Ædiff: N— Centrum = −46′.6793
Q— » = +9.0570
R— » = −43.9787
V— » = −5.5887
W— » = −4.3842
»

$f^\circ_\alpha = 0.99312$ $\quad -i^\circ_\alpha = +0.00060$

$f_\alpha = \mathbf{0.99281}$ $\quad -i_\alpha = \mathbf{+0.00055}$ $\quad \measuredangle\, i_\alpha = -1'.9$

Refr. = + 6

$Tx_♃$ = + 52

$f'_\alpha = \mathbf{0.99313}$ $\quad J_\alpha = \mathbf{+0.00113}$

$\alpha_♃ = 8^h\ 7^m.1$

1896. März 9.

Reihe. Decl.

…ject.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
Ctr.	**63.8748**		**64.5104**							
M	63.8740	+ 8	64.5088	+16	0	0.0000		0.0000	0.0000	
N	64.4095	+24	63.9812	+25	0	+ 0.5319		− 0.1022	+ 0.4297	
Q	36.2665	+24	92.1243	− 3	+ 6	−27.6092		− 0.0038	−27.6130	Bilder 2—3.
R	36.2792	+37	92.0996	+11	+20	−27.5891		− 0.0890	−27.6781	
V	41.4542	+26	86.9239	− 3	+ 3	−22.4153		− 0.0014	−22.4167	
W	91.7947	− 5	36.5953	+22	− 7	+27.9154		− 0.0009	+27.9145	
a_n	67.4149	+ 9	60.9920	+12		+ 3.5291				Bilder 3.
a_c	67.0185	+ 9	61.3849	+12		+ 3.1344	+ 3.1332			
a_s	66.6211	+ 9	61.7840	+11		+ 2.7362				
b_n	65.6661	+11	62.7371	+11		+ 1.7823				
b_c	65.2769	+17	63.1340	+11		+ 1.3896	+ 1.3914			
b_s	64.8880	+17	63.5198	+11		+ 1.0022				
d_n	62.2330	+10	66.1735	+12		− 1.6526				
d_c	61.8540	+10	66.5501	+10		− 2.0302	− 2.0291			
d_s	61.4832	+10	66.9280	+10		− 2.4046				
e_n	60.5861	+11	67.8235	+20		− 3.3014				
e_c	60.2055	+15	68.1995	+20		− 3.6794	− 3.6782			
e_s	59.8290	+15	68.5718	+20		− 4.0538				

Trabant — Jupiterscentrum.

…ject.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta\,(y_t-y_{♃})$	$J_\delta\,(x_t-x_{♃})$	$-(x_t^2-x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
…I a	66.7900	+ 9	61.6001	+11		+ 2.9126	−0.2206						
b	65.0530	+17	63.3429	+11		+ 1.1732	−0.2182	−0.2172	−0'.2158	−0'.0004	−0'.0005	+0'.0001	**−0'.2166**
d	61.6371	+10	66.7600	+10		− 2.2436	−0.2145						
e	59.9860	+15	68.4089	+20		− 3.8939	−0.2157						
…I a	66.7680	+ 9	61.6356	+11		+ 2.8839	−0.2493						
b	65.0285	+17	63.3689	+11		+ 1.1479	−0.2435	−0.2464	−0.2448	−0.0006	−0.0007	+0.0001	**−0.2460**
d	61.6081	+10	66.7880	+10		− 2.2722	−0.2431						
e	59.9510	+15	68.4419	+20		− 3.9279	−0.2497						
…I a	67.8555	+18	60.5342	+11		+ 3.9788	+0.8456						
b	66.1190	+10	62.2770	+10		+ 2.2388	+0.8474	+0.8470	+0.8414	+0.0018	+0.0011	+0.0001	**+0.8444**
d	62.6986	+ 9	65.6936	+11		− 1.1798	+0.8493						
e	61.0460	+10	67.3469	+ 9		− 2.8326	+0.8456						
… a	68.0270	+18	60.3639	+15		+ 4.1495	+1.0163						
b	66.2869	+10	62.1090	+10		+ 2.4068	+1.0154	+1.0167	+1.0100	+0.0019	+0.0012	+0.0001	**+1.0132**
d	62.8710	+ 9	65.5232	+11		− 1.0084	+1.0207						
e	61.2190	+10	67.1825	+ 9		− 2.6639	+1.0143						

Scheinbare Decldiff: N—Centrum $= +$ 0'.4473 $f^\circ_\delta = 0.99338$ $i^\circ_\delta = -0.00052$

Q— » $= -27.4362$

R— » $= -27.4717$ f_δ $=$ **0.99285** i_δ $=$ **−0.00064** $\measuredangle\, i_\delta = -$ 2'.2

V— » $= -22.2685$

W— » $= +27.7290$ f'_δ $=$ **0.99337** J_δ $=$ **−0.00050**

$\delta_{♃} = +20°$ 58'.6

52ᵇ B. 1896. März 9.

Æ 133.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 52ᵇ A.									
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
♃ f_w	59.2055	+11	69.2000	+14		− 5.1407				
f_c	59.6126	+15	68.7850	+14		− 4.7294	− 4.7281	$10^h\ 32^m\ 5^s$		3
f_o	60.0290	+15	68.3704	+19		− 4.3142				
♃ h_w	59.2210	+11	69.1850	+13		− 5.1254				
h_c	59.6246	+15	68.7750	+13		− 4.7184	− 4.7198	34 27		2—3
h_o	60.0300	+15	68.3744	+18		− 4.3156			$10^h\ 34^m\ 40^s$	
♃ i_w	59.2260	+10	69.1780	+13		− 5.1194				
i_c	59.6011	+14	68.7890	+13		− 4.7372	− 4.7296	35 30		1—2
i_o	60.0105	+14	68.3879	+18		− 4.3322				
♃ k_w	59.2210	+10	69.1850	+14		− 5.1255				
k_c	59.6136	+14	68.7910	+14		− 4.7320	− 4.7307	36 40		2
k_o	60.0100	+14	68.3919	+19		− 4.3345				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	60.3314	+15	68.0550	+19		− 4.0053	+0.7228						1—2
h	60.3289	+15	68.0610	+18		− 4.0095	+0.7103	+0.7094	+0′.7045	0′.0000	−0′.0017	**+0′.7028**	2—3
i	60.3134	+14	68.0730	+18		− 4.0233	+0.7063						2
k	60.3064	+14	68.0840	+19		− 4.0324	+0.6983						2
II f	60.8540	+11	67.5282	+18		− 3.4808	+1.2473						2—3
h	60.8715	+11	67.5172	+18		− 3.4665	+1.2533	+1.2558	+1.2472	0.0000	−0.0017	**+1.2455**	2—3
i	60.8670	+10	67.5212	+19		− 3.4708	+1.2588						2—3
k	60.8705	+10	67.5172	+19		− 3.4671	+1.2636						2
III f	55.9445	+ 1	72.4429	+12		− 8.3930	−3.6649						2—3
h	55.9470	0	72.4399	+11		− 8.3903	−3.6705	−3.6710	−3.6458	+0.0001	−0.0017	**−3.6474**	2—3
i	55.9375	0	72.4539	+11		− 8.4020	−3.6724						2
k	55.9320	− 1	72.4579	+12		− 8.4069	−3.6762						2—3
IV f	55.8565	+ 1	70.5361	+13		− 8.4837	−3.7556						3
h	55.8690	0	70.5231	+12		− 8.4710	−3.7512	−3.7503	−3.7246	+0.0001	−0.0017	**−3.7262**	3—4
i	55.8635	− 1	70.5311	+12		− 8.4778	−3.7482						2—3
k	55.8655	− 1	70.5311	+13		− 8.4768	−3.7461						3

Scheinbare Ædiff. wie 52ᵇ A.

$f^\circ_\alpha = 0.99312$ $\quad -i^\circ_\alpha = +0.00060$

$f_\alpha = \mathbf{0.99281}$ $\quad -i_\alpha = \mathbf{+0.00055}$ $\quad ♃\ i_\alpha = -\ 1'.9$

$Refr. = +\ 7$

$Tx_♃ = -\ 52$

$f'_\alpha = \mathbf{0.99315}$ $\quad J_\alpha = \mathbf{+0.00010}$

$\alpha_♃ = 8^h\ 7^m.1$

1896. März 9.

Reihe. Decl.

Object.	Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	Anhaltsterne wie 52^b A.									
		mm/10000		mm/10000	mm/10000					
	mm		mm			mm	mm			
♃ n	68.9690	+14	59.4292	+15		+ 5.0876				Bilder 3—4.
♃ c	68.5841	+14	59.8195	+15		+ 4.7000	+ 4.6986			
♃ s	68.1945	+19	60.2140	+15		+ 4.3082				
♃ n	65.4839	+17	62.9175	+10		+ 1.6014				
♃ c	65.1000	+17	63.3114	+10		+ 1.2124	+ 1.2131			
♃ s	64.7080	+17	63.6936	+ 9		+ 0.8254				
♃ n	63.7605	+ 9	64.6426	+17		— 0.1236				
♃ c	63.3959	+10	65.0085	+17		— 0.4888	— 0.4911			
♃ s	63.0245	+10	65.3809	+17		— 0.8608				
♃ n	62.0130	+10	66.3849	+11		— 1.8682				
♃ c	61.6401	+10	66.7660	+ 9		— 2.2451	— 2.2420			
♃ s	61.2739	+11	67.1350	+ 9		— 2.6126				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
f	68.3774	+19	60.0110	+14		+ 4.5012	—0.1974	—0.1942	—0.′1929	—0.′0003	+0.′0003	+0.′0001	**—0.′1928**
h	64.8950	+17	63.4976	+ 8		+ 1.0170	—0.1961						
i	63.1945	+10	65.1990	+16		— 0.6848	—0.1937						
k	61.4474	+11	66.9460	+ 8		— 2.4314	—0.1894						
f	68.3129	+19	60.0870	+14		+ 4.4310	—0.2676	—0.2661	—0.2643	—0.0006	+0.0005	+0.0001	**—0.2643**
h	64.8240	+17	63.5671	+ 8		+ 0.9467	—0.2664						
i	63.1210	+10	65.2709	+16		— 0.7574	—0.2663						
k	61.3719	+11	67.0200	+ 8		— 2.5061	—0.2641						
f	69.4389	+16	58.9510	+13		+ 5.5619	+0.8633	+0.8649	+0.8592	+0.0017	—0.0027	+0.0001	**+0.8583**
h	65.9530	+13	62.4349	+12		+ 2.0769	+0.8638						
i	64.2500	+11	64.1400	+11		+ 0.3728	+0.8639						
k	62.5046	+12	65.8870	+13		— 1.3734	+0.8686						
f	69.5876	+19	58.8045	+13		+ 5.7096	+1.0110	+1.0120	+1.0053	+0.0017	—0.0028	+0.0001	**+1.0043**
h	66.1025	+13	62.2919	+12		+ 2.2232	+1.0101						
i	64.4004	+11	63.9950	+11		+ 0.5205	+1.0116						
k	62.6551	+12	65.7436	+13		— 1.2265	+1.0155						

Scheinbare Decldiff. wie 52^b A.

$f^\circ_\delta = 0.99338$ $\quad i^\circ_\delta = -0.00052$

$f_\delta = \mathbf{0.99285}$ $\quad i_\delta = \mathbf{-0.00064}$ $\quad \angle\, i_\delta = -2.′2$

$f'_\delta = \mathbf{0.99339}$ $\quad J_\delta = \mathbf{-0.00048}$

$\delta_♃ = +20° \; 58.′6$

53 A. 1896. März 11.

Æ **134**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
Ctr.	**64.5191** mm	mm/10000	**63.8593** mm	mm/10000	mm/10000	mm	mm			
T	64.5175	+16	63.8585	+ 8	0	0.0000				1—2
M	68.2591	+22	60.1161	+17	0	+ 3.7418				1—2
N	24.1250	+29	104.2561	+10	+19	—40.3936				1—2
Q	76.8857	+17	51.4984	+17	— 1	+12.3636		$9^h\ 37^m\ 55^s$		1—2
R	26.5817	+30	101.7974	+10	+20	—37.9348				1—2
V	62.9934	+14	65.3836	+21	0	— 1.5254				1—2
W	64.1115	+25	64.2710	+24	0	— 0.4096				1—2
♃ a_w	68.8080	+14	59.6070	+14		+ 4.2706				
a_c	69.2155	+14	59.1920	+10		+ 4.6820	+ 4.6849	9 25 10		2
a_o	69.6340	+17	58.7710	+10		+ 5.1020				
♃ c_w	68.8260	+13	59.5720	+14		+ 4.2970				
c_c	69.2260	+13	59.1835	+10		+ 4.6915	+ 4.6923	28 45		1
c_o	69.6235	+16	58.7875	+10		+ 5.0884			$9^h\ 28^m\ 49^s$	
♃ d_w	68.8580	+13	59.5400	+15		+ 4.3290				
d_c	69.2580	+13	59.1490	+11		+ 4.7247	+ 4.7283	30 5		1
d_o	69.6650	+16	58.7435	+11		+ 5.1311				
♃ e_w	68.7710	+14	59.6290	+15		+ 4.2410				
e_c	69.1825	+14	59.2320	+11		+ 4.6455	+ 4.6452	31 15		1—2
e_o	69.5855	+17	58.8280	+11		+ 5.0492				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	68.6460	+14	59.7400	+14		+ 4.1181	—0.5668						1—2
c	68.6370	+13	59.7525	+14		+ 4.1123	—0.5800	—0.5816	—0'.5777	+0'.0001	—0'.0019	**—0'.5795**	2
d	68.6640	+13	59.7210	+15		+ 4.1415	—0.5868						2
e	68.5755	+13	59.8110	+15		+ 4.0522	—0.5930						3
II a	67.0550	+ 9	61.3295	+10		+ 2.5328	—2.1521						2
c	67.0510	+ 8	61.3340	+10		+ 2.5285	—2.1638	—2.1636	—2.1489	+0.0005	—0.0019	**—2.1503**	1—2
d	67.0860	+ 8	61.3030	+11		+ 2.5614	—2.1669						2—3
e	66.9965	+ 8	61.3895	+11		+ 2.4734	—2.1718						2
III a	66.0985	+11	62.2865	+ 9		+ 1.5762	—3.1087						2
c	66.1140	+10	62.2695	+ 9		+ 1.5924	—3.0999	—3.0999	—3.0789	+0.0009	—0.0019	**—3.0799**	1—2
d	66.1570	+10	62.2305	+10		+ 1.6334	—3.0949						2
e	66.0730	+10	62.3150	+10		+ 1.5491	—3.0961						1—2
IV a	71.9690	+12	56.4190	— 1		+ 7.4458	+2.7609						2
c	71.9855	+11	56.4060	— 1		+ 7.4604	+2.7681	+2.7678	+2.7491	—0.0006	—0.0019	**+2.7466**	1—2
d	72.0250	+11	56.3650	0		+ 7.5006	+2.7723						2
e	71.9410	+12	56.4520	0		+ 7.4152	+2.7700						2

Scheinbare Ædiff.: M—Centrum = + 3'.9700 $f^\circ_\alpha = 0.99320$ $-i^\circ_\alpha = +0.00056$
N— » = —42.7093
Q— » = +13.0272 f_α = **0.99291** $-i_\alpha$ = **+0.00053** ∡ i_α = — 1'.8
R— » = —40.0087 *Refr.* = +0.00003
V— » = — 1.6187 $Tx_♃$ = + 52
W— = — 0.4140 f'_α = **0.99320** J_α = **+0.00108**

$\alpha_♃ = 8^h\ 6^m.8$

1896. März 11.

Reihe. Decl.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.6793		**64.7011**							
63.6785	+ 8	64.6995	+16	0	0.0000		0.0000	0.0000	
74.2491	+12	54.1283	+ 4	0	+10.5717		— 0.0007	+10.5710	
74.7689	+27	53.6179	+19	— 6	+11.0862		— 0.0856	+11.0006	Bilder 2—3.
46.6520	+13	81.7352	+ 6	+ 2	—17.0302		— 0.0078	—17.0380	
46.6450	+24	81.7339	+17	+ 9	—17.0323		— 0.0737	—17.1060	
51.8359	+12	76.5429	+ 9	0	—11.8424		— 0.0001	—11.8425	
102.1706	+ 4	26.2118	+24	—16	+38.4877		0.0000	+38.4877	
67.2005	+ 9	61.2080	+12		+ 3.5070				Bilder 3.
66.8120	+ 9	61.6000	+11		+ 3.1168	+ 3.1182			
66.4260	+11	61.9860	+11		+ 2.7309				
63.7735	+ 9	64.6300	+18		+ 0.0822				
63.4045	+10	65.0050	+18		— 0.2898	— 0.2889			
63.0335	+10	65.3730	+18		— 0.6592				
62.0060	+10	66.4120	+10		— 1.6921				
61.6310	+10	66.7750	+10		— 2.0611	— 2.0627			
61.2570	+11	67.1490	+10		— 2.4350				
60.3190	+15	68.0920	+20		— 3.3758				
59.9400	+15	68.4700	+20		— 3.7544	— 3.7533			
59.5650	+15	68.8460	+15		— 4.1296				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.9230	+ 9	61.4700	+11		+ 3.2373	+0.1191						
63.5200	+ 9	64.8730	+17		— 0.1660	+0.1229	+0.1224	+0.′1216	+0.′0003	+0.′0003	+0.′0001	**+0.′1223**
61.7450	+10	66.6480	+ 9		— 1.9406	+0.1221						
60.0580	+15	68.3350	+19		— 3.6278	+0.1255						
67.3040	+ 8	61.0860	+11		+ 3.6198	+0.5016						
63.8995	+ 8	64.4520	+ 9		+ 0.2146	+0.5035	+0.5032	+0.4999	+0.0012	+0.0008	+0.0001	**+0.5020**
62.1255	+ 9	66.2660	+11		— 1.5594	+0.5033						
60.4360	+14	67.9555	+19		— 3.2491	+0.5042						
67.6220	+18	60.7655	+11		+ 3.9395	+0.8213						
64.2135	+ 8	64.1745	+ 9		+ 0.5304	+0.8193	+0.8185	+0.8131	+0.0017	+0.0011	+0.0001	**+0.8160**
62.4395	+ 9	65.9510	+11		— 1.2450	+0.8177						
60.7460	+10	67.6420	+19		— 2.9376	+0.8157						
66.2635	+12	62.1285	+12		+ 2.5784	—0.5398						
62.8580	+11	65.5390	+13		— 0.8297	—0.5408	—0.5426	—0.5390	—0.0015	—0.0019	+0.0001	**—0.5423**
61.0780	+12	67.3150	+11		— 2.6076	—0.5449						
59.3870	+12	69.0050	+16		— 4.2983	—0.5450						

Scheinbare Decldiff: M—Centrum = +10.′5025 $\quad f^\circ_\delta = 0.99341 \quad i^\circ_\delta = -0.00056$

N— » = +10.9498

Q— » = —16.9337 $\quad f_\delta = \mathbf{0.99292} \quad i_\delta = \mathbf{-0.00062} \quad \sphericalangle\, i_\delta = -2.′1$

R— » = —16.9692

V— » = —11.7660 $\quad f'_\delta = \mathbf{0.99340} \quad J_\delta = \mathbf{-0.00054}$

W— » = +38.2317

$\delta_♃ = +20^\circ\ 59.′7$

53 B. **1896. März 11.**

Ꜳ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne		**wie 53 A.**							
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	59.3910	+11	69.0100	+14		− 5.1396				
f_c	59.8070	+15	68.5975	+14		− 4.7251	− 4.7248	9^h 46^m 20^s		2—3
f_o	60.2250	+15	68.1840	+19		− 4.3096				
♃ g_w	59.4395	+11	68.9645	+13		− 5.0925				
g_c	59.8520	+15	68.5505	+13		− 4.6790	− 4.6817	47 42		1—2
g_o	60.2580	+15	68.1450	+18		− 4.2736			9^h 48^m 17^s	
♃ h_w	59.3910	+10	69.0090	+13		− 5.1390				
h_c	59.7930	+14	68.6140	+13		− 4.7404	− 4.7358	49 2		1—2
h_o	60.2050	+14	68.2010	+18		− 4.3281				
♃ i_w	59.3985	+10	69.0030	+14		− 5.1324				
i_c	59.8055	+14	68.6100	+14		− 4.7322	− 4.7324	50 5		2
i_o	60.1980	+14	68.2030	+19		− 4.3326				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I f	59.1355	+11	69.2510	+14		− 5.3878	−0.6630						2
g	59.1700	+11	69.2210	+13		− 5.3555	−0.6738	−0.6734	−0.′6688	0.′0000	−0.′0019	**−0.′6707**	2—3
h	59.1150	+10	69.2745	+13		− 5.4098	−0.6740						2
i	59.1110	+10	69.2810	+13		− 5.4150	−0.6826						3
II f	57.5890	+ 6	70.7995	+13		− 6.9355	−2.2107						2—3
g	57.6230	+ 6	70.7650	+12		− 6.9012	−2.2195	−2.2182	−2.2032	0.0000	−0.0019	**−2.2051**	2—3
h	57.5700	+ 5	70.8180	+12		− 6.9542	−2.2184						2—3
i	57.5680	+ 5	70.8205	+12		− 6.9565	−2.2241						3
III f	56.7450	+11	71.6395	+12		− 7.7772	−3.0524						2
g	56.7930	+11	71.5970	+11		− 7.7320	−3.0503	−3.0477	−3.0271	0.0000	−0.0019	**−3.0290**	2—3
h	56.7410	+10	71.6420	+11		− 7.7804	−3.0446						2—3
i	56.7460	+ 9	71.6380	+11		− 7.7760	−3.0436						2
IV f	62.6075	+10	65.7815	+10		− 1.9169	+2.8079						3
g	62.1505	+10	65.7395	+10		− 1.8744	+2.8073	+2.8125	+2.7936	0.0000	−0.0019	**+2.7917**	3
h	62.6055	+ 9	65.7845	+10		− 1.9194	+2.8164						2—3
i	62.6125	+ 9	65.7805	+11		− 1.9140	+2.8184						3

Scheinbare Ꜳdiff. wie 53 A.

$f^\circ_\alpha = 0.99320$ $\quad -i^\circ_\alpha = +0.00056$

f_α = **0.99291** $\quad -i_\alpha$ = **+0.00053** $\quad ⊀\ i_\alpha = -\ 1.'8$

Refr. $= +\ \ 4$

$Tx_♃ = -\ \ 52$

f'_α = **0.99322** $\quad J_\alpha$ = **+0.00005**

$\alpha_♃ = 8^h\ 6.^m8$

1896. März 11.

Reihe.

Decl.

P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 53 A.**							
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
68.7940	+14	59.6190	+15		+ 5.0984				
68.4050	+19	60.0050	+15		+ 4.7111	+ 4.7084			
68.0100	+19	60.4010	+15		+ 4.3156				
67.0725	+ 9	61.3390	+11		+ 3.3776				
66.6910	+ 9	61.7220	+10		+ 2.9954	+ 2.9948			
66.3020	+11	62.1010	+10		+ 2.6114				
65.4530	+17	62.9570	+10		+ 1.7592				
65.0670	+17	63.3375	+10		+ 1.3760	+ 1.3765			
64.6845	+17	63.7185	+ 9		+ 0.9943				
63.6610	+ 9	64.7500	+17		— 0.0340				
63.2820	+10	65.1260	+17		— 0.4114	— 0.4075			
62.9100	+10	65.4950	+17		— 0.7770				

Trabant — Jupiterscentrum.

P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.5370	+15	59.8530	+15		+ 4.8529	+0.1445						
66.8285	+10	61.5650	+10		+ 3.1426	+0.1478	+0.1473	+0.′1463	+0.′0003	—0.′0004	+0.0001	**+0.′1463**
65.2060	+18	63.1810	+10		+ 1.5238	+0.1473						
63.4260	+11	64.9630	+17		— 0.2579	+0.1496						
68.9130	+15	59.4760	+11		+ 5.2296	+0.5212						
67.2020	+10	61.1890	+11		+ 3.5174	+0.5226	+0.5222	+0.5188	+0.0011	—0.0015	+0.′0001	**+0.5185**
65.5820	+18	62.8075	+10		+ 1.8986	+0.5221						
63.8000	+10	64.5900	+17		+ 0.1156	+0.5231						
69.2010	+16	59.1830	+12		+ 5.5201	+0.8117						
67.4865	+21	60.8990	+12		+ 3.8051	+0.8103	+0.8100	+0.8047	+0.0016	—0.0022	+0.0001	**+0.8042**
65.8670	+13	62.5210	+11		+ 2.1840	+0.8075						
64.0870	+11	64.3030	+10		+ 0.4030	+0.8105						
67.8355	+19	60.5580	+10		+ 4.1501	—0.5583						
66.1250	+11	62.2685	+ 9		+ 2.4392	—0.5556	—0.5583	—0.5546	—0.0015	+0.0010	+0.0001	**—0.5550**
64.5010	+17	63.8910	+ 8		+ 0.8164	—0.5601						
62.7195	+10	65.6745	+10		— 0.9666	—0.5591						

Scheinbare Decldiff. wie 53 A.

$f^\circ_\delta = 0.99341$ $\quad i^\circ_\delta = -0.00056$

$f_\delta = \mathbf{0.99292}$ $\quad i_\delta = \mathbf{-0.00062}$ $\quad \measuredangle\, i_\delta = -2.'1$

$f'_\delta = \mathbf{0.99342}$ $\quad J_\delta = \mathbf{-0.00052}$

$\delta_♃ = +20^\circ\ 59.'7$

54 A. 1896. März 16.

Æ 136

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	mm 62.9144		mm 65.4768							
S	62.9135	+ 9	65.4751	+17	0	0.0000				3
M	Durch ein Jupitersbild verdeckt.									
N	23.7469	+26	104.6379	+ 7	+17	−39.1616				3
Q	76.5527	+21	51.8337	+21	− 3	+13.6404		$9^h\ 42^m\ 30^s$		3
R	26.2460	+36	102.1308	+14	+20	−36.6581				3
V	62.6504	+18	65.7275	+17	0	− 0.2573				2—3
W	63.6846	+20	64.6945	+31	0	+ 0.7757				2—3
♃ a_w	67.1885	+ 9	61.2150	+10		+ 4.2679				
a_c	67.5985	+19	60.8120	+10		+ 4.6749	+ 4.6733	9 31 50		3—4
a_o	67.9905	+19	60.3990	+14		+ 5.0772				
♃ b_w	67.2055	+ 8	61.1860	+10		+ 4.2908				
b_c	67.5985	+18	60.7990	+10		+ 4.6814	+ 4.6851	32 52	$9^h\ 33^m\ 42^s$	3—4
b_o	68.0035	+18	60.4000	+14		+ 5.0832				
♃ c_w	67.2430	+ 8	61.1630	+11		+ 4.3210				
c_c	67.6440	+18	60.7675	+11		+ 4.7198	+ 4.7197	33 54		3—4
c_o	68.0320	+18	60.3580	+15		+ 5.1184				
♃ e_w	67.2240	+ 8	61.1760	+11		+ 4.3050				
e_c	67.6245	+18	50.7775	+11		+ 4.7050	+ 4.7054	36 10		2—3
e_o	68.0225	+18	60.3730	+15		+ 5.1061				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	69.0950	+14	59.2940	+10		+ 6.1819	+1.5086						2—3
b	69.1080	+13	59.2820	+10		+ 6.1944	+1.5093	+1.5044	+1′.4942	−0′.0010	−0′.0021	**+1′.4911**	2—3
c	69.1335	+13	59.2595	+11		+ 6.2183	+1.4986						2—3
e	69.1190	+13	59.2690	+12		+ 6.2062	+1.5008						3
II	Verfinstert.												
III a	64.7165	+17	63.6730	+ 8		+ 1.8034	−2.8699						3
b	64.7290	+16	63.6610	+ 8		+ 1.8156	−2.8695	−2.8735	−2.8540	+0.0017	−0.0021	**−2.8544**	3—4
c	64.7545	+16	63.6340	+ 9		+ 1.8418	−2.8779						3
e	64.7400	+16	63.6455	+ 9		+ 1.8288	−2.8766						2—3
IV a	74.9170	+11	53.4700	+ 7		+12.0049	+7.3316						3
b	74.9260	+10	53.4555	+ 8		+12.0166	+7.3115	+7.3298	+7.2799	−0.0047	−0.0021	**+7.2731**	3
c	74.9580	+10	53.4300	+ 9		+12.0453	+7.3256						2—3
e	74.9465	+11	53.4390	+ 9		+12.0350	+7.3296						3

Scheinbare Ædiff: N—Centrum $= -41'.4098$
Q— » $= +14.3275$
R— » $= -38.7090$
V— » $= -\ 0.3182$
W— » $= +\ 0.8862$

$f^\circ_\alpha = 0.99318$ $\qquad -i^\circ_\alpha = +0.00207$

$f_\alpha = \mathbf{0.99289}$ $\qquad -i_\alpha = \mathbf{+0.00204}$ $\qquad ∡\ i_\alpha = -7'.0$

Refr. $= +\ 3$

$Tx_♃ = +\ 52$

$f'_\alpha = \mathbf{0.99319}$ $\qquad J\alpha = \mathbf{+0.00259}$

$\alpha_♃ = 8^h\ 6^m.0$

1896. März 16.

Reihe. Decl.

ect.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
r.	**63.5739**		**64.8150**							
	63.5730	+ 9	64.8140	+16	0	0.0000		0.0000	0.0000	
	Durch e	in J	upitersbild	verd	eckt.					
	67.0526	+25	61.3340	+10	− 1	+ 3.4808		− 0.0805	+ 3.4003	
	39.0141	+29	89.3733	− 2	+ 5	−24.5567		− 0.0094	−24.5661	Bilder 4—5
	38.9312	+41	89.4476	+ 9	+12	−24.6346		− 0.0689	−24.7035	
	44.1803	+20	84.2035	− 7	+ 2	−19.3892		0.0000	−19.3892	
	94.5185	− 2	33.8740	+20	− 8	+30.9412		0.0000	+30.9412	
n	67.0830	+ 8	61.3190	+11		+ 3.5027				
c	66.7070	+ 8	61.7045	+10		+ 3.1220	+ 3.1230			
s	66.3225	+10	62.0755	+10		+ 2.7444				
n	65.3445	+16	63.0590	+10		+ 1.7639				
c	64.9795	+16	63.4360	+10		+ 1.3929	+ 1.3939			
s	64.6065	+16	63.7990	+ 9		+ 1.0250				
n	63.5400	+ 9	64.8580	+17		− 0.0386				
c	63.1740	+ 9	65.2290	+17		− 0.4070	− 0.4075			
s	62.8035	+ 9	65.5985	+11		− 0.7768				
n	60.1320	+14	68.2650	+19		− 3.4459				
c	59.7550	+14	68.6480	+14		− 3.8256	− 3.8230			
s	59.3810	+10	69.0170	+14		− 4.1974				

ect.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
a	66.3175	+11	62.0770	+11		+ 2.7411	−0.3819						
b	64.5900	+17	63.8030	+10		+ 1.0147	−0.3792	−0.3795	−0'.3770	−0'.0029	−0'.0010	+0'.0001	**−0'.3808**
c	62.7895	+10	65.6030	+12		− 0.7860	−0.3785						
e	59.3740	+11	69.0180	+15		− 4.2014	−0.3784						
	Verfinst	ert.											
a	67.3390	+ 8	61.0490	+10		+ 3.7658	+0.6428						
b	65.6130	+10	62.7760	+ 9		+ 2.0394	+0.6465	+0.6446	+0.6404	+0.0055	+0.0010	+0.0001	**+0.6470**
c	63.8095	+ 8	64.5805	+16		+ 0.2350	+0.6425						
e	60.3965	+14	67.9910	+18		− 3.1766	+0.6464						
a	64.9015	+20	63.4940	+13		+ 1.3250	−1.7980						
b	63.1780	+13	65.2145	+20		− 0.3978	−1.7917	−1.7936	−1.7818	−0.0142	−0.0069	+0.0001	**−1.8028**
c	61.3750	+14	67.0190	+12		− 2.2010	−1.7935						
e	57.9610	+ 9	70.4295	+20		− 5.6140	−1.7910						

Scheinbare Decldiff: N—Centrum $= + 3.4507$ $\quad f^\circ_\delta = 0.99344$ $\quad i^\circ_\delta = -0.00195$

Q— » $= -24.4328$

R— » $= -24.4683$ $\quad f_\delta = \mathbf{0.99294}$ $\quad i_\delta = \mathbf{-0.00202}$ $\quad \sphericalangle\, i_\delta = -6'.9$

V— » $= -19.2652$

W— » $= +30.7328$ $\quad f'_\delta = \mathbf{0.99343}$ $\quad J_\delta = \mathbf{-0.00193}$

$\delta_♃ = +21^\circ\ 1'.8$

54 B. 1896. März 16.

Æ 13.

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 54 A.									
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ f_w	57.7685	+ 6	70.6210	+12		— 5.1454				
f_c	58.1715	+ 6	70.2220	+16		— 4.7446	— 4.7413	9^h 47^m 10^s		4
f_o	58.5870	+ 6	69.8160	+16		— 4.3338				
♃ g_w	57.8170	+ 6	70.5810	+12		— 5.1011				
g_c	58.2115	+ 6	70.1920	+16		— 4.7096	— 4.7102	48 7		3
g_o	58.5960	+ 6	69.7975	+16		— 4.3200			9^h 48^m 34^s	
♃ h_w	57.7890	+ 6	70.6005	+12		— 5.1248				
h_c	58.2005	+ 6	70.2020	+16		— 4.7196	— 4.7191	49 5		3—4
h_o	58.6080	+ 6	69.7955	+16		— 4.3130				
♃ i_w	57.8160	+ 5	70.5810	+13		— 5.1017				
i_c	58.2060	+ 5	70.1940	+17		— 4.7134	— 4.7137	49 55		2—3
i_o	58.5910	+ 5	69.8040	+17		— 4.3259				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I f	59.6340	+15	68.7540	+13		— 3.2787	+1.4626						3
g	59.6580	+15	68.7310	+13		— 3.2552	+1.4550	+1.4587	+1′.4488	—0′.0006	—0′.0021	**+1′.4461**	3
h	59.6545	+15	68.7375	+13		— 3.2602	+1.4589						3
i	59.6570	+14	68.7300	+14		— 3.2553	+1.4584						3
II	Verfinstert.												
III f	55.2695	+ 1	73.1150	+14		— 7.6422	—2.9009						2—3
g	55.2925	0	73.0910	+13		— 7.6187	—2.9085	—2.9041	—2.8844	+0.0010	—0.0021	**—2.8855**	3
h	55.2950	0	73.0945	+13		— 7.6192	—2.9001						3
i	55.2950	— 1	73.0970	+13		— 7.6205	—2.9068						3
IV f	65.4905	+11	62.8990	+ 9		+ 2.5770	+7.3183						3 unterexponiert
g	65.5120	+10	62.8780	+ 9		+ 2.5982	+7.3084	+7.3140	+7.2643	—0.0028	—0.0021	**+7.2594**	3 »
h	65.5120	+10	62.8765	+10		+ 2.5990	+7.3181						3 »
i	65.5120	+10	62.8790	+10		+ 2.5977	+7.3114						3 »

Scheinbare Ædiff. wie 54 A.

$f^\circ_\alpha = 0.99318$ $\qquad -i^\circ_\alpha = +0.00207$

$f_\alpha = \mathbf{0.99289}$ $\qquad -i_\alpha = \mathbf{+0.00204}$ $\qquad \sphericalangle\, i_\alpha = -7'.0$

$Refr. = +\ \ 4$

$Tx_♃ = -\ \ 52$

$f'_\alpha = \mathbf{0.99320}$ $\qquad J_\alpha = \mathbf{+0.00156}$

$\alpha_♃ = 8^h\ 6^m.0$

1896. März 16.

Reihe.

Decl.

Obj.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	Anhaltst	erne	wie 54 A.							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
	68.6570	+15	59.7440	+15		+ 5.0774				Bilder 3—4.
	68.2770	+20	60.1300	+15		+ 4.6946	+ 4.6957			
	67.8950	+20	60.5070	+15		+ 4.3151				
	66.8700	+10	61.5300	+10		+ 3.2908				
	66.5080	+10	61.9040	+10		+ 2.9228	+ 2.9237			
	66.1400	+12	62.2610	+10		+ 2.5604				
	65.1325	+18	63.2650	+10		+ 1.5550				
	64.7680	+18	63.6465	+ 9		+ 1.1820	+ 1.1835			
	64.3950	+18	64.0105	+ 9		+ 0.8136				
	63.4550	+11	64.9435	+17		— 0.1237				
	63.0975	+11	65.3130	+17		— 0.4872	— 0.4836			
	62.7400	+11	65.6615	+11		— 0.8399				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.8990	+20	60.4940	+11		+ 4.3238	—0.3719						
66.1300	+12	62.2630	+10		+ 2.5544	—0.3693	—0.3695	—0.'3671	—0.'0028	—0.'0006	+0.'0001	**—0.'3692**
64.3930	+10	64.0045	+ 9		+ 0.8152	—0.3683						
62.7250	+11	65.6710	+11		— 0.8522	—0.3686						
Verfinst	ert.											
68.9220	+16	59.4670	+13		+ 5.3485	+0.6528						
67.1570	+11	61.2340	+13		+ 3.5822	+0.6585	+0.6572	+0.6529	+0.0056	—0.0020	+0.0001	**+0.6566**
65.4150	+19	62.9755	+12		+ 1.8410	+0.6575						
63.7520	+11	64.6405	+19		+ 0.1762	+0.6598						
66.4830	+10	61.9215	+10		+ 2.9016	—1.7941						
64.7035	+16	63.6920	+ 9		+ 1.1270	—1.7967	—1.7955	—1.7838	—0.0140	+0.0008	+0.0001	**—1.7969**
62.9620	+ 9	65.4340	+17		— 0.6156	—1.7991						
61.3020	+10	67.0955	+ 9		— 2.2758	—1.7922						

Scheinbare Decldiff. wie 54 A.

$f^\circ_\delta = 0.99344$ $\quad i^\circ_\delta = -0.00195$

$f_\delta = \mathbf{0.99294}$ $\quad i_\delta = \mathbf{-0.00202}$ $\quad \measuredangle\, i_\delta = -6'.9$

$f'_\delta = \mathbf{0.99344}$ $\quad J_\delta = \mathbf{-0.00192}$

$\delta_♃ = +21^\circ\ 1'.8$

55 A. 1896. März 24.

Æ 138

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.6970**		**64.6914**							
X	63.6962	+ 8	64.6897	+17	0	0.0000				3
M	71.3508	+22	57.0360	+15	— 1	+ 7.6548				2—3
N	27.2073	+30	101.1826	+ 9	+16	—36.4878				3—4
Q	79.9674	+25	48.4190	+36	— 9	+16.2700		**10ʰ 5ᵐ 2ˢ**		4
R	29.6174	+35	98.7265	+18	+21	—34.0394				3—4 ellipt.
V	66.0731	+27	62.3091	+25	— 1	+ 2.3792				3
W	67.2035	+11	61.1833	+13	0	+ 3.5072				2—3
♃ a_w	66.8265	+ 9	61.5655	+ 9		+ 3.1277				
a_c	67.1990	+ 9	61.2050	+10		+ 3.4942	+ 3.4962	9 49 54		1
a_o	67.5685	+19	60.8305	+10		+ 3.8666				
♃ b_w	66.7855	+ 8	61.6145	+ 9		+ 3.0826				
b_c	67.1665	+ 8	61.2380	+10		+ 3.4614	+ 3.4593	51 12		1—2
b_o	67.5395	+18	60.8670	+10		+ 3.8338			**9ʰ 51ᵐ 47ˢ**	
♃ c_w	66.7870	+ 8	61.6110	+10		+ 3.0851				
c_c	67.1625	+ 8	61.2430	+11		+ 3.4568	+ 3.4609	52 29		2
c_o	67.5435	+18	60.8570	+11		+ 3.8408				
♃ d_w	66.8000	+ 8	61.5990	+10		+ 3.0976				
d_c	67.1700	+ 8	61.2330	+11		+ 3.4656	+ 3.4653	53 34		1—2
d_o	67.5335	+18	60.8630	+11		+ 3.8328				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	65.9080	+11	62.4845	+ 9		+ 2.2090	—1.2872						2
b	65.8750	+10	62.5180	+ 9		+ 2.1758	—1.2835	—1.2810	—1.′2721	+0.′0001	—0.′0024	**—1.′2744**	2—3
c	65.8830	+10	62.5100	+ 9		+ 2.1838	—1.2771						3
d	65.8885	+10	62.5045	+10		+ 2.1892	—1.2761						3
II a	70.2805	+17	58.1055	+ 5		+ 6.5853	+3.0891						2
b	70.2420	+16	58.1480	+ 5		+ 6.5448	+3.0855						2—3
c	70.2465	+16	58.1440	+ 6		+ 6.5490	+3.0881	+3.0872	+3.0658	—0.0002	—0.0024	**+3.0632**	3
d	70.2475	+16	54.1405	+ 6		+ 6.5512	+3.0859						2
III a	62.3525	+10	66.0365	+10		— 1.3448	—4.8410						2—3
b	62.3125	+10	66.0765	+10		— 1.3848	—4.8441						2—3
c	62.3135	+ 9	66.0730	+10		— 1.3826	—4.8435	—4.8448	—4.8110	+0.0002	—0.0024	**—4.8132**	3
d	62.3100	+ 9	66.0750	+11		— 1.3854	—4.8507						2—3
IV a	59.4525	+11	68.9360	+13		— 4.2446	—7.7408						2—3
b	59.4195	+11	68.9715	+13		— 4.2789	—7.7382						2—3
c	59.4255	+10	68.9670	+13		— 4.2737	—7.7346	—7.7374	—7.6836	+0.0004	—0.0024	**—7.6856**	3 unterexponiert
d	59.4280	+10	68.9630	+14		— 4.2705	—7.7358						2—3

Scheinbare Ædiff: M— Centrum = + 8.′0993 $f^\circ_\alpha = 0.99303$ $-i^\circ_\alpha = -0.00010$
N— » = —38.5810
Q— » = +17.1563 f_α = **0.99273** $-i_\alpha$ = **—0.00014** $\measuredangle\ i_\alpha = +\ 0.′5$
R— » = —35.8802 *Refr.* = — 4
V— » = — 2.5107 $Tx_♃$ = + 39
W— » = + 3.7150 f'_α = **0.99304** J_α = **+0.00021**

$\alpha_♃ = 8^h\ 5^m.6$

1896. März 24.

Reihe. **Decl.**

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **60.8665**	mm/10000	mm **67.5288**	mm/10000	mm/10000	mm	mm	mm	mm	
60.8655	+10	67.5270	+18	0	0.0000		0.0000	0.0000	
45.7124	+15	82.6792	+ 5	+ 1	−15.1516		− 0.0031	−15.1547	
46.2461	+30	82.1478	+17	+ 7	−14.6184		− 0.0704	−14.6888	
18.0998	+31	110.2971	+ 8	+12	−42.7652		− 0.0136	−42.7788	Bilder 2. Mond sehr nahe. Cirri.
18.1055	+37	101.2713	+19	+21	−42.7488		− 0.0596	−42.8084	
23.2886	+24	105.1010	+ 8	+14	−37.5728		− 0.0003	−37.5731	
73.6369	+12	54.7589	0	0	+12.7708		− 0.0007	+12.7701	
66.5655	+ 8	61.8430	+10		+ 5.6923				
66.2225	+10	62.1925	+10		+ 5.3462	+ 5.3455			
65.8720	+10	62.5385	+10		+ 4.9979				
64.7990	+16	63.6090	+ 9		+ 3.9265				
64.4490	+ 8	63.9630	+ 9		+ 3.5741	+ 3.5731			
64.0910	+ 8	64.3155	+ 9		+ 3.2188				
63.1030	+ 9	65.3020	+17		+ 2.2312				
62.7545	+ 9	65.6550	+11		+ 1.8808	+ 1.8803			
62.3970	+ 9	66.0115	+11		+ 1.5288				
61.3490	+10	67.0550	+ 9		+ 0.4782				
61.0050	+10	67.4100	+ 9		+ 0.1291	+ 0.1305			
60.6580	+10	67.7510	+19		− 0.2158				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.5450	+ 8	61.8530	+10		+ 5.6770	+0.3315	+0.3281	+0.′3259	−0.′0003	+0.′0004	+ 0.′0002	**+0.3262**
64.7710	+16	63.6250	+ 9		+ 3.9045	+0.3314						
63.0750	+ 9	65.2325	+17		+ 2.2020	+0.3217						
61.3250	+10	67.0705	+ 9		+ 0.4584	+0.3279						
65.4320	+17	62.9630	+11		+ 4.5660	−0.7795	−0.7794	−0.7740	+0.0007	−0.0017	+0.0002	**−0.′7748**
63.6595	+ 9	64.7345	+18		+ 2.7932	−0.7799						
61.9670	+10	66.4270	+12		+ 1.1010	−0.7793						
60.2165	+15	68.1750	+20		− 0.6484	−0.7789						
67.3875	+ 9	61.0070	+10		+ 6.5214	+1.1759	+1.1744	+1.1664	−0.0011	+0.0006	+0.0002	**+1.1661**
65.6120	+11	62.7780	+ 9		+ 4.7482	+1.1751						
63.9190	+ 9	64.4740	+16		+ 3.0533	+1.1730						
62.1675	+10	66.2220	+10		+ 1.3039	+1.1734						
68.1035	+20	60.2910	+15		+ 7.2376	+1.8921	+1.8907	+1.8777	−0.0019	−0.0003	+0.0002	**+1.8757**
66.3330	+12	62.0640	+10		+ 5.4658	+1.8927						
64.6365	+18	63.7610	+ 9		+ 3.7694	+1.8891						
62.8865	+11	65.5100	+11		+ 2.0194	+1.8889						

Scheinbare Decldiff: M— Centrum = −15.′0490 $\quad f^\circ_\delta = 0.99315 \quad i^\circ_\delta = +0.00024$

N— » = −14.6018

Q— » = −42.4855 $\quad f_\delta =$ **0.99264** $\quad i_\delta =$ **+0.00014** $\quad \measuredangle\, i_\delta = +$ 0.′5

R— » = −42.5208

V— » = −37.3178 $\quad f'_\delta =$ **0.99314** $\quad J_\delta =$ **+0.00025**

W— » = +12.6808

$\delta_♃ = +21^\circ\ 3.′0$

55 B. 1896. März 24.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne		**wie 55 A.**							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
♃ e_w	57.4240	+ 5	70.9795	+12		— 6.2809				
e_c	57.7980	+ 5	70.6050	+12		— 5.9066	— 5.9070	$10^h\ 11^m\ 17^s$		2
e_o	58.1720	+ 5	70.2325	+16		— 5.5336				
♃ f_w	57.4320	+ 5	70.9740	+12		— 6.2742				
f_c	57.8050	+ 5	70.6030	+12		— 5.9022	— 5.9013	12 14		2
f_o	58.1775	+ 5	70.2260	+16		— 5.5276			$10^h\ 12^m\ 43^s$	
♃ g_w	57.4220	+ 5	70.9850	+13		— 6.2847				
g_c	57.7870	+ 5	70.6195	+13		— 5.9194	— 5.9175	13 9		2
g_o	58.1570	+ 5	70.2470	+17		— 5.5484				
♃ h_w	57.3965	+ 6	71.0075	+13		— 6.3086				
h_c	57.7600	+ 6	70.6500	+13		— 5.9482	— 5.9468	14 12		1—2
h_o	58.1225	+ 6	70.2830	+17		— 5.5836				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I e	56.5855	+ 9	71.8080	+11		— 7.1142	—1.2072						2—3
f	56.5860	+ 9	71.8055	+11		— 7.1126	—1.2113	—1.2040	—1.1956	—0.0002	—0.0024	**—1.1982**	3
g	56.5800	+ 9	71.8130	+12		— 7.1194	—1.2019						2—3
h	56.5545	+10	71.8340	+12		— 7.1426	—1.1958						3 unterexponiert
II e	60.8680	+10	67.5180	+18		— 2.8282	+3.0788						2
f	60.8670	+10	67.5200	+19		— 2.8298	+3.0715	+3.0752	+3.0539	+0.0007	—0.0024	**+3.0522**	1—2
g	60.8550	+10	67.5320	+19		— 2.8418	+3.0757						2—3
h	60.8260	+11	67.5635	+20		— 2.8720	+3.0748						2
III e	52.9315	+ 8	75.4565	+10		—10.7654	—4.8584						2—3
f	52.9320	+ 7	75.4570	+10		—10.7654	—4.8641	—4.8609	—4.8271	—0.0010	—0.0024	**—4.8305**	2—3
g	52.9210	+ 7	75.4680	+11		—10.7765	—4.8590						2
h	52.8910	+ 7	75.5025	+11		—10.8088	—4.8620						2—3
IV e	50.0760	+ 6	78.3165	+ 8		—13.6232	—7.7162						2
f	50.0800	+ 6	78.3150	+ 8		—13.6204	—7.7191	—7.7149	—7.6613	—0.0016	—0.0024	**—7.6653**	2—3 unterexp.
g	50.0685	+ 6	78.3260	+ 9		—13.6317	—7.7142						2—3 »
h	50.0420	+ 6	78.3500	+ 9		—13.6570	—7.7102						2—3 »

Scheinbare Ædiff. wie 55 A.

$f^o_\alpha = 0.99303$ $\qquad -i^o_\alpha = -0.00010$

$f_\alpha = \mathbf{0.99273}$ $\qquad -i_\alpha = \mathbf{-0.00014}$ $\qquad ∡\, i_\alpha = +\, 0.''5$

$Refr. = -\ 6$

$Tx_♃ = -\ 66$

$f'_\alpha = \mathbf{0.99305}$ $\qquad J_\alpha = \mathbf{-\ 0.00086}$

$\alpha_♃ = 8^h\ 5^m.6$

1896. März 24.

Reihe. Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	**erne**	**wie 55 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
64.9740	+18	63.4300	+ 9		+ 4.1036				
64.6235	+18	63.7860	+ 9		+ 3.7504	+ 3.7486			
64.2640	+10	64.1430	+ 9		+ 3.3917				
63.2315	+11	65.1690	+17		+ 2.3621				
62.8800	+11	65.5315	+11		+ 2.0054	+ 2.0094			
62.5320	+11	65.8730	+11		+ 1.6606				
61.4805	+12	66.9220	+ 9		+ 0.6106				
61.1350	+12	67.2675	+ 9		+ 0.2650	+ 0.2635			
60.7885	+12	67.6200	+19		— 0.0850				
59.7970	+16	68.6080	+14		— 1.0742				
59.4650	+12	68.9520	+14		— 1.4124	— 1.4121			
59.1235	+12	69.2850	+14		— 1.7497				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.9320	+19	63.4610	+11		+ 4.0670	+0.3184						
63.1930	+12	65.2045	+18		+ 2.3251	+0.3157	+0.3151	+0'.3129	—0'.0003	—0'.0008	+0'.0002	**+0'.3120**
61.4420	+13	66.9535	+10		+ 0.5756	+0.3121						
59.7725	+17	68.6305	+15		— 1.0978	+0.3143						
63.8320	+ 9	64.5570	+16		+ 2.9683	—0.7803						
62.0955	+10	66.2990	+10		+ 1.2294	—0.7800	—0.7814	—0.7760	+0.0008	+0.0016	+0.0002	**—0.7734**
60.3445	+15	68.0480	+18		— 0.5208	—0.7843						
58.6740	+11	69.7220	+16		— 2.1931	—0.7810						
65.7975	+14	62.5915	+14		+ 4.9342	+1.1856						
64.0600	+12	64.3295	+13		+ 3.1964	+1.1870	+1.1852	+1.1771	—0.0013	—0.0045	+0.0002	**+1.1715**
62.3110	+13	66.0780	+15		+ 1.4476	+1.1841						
60.6365	+14	67.7540	+23		— 0.2280	+1.1841						
66.5130	+13	61.8850	+15		+ 5.6450	+1.8964						
64.7765	+21	63.6200	+14		+ 3.9098	+1.9004	+1.8968	+1.8838	—0.0022	—0.0084	+0.0002	**+1.8734**
63.0255	+14	65.3720	+22		+ 2.1575	+1.8940						
61.3525	+15	67.0460	+14		+ 0.4844	+1.8965						

Scheinbare Decldiff. wie 55 A.

$f^\circ_\delta = 0.99315$ $i^\circ_\delta = +0.00024$

$f_\delta = \mathbf{0.99264}$ $i_\delta = \mathbf{+0.00014}$ $\measuredangle\, i_\delta = +0'.5$

$f'_\delta = \mathbf{0.99316}$ $J_\delta = \mathbf{+0.00028}$

$\delta_♃ = +21^\circ\ 3'.0$

56 A. **1896. März 29.**

Æ **140**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.2711**		**64.1177**							
Y	64.2703	+ 8	64.1168	+ 9	0	0.0000				2
M	74.9525	+13	53.4000	+10	− 1	+10.6996				2
N	30.8249	+22	97.5327	+ 4	+11	−33.4286				2
Q	83.5684	+ 1	44.8737	+24	− 4	+19.2691		10^h 11^m 32^s		2—3
R	33.2581	+27	95.1713	+ 4	+10	−31.0312				2
V	69.6710	+21	53.7439	+15	0	+ 5.3872				2
W	70.8204	+28	57.4565	+25	− 4	+ 6.6050				3
$♃\,b_w$	68.3465	+19	60.0600	+14		+ 4.0668				
b_c	68.7300	+14	59.6650	+14		+ 4.4558	+ 4.4595	10 1 49		3
b_o	69.1310	+14	59.2660	+10		+ 4.8560				
$♃\,c_w$	68.2790	+18	60.1315	+15		+ 3.9972				
c_c	68.6750	+13	59.7340	+15		+ 4.3937	+ 4.3941	3 9		3—4
c_o	69.0700	+13	59.3340	+11		+ 4.7914			10^h 3^m 52^s	
$♃\,d_w$	68.3150	+18	60.1070	+15		+ 4.0274				
d_c	68.7025	+13	59.7090	+15		+ 4.4200	+ 4.4231	4 9		3
d_o	69.1020	+13	59.3050	+11		+ 4.8219				
$♃\,f_w$	68.3010	+19	60.1295	+16		+ 4.0092				
f_c	68.6925	+14	59.7370	+16		+ 4.4010	+ 4.4041	6 24		2—3
f_o	69.0885	+14	59.3310	+12		+ 4.8022				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I b	66.8745	+ 9	61.5120	+ 9		+ 2.6046	−1.8549						3
c	66.8105	+ 8	61.5815	+ 9		+ 2.5378	−1.8563	−1.8574	−1.′8450	−0.′0007	−0.′0026	**−1.′8483**	3—4
d	66.8430	+ 8	61.5550	+10		+ 2.5672	−1.8559						3
f	66.8230	+ 9	61.5860	+11		+ 2.5417	−1.8624						3
II b	65.9700	+11	62.4195	+ 9		+ 1.6986	−2.7609						2—3
c	65.9065	+10	62.4870	+ 9		+ 1.6331	−2.7610	−2.7632	−2.7447	−0.0011	−0.0026	**−2.7484**	3—4
d	65.9340	+10	62.4630	+10		+ 1.6588	−2.7643						3—4
f	65.9200	+11	62.4920	+11		+ 1.6373	−2.7668						3
III b	71.3960	+12	56.9910	+ 9		+ 7.1260	+2.6665						2—3
c	71.3360	+12	57.0610	+10		+ 7.0609	+2.6668	+2.6614	+2.6436	+0.0011	−0.0026	**+2.6421**	3
d	71.3600	+12	57.0405	+10		+ 7.0832	+2.6601						3—4
f	71.3380	+13	57.0725	+12		+ 7.0561	+2.6520						3
IV b	74.8970	+10	53.5020	+ 3		+10.6212	+6.1617						2—3
c	74.8415	+10	53.5625	+ 4		+10.5631	+6.1690	+6.1684	+6.1271	+0.0023	−0.0026	**+6.1268**	2—3
d	74.8740	+11	53.5350	+ 4		+10.5932	+6.1701						3 unterexponiert
f	74.8620	+12	53.5555	+ 6		+10.5768	+6.1727						3 unterexponiert

Scheinbare Æ diff: M— Centrum $= +11.'3000$ $f^\circ_\alpha = 0.99328$ $-i^\circ_\alpha = -0.00220$
N— » $= -35.3803$
Q— » $= +20.3570$ $f_\alpha = \mathbf{0.99298}$ $-i_\alpha = \mathbf{-0.00224}$ $\measuredangle\, i_\alpha = +\ 7.'7$
R— » $= -32.6795$ *Refr.* $= +\ \ 5$
V— » $= +\ 5.7113$ $Tx_♃ = +\ 49$
W— » $= +\ 6.9157$ $f'_\alpha = \mathbf{0.99330}$ $J_\alpha = \mathbf{-0.00170}$

$\alpha_♃ = 8^h\ 5.^m7$

1896. März 29.

Reihe. Decl.

Obj.	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
	62.9138		**65.4666**							
	62.9129	+ 9	65.4650	+16	0	0.0000		0.0000	0.0000	
	73.7082	+16	54.6409	+ 3	− 1	+10.8106		− 0.0060	+10.8046	
	74.3850	+24	54.0980	+19	− 3	+11.4198		− 0.0592	+11.3606	
	46.0710	+23	82.2561	+ 7	+ 3	−16.8150		− 0.0191	−16.8341	
	46.2525	+26	82.2156	+16	+ 5	−16.7042		− 0.0495	−16.7537	
	51.3091	+11	77.0531	+11	0	−11.5956		− 0.0015	−11.5971	
	101.6419	+ 5	26.7289	+24	−16	+38.7304		− 0.0023	+38.7281	
	65.3810	+17	63.0155	+10		+ 2.4595				Bilder 4—5.
	65.0190	+17	63.3835	+10		+ 2.0945	+ 2.0913			
	64.6420	+17	63.7555	+ 9		+ 1.7200				
	63.6610	+ 9	64.7390	+17		+ 0.7370				
	63.2940	+10	65.1010	+17		+ 0.3720	+ 0.3674			
	62.9115	+10	65.4770	+17		+ 0.0067				
	61.8440	+10	66.5490	+ 9		− 1.0760				
	61.4790	+11	66.9280	+ 9		− 1.4480	− 1.4477			
	61.1020	+11	67.2935	+ 9		− 1.8192				
	58.3825	+ 6	70.0100	+17		− 4.5378				
	58.0160	+ 6	70.3840	+17		− 4.9082	− 4.9067			
	57.6470	+ 6	70.7475	+13		− 5.2742				

Obj.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
	65.4625	+16	62.9250	+10		+ 2.5454	+0.4541						
	63.7405	+ 8	64.6470	+17		+ 0.8227	+0.4553	+0.4546	+0.′4516	−0.′0043	+0.′0007	+0.′0002	**+0.′4482**
	61.9250	+ 9	66.4625	+11		− 0.9924	+0.4553						
	58.4640	+10	69.9220	+17		− 4.4530	+0.4537						
	65.6850	+10	62.7065	+10		+ 2.7656	+0.6743						
	63.9620	+ 8	64.4255	+ 9		+ 1.0446	+0.6772	+0.6765	+0.6720	−0.0066	+0.0009	+0.0002	**+0.6665**
	62.1465	+ 9	66.2405	+11		− 0.7707	+0.6770						
	58.6895	+10	69.7000	+17		− 4.2292	+0.6775						
	64.2875	+ 9	64.0860	+11		+ 1.3770	−0.7143						
	62.5640	+10	65.8080	+13		− 0.3458	−0.7132	−0.7126	−0.7079	+0.0063	−0.0017	+0.0002	**−0.7031**
	60.7490	+11	67.6160	+21		− 2.1576	−0.7099						
	57.2880	+10	71.0800	+15		− 5.6198	−0.7131						
	63.6035	+12	64.7620	+20		+ 0.6968	−1.3945						
	61.8800	+13	66.4810	+14		− 1.0252	−1.3926	−1.3943	−1.3852	+0.0147	−0.0052	+0.0002	**−1.3755**
	60.0650	+18	68.2980	+22		− 2.8403	−1.3926						
	56.6020	+13	71.7630	+15		− 6.3042	−1.3975						

Scheinbare Decldiff: M—Centrum = +10.′7647 $f^\circ_\delta = 0.99346$ $i^\circ_\delta = +0.00236$

N— » = +11.2118

Q— » = −16.6718 f_δ = **0.99295** i_δ = **+0.00226** $\measuredangle\, i_\delta = +\ 7.'8$

R— » = −16.7073

V— » = −11.5042 f'_δ = **0.99346** J_δ = **+0.00238**

W— » = +38.4945

$\delta_{♃} = +21^\circ\ 2.'4$

56 B. **1896. März 29.**

Æ **142**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 56 A.									
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
$♃ g_w$	58.8530	+11	69.5490	+13		− 5.4248				
g_c	59.2530	+11	69.1460	+13		− 5.0233	− 5.0192	$10^h\ 18^m\ 10^s$		4
g_o	59.6640	+15	68.7300	+13		− 4.6096				
$♃ h_w$	58.8890	+10	69.5200	+13		− 5.3924				
h_c	59.2790	+10	69.1250	+13		− 4.9998	− 4.9958	19 9		3—4
h_o	59.6820	+14	68.7190	+13		− 4.5952			$10^h\ 20^m\ 17^s$	
$♃ k_w$	58.9515	+10	69.4630	+14		− 5.3326				
k_c	59.3395	+10	69.0760	+14		− 4.9452	− 4.9417	21 27		3
k_o	59.7330	+14	68.6740	+14		− 4.5472				
$♃ l_w$	58.8855	+11	69.5395	+14		− 5.4038				
l_c	59.2620	+11	69.1570	+14		− 5.0244	− 5.0235	22 22		2—3
l_o	59.6425	+15	68.7730	+14		− 4.6422				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I g	57.3785	+10	71.0030	+12		− 6.8890	−1.8698						3
h	57.3980	+10	70.9910	+12		− 6.8733	−1.8775	−1.8763	−1.8637	−0.0012	−0.0026	**−1.8675**	3 unterexponiert
k	57.4545	+ 9	70.9430	+13		− 6.8212	−1.8795						3—4
l	57.3790	+ 9	71.0290	+13		− 6.9019	−1.8784						3 unterexponiert
II g	56.4650	+10	71.9165	+11		− 7.8025	−2.7833						3
h	56.4825	+10	71.9060	+11		− 7.7885	−2.7927	−2.7903	−2.7717	−0.0018	−0.0026	**−2.7761**	3
k	56.5440	+ 9	71.8560	+12		− 7.7328	−2.7911						3
l	56.4640	+ 9	71.9455	+12		− 7.8176	−2.7941						3
III g	61.8780	+10	66.5105	+ 8		− 2.3928	+2.6264						3
h	61.8930	+ 9	66.4980	+ 8		− 2.3792	+2.6166	+2.6173	+2.5998	+0.0019	−0.0026	**+2.5991**	2—3
k	61.9500	+ 9	66.4520	+ 9		− 2.3277	+2.6140						3
l	61.8680	+10	66.5370	+10		− 2.4112	+2.6123						3
IV g	65.4465	+17	62.9435	+ 9		+ 1.1752	+6.1944						3
h	65.4640	+16	62.9305	+10		+ 1.1904	+6.1862	+6.1919	+6.1504	+0.0038	−0.0026	**+6.1516**	3—4 unterexp.
k	65.5330	+16	62.9725	+10		+ 1.2538	+6.1955						3—4
l	65.4525	+17	62.9635	+11		+ 1.1681	+6.1916						3 unterexponiert

Scheinbare Ædiff. wie 56 A.

$f^\circ_\alpha = 0.99328$ $\quad -i^\circ_\alpha = -0.00220$

$f_\alpha = \mathbf{0.99298}$ $\quad -i_\alpha = \mathbf{-0.00224}$ $\quad \measuredangle\, i_\alpha = +\ 7'.7$

$Refr. = +\ 6$

$Tx_♃ = -\ 56$

$f'_\alpha = \mathbf{0.99331}$ $\quad J_\alpha = \mathbf{-0.00274}$

$\alpha_♃ = 8^h\ 5^m.7$

eihe.

1896. März 29.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		wie 56 A.							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
67.1440	+10	61.2750	+11		+ 4.2108				Bilder 4.
66.7645	+10	61.6480	+10		+ 3.8346	+ 3.8308			
66.3830	+12	62.0420	+10		+ 3.4470				
65.5080	+18	62.9170	+10		+ 2.5723				
65.1390	+18	63.2850	+10		+ 2.2038	+ 2.2026			
64.7620	+18	63.6525	+ 9		+ 1.8316				
61.9815	+11	66.4395	+ 9		— 0.9525				
61.6185	+11	66.8005	+ 9		— 1.3145	— 1.3171			
61.2470	+12	67.1690	+ 9		— 1.6844				
60.2330	+16	68.1825	+19		— 2.6985				
59.8745	+16	68.5470	+14		— 3.0598	— 3.0566			
59.5260	+16	68.9020	+14		— 3.4115				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.2240	+11	61.1860	+11		+ 4.2954	+0.4646						
65.5895	+13	62.8230	+10		+ 2.6598	+0.4572	+0.4620	+0'.4590	—0'.0045	—0'.0012	+0'.0002	+0'.4535
62.0785	+12	66.3395	+11		— 0.8540	+0.4631						
60.3395	+17	68.0795	+19		— 2.5937	+0.4629						
67.4505	+11	60.9620	+11		+ 4.5206	+0.6898						
65.8190	+13	62.5970	+10		+ 2.8876	+0.6850	+0.6888	+0.6843	—0.0067	—0.0020	+0.0002	+0.6758
62.3040	+12	66.1105	+11		— 0.6268	+0.6903						
60.5640	+13	67.8490	+19		— 2.3664	+0.6902						
66.0440	+11	62.3515	+ 9		+ 3.1228	—0.7080						
64.4155	+ 9	63.9800	+ 8		+ 1.4942	—0.7084	—0.7065	—0.7018	+0.0063	+0.0011	+0.0002	—0.6942
60.8990	+11	67.4940	+18		— 2.0214	—0.7043						
59.1595	+11	69.2360	+13		— 3.7620	—0.7054						
65.3440	+16	63.0410	+10		+ 2.4282	—1.4026						
63.7130	+ 8	64.6770	+17		+ 0.7940	—1.4086	—1.4063	—1.3971	+0.0149	+0.0013	+0.0002	—1.3807
60.1940	+14	68.1950	+19		— 2.7244	—1.4073						
58.4525	+ 5	69.9310	+17		— 4.4634	—1.4068						

Scheinbare Decldiff. wie 56 A.

$f^\circ_\delta = 0.99346$ $\quad i^\circ_\delta = +0.00236$

$f_\delta = \mathbf{0.99295}$ $\quad i_\delta = \mathbf{+0.00226}$ $\quad \measuredangle\, i_\delta = +\ 7'.8$

$f'_\delta = \mathbf{0.99348}$ $\quad J_\delta = \mathbf{+0.00241}$

$\delta_♃ = +21^\circ\ 2'.4$

57 A. 1896. März 30.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.9323**		**65.4446**							
U	62.9314	+ 9	65.4429	+17	0	0.0000				2
M	66.6790	+11	61.6940	+12	0	+ 3.7486				2
N	22.5495	+28	105.8289	+10	+20	−40.3806				1−2
Q	75.2936	+18	53.0918	+13	− 1	+12.3572		10^h 28^m 23^s		2
R	24.9867	+33	103.3895	+11	+18	−37.9424				1—2
V	61.3991	+15	66.9759	+13	0	− 1.5322				1—2
W	62.5412	+25	65.8375	+26	0	− 0.3920				2
♃ a_w	70.3925	+17	57.9870	+ 5		+ 7.4595				
a_c	70.8030	+13	57.5980	+ 5		+ 7.8590	+ 7.8657	10 19 33		2—3
a_o	71.2275	+13	57.1830	+ 9		+ 8.2786				
♃ c_w	70.3565	+16	58.0430	+ 5		+ 7.4134				
c_c	70.7675	+12	57.6395	+ 5		+ 7.8205	+ 7.8214	22 30		3
c_o	71.1760	+12	57.2280	+ 9		+ 8.2303				
♃ d_w	70.3880	+16	58.0160	+ 6		+ 7.4426			10^h 22^m 27^s	
d_c	70.7790	+12	57.6245	+ 6		+ 7.8337	+ 7.8354	23 28		2
d_o	71.1755	+12	57.2280	+10		+ 8.2300				
♃ e_w	70.3475	+17	58.0560	+ 6		+ 7.4024				
e_c	70.7430	+13	57.6640	+ 6		+ 7.7960	+ 7.7976	24 18		2
e_o	71.1400	+13	57.2640	+10		+ 8.1943				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	72.7180	+14	55.6680	− 1		+ 9.7819	+1.9162						2
c	72.6830	+13	55.7080	0		+ 9.7443	+1.9229	+1.9189	+1′.9060	−0′.0004	−0′.0026	**+1′.9030**	3
d	72.6910	+13	55.6965	0		+ 9.7540	+1.9186						2—3
e	72.6520	+14	55.7345	+ 1		+ 9.7156	+1.9180						2
II a	69.9930	+17	58.3915	+ 5		+ 7.0575	−0.8082						2
c	69.9655	+16	58.4200	+ 5		+ 7.0294	−0.7920	−0.7946	−0.7893	+0.0002	−0.0026	**−0.7917**	2
d	69.9830	+16	58.4050	+ 6		+ 7.0456	−0.7898						2
e	69.9455	+17	58.4401	+ 6		+ 7.0094	−0.7882						2—3
III a	69.2705	+14	59.1150	+10		+ 6.3341	−1.5311						2
c	69.2275	+13	59.1640	+10		+ 6.2880	−1.5334	−1.5356	−1.5253	+0.0003	−0.0026	**−1.5276**	2—3
d	69.2370	+13	59.1500	+11		+ 6.2998	−1.5356						2—3
e	69.1935	+14	59.1940	+11		+ 6.2560	−1.5416						3
IV a	78.7490	+ 6	49.6365	+ 5		+15.8124	+7.9467						2—3
c	78.7190	+ 6	49.6700	+ 6		+15.7806	+7.9592	+7.9551	+7.9018	−0.0017	−0.0026	**+7.8975**	2—3
d	78.7305	+ 6	49.6560	+ 6		+15.7933	+7.9579						2—3
e	78.7925	+ 7	49.6960	+ 7		+15.7543	+7.9567						2—3

Scheinbare Ædiff: M— Centrum $= + 3'.9702$ $f^\circ_\alpha = 0.99328$ $-i^\circ_\alpha = +0.00007$

N— » $= -42.7105$

Q— » $= +13.0272$ f_α $=$ **0.99297** $-i_\alpha$ $=$ **+0.00002** $\measuredangle\, i_\alpha = -0'.1$

R— » $= -40.0095$ $Refr.$ $= + 6$

V— » $= - 1.6185$ $Tx_♃$ $= + 87$

W— $= - 0.4142$ f'_α $=$ **0.99330** J_α $=$ **+0.00095**

$\alpha_♃ = 8^h\ 5^m.8$

1896. März 30.

Reihe.

Decl.

P.-Kr. 90° (mm)	$t+k$ ($\frac{mm}{10000}$)	P.-Kr. 270° (mm)	$t+k$ ($\frac{mm}{10000}$)	s ($\frac{mm}{10000}$)	y (mm)	$\frac{♃_n + ♃_c + ♃_s}{3}$ (mm)	$-\frac{x^2}{2} tg\delta \sin 1'$ (mm)	$y - \frac{x^2}{2} tg\delta \sin 1'$ (mm)	Bemerkungen zur Aufnahme.
63.2885		**65.0884**							
63.2875	+10	65.0868	+16	0	0.0000		0.0000	0.0000	
73.8579	+12	54.5200	0	0	+10.5695		— 0.0007	+10.5688	
74.4063	+28	53.9819	+20	— 6	+11.1120		— 0.0861	+11.0259	
76.2505	+18	82.1355	+ 5	+ 2	—17.0417		— 0.0078	—17.0495	Bilder 2—3.
46.2803	+31	82.0953	+17	+ 8	—17.0060		— 0.0742	—17.0802	
51.4430	+12	76.9325	+ 9	0	—11.8447		— 0.0001	—11.8448	
101.7809	+ 5	26.6060	+22	—16	+38.4850		0.0000	+38.4850	
66.7990	+ 9	61.5975	+11		+ 3.5006				Bilder 3.
66.4110	+11	61.9950	+11		+ 3.1080	+ 3.1067			
66.0135	+11	62.3905	+11		+ 2.7114				
63.3060	+10	65.0945	+18		+ 0.0053				
62.9200	+10	65.4880	+18		— 0.3844	— 0.3840			
62.5270	+10	65.8725	+12		— 0.7729				
61.6795	+10	66.7220	+10		— 1.6213				
61.3040	+11	67.1010	+10		— 1.9985	— 1.9993			
60.9210	+11	67.4775	+10		— 2.3782				
60.0410	+15	68.3630	+20		— 3.2613				
59.6630	+15	68.7435	+15		— 3.6408	— 3.6354			
59.2945	+11	69.1020	+15		— 4.0040				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$ (mm)	Mittel. (mm)	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
65.9270	+13	62.4640	+12		+ 2.6315	—0.4752						
62.4430	+12	65.9430	+13		— 0.8501	—0.4661	—0.4673	—0.′4642	+0.′0003	—0.′0019	+0.′0002	**—0.′4656**
60.8380	+13	67.5570	+21		— 2.4600	—0.4607						
59.1920	+13	69.1970	+16		— 4.1027	—0.4673						
66.6505	+ 9	61.7375	+11		+ 3.3564	+0.2497						
63.1605	+10	65.2230	+18		— 0.1317	+0.2523	+0.2541	+0.2524	—0.0001	+0.0006	+0.0002	**+0.2531**
61.5580	+10	66.8355	+10		— 1.7388	+0.2605						
59.9145	+15	68.4770	+20		— 3.3816	+0.2538						
66.7120	+ 9	61.6740	+11		+ 3.4188	+0.3121						
63.2240	+10	65.1595	+18		— 0.0682	+0.3158	+0.3190	+0.3169	— 0.0002	+0.0012	+0.0002	**+0.3181**
61.6230	+10	66.7680	+10		— 1.6726	+0.3267						
59.9810	+15	68.4085	+20		— 3.3140	+0.3214						
64.5595	+22	63.8285	+13		+ 1.2659	—1.8408						
61.0750	+16	67.3160	+13		— 2.2201	—1.8364	—1.8335	—1.8214	+0.0012	—0.0105	+0.0002	**—1.8305**
59.4690	+16	68.9220	+18		— 3.8266	—1.8273						
57.8310	+11	70.5600	+17		— 5.4648	—1.8294						

Scheinbare Decldiff: M—Centrum $= +10.'5027$ $f^\circ_\delta = 0.99342$ $i^\circ_\delta = +0.00013$

N— » $= +10.9498$

Q— » $= -16.9338$ $f_\delta = \mathbf{0.99289}$ $i_\delta = \mathbf{0.00000}$ $\measuredangle\, i_\delta = 0.'0$

R— » $= -16.9693$

V— » $= -11.7662$ $f'_\delta = \mathbf{0.99342}$ $J_\delta = \mathbf{+0.00015}$

W— » $= +38.2325$

$\delta_♃ = +21^\circ\ 2.'2$

57 B. 1896. März 30.

Æ 143.

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	(♃w + ♃c + ♃o)/3	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	erne	wie 57 A.							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
♃ g_w	57.8525	+ 5	70.5430	+17		— 5.0897				
g_c	58.2445	+ 5	70.1475	+17		— 4.6960	— 4.6908	10^h 36^m 30^s		2
g_o	58.6570	+10	69.7420	+17		— 4.2867				
♃ h_w	57.8300	+ 5	70.5775	+16		— 5.1182				
h_c	58.2260	+ 5	70.1760	+16		— 4.7194	— 4.7203	37 30		2—3
h_o	58.6200	+10	69.7785	+16		— 4.3234			10^h 37^m 56^s	
♃ i_w	57.8520	+ 5	70.5480	+16		— 5.0924				
i_c	58.2460	+ 5	70.1580	+16		— 4.7004	— 4.6994	38 18		2
i_o	58.6420	+10	69.7645	+16		— 4.3054				
♃ k_w	57.8670	+ 6	70.5270	+16		— 5.0744				
k_c	58.2600	+ 6	70.1380	+16		— 4.6834	— 4.6811	39 28		2
k_o	58.6605	+11	69.7430	+16		— 4.2854				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I g	60.1520	+14	68.2350	+19		— 2.7856	+1.9052						2—3
h	60.1235	+14	68.2610	+19		— 2.8128	+1.9075	+1.9057	+1.″8929	+0.″0002	—0.″0026	**+1.″8905**	2—3
i	60.1455	+15	68.2450	+18		— 2.7938	+1.9056						3
k	60.1600	+15	68.2250	+18		— 2.7765	+1.9046						2—3
II g	57.5060	+ 5	70.8810	+13		— 5.4318	—0.7410						2—3
h	57.4825	+ 5	70.9045	+12		— 5.4552	—0.7349	—0.7341	—0.7292	—0.0001	—0.0026	**—0.7319**	2
i	57.5070	+ 6	70.8805	+12		— 5.4309	—0.7315						2—3
k	57.5270	+ 6	70.8590	+12		— 5.4102	—0.7291						2
III g	56.6700	+ 9	71.7135	+12		— 6.2658	—1.5750						3
h	56.6430	+ 9	71.7460	+11		— 6.2954	—1.5751	—1.5771	—1.5665	—0.0001	—0.0026	**—1.5692**	2—3
i	56.6605	+10	71.7225	+11		— 6.2749	—1.5755						2—3
k	56.6730	+10	71.7130	+11		— 6.2639	—1.5828						2—3
IV g	66.2095	+10	62.1740	+10		+ 3.2739	+7.9647						2—3
h	66.1850	+10	62.2025	+10		+ 3.2474	+7.9677	+7.9670	+7.9137	+0.0008	—0.0026	**+7.9119**	2
i	66.2080	+10	62.1835	+ 9		+ 3.2684	+7.9678						3
k	66.2240	+11	62.1630	+ 9		+ 3.2868	+7.9679						2—3

Scheinbare Ædiff. wie 57 A.

$f^\circ_\alpha = 0.99328$ $\quad -i^\circ_\alpha = +0.00007$

$f_\alpha = \mathbf{0.99297}$ $\quad -i_\alpha = \mathbf{+0.00002}$ $\quad \measuredangle\, i_\alpha = -\,0.''1$

$Refr. = +\ 8$

$Tx_♃ = -\ 52$

$f'_\alpha = \mathbf{0.99331}$ $\quad J_\alpha = \mathbf{-0.00042}$

$\alpha_♃ = 8^h\ 5^m.8$

1896. März 30.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y - \frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		wie 57 A.							
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
61.4885	+11	66.9200	+9		−1.8157				
61.8750	+11	66.5365	+9		−1.4307	−1.4313			
62.2550	+11	66.1500	+11		−1.0476				
63.2195	+11	65.1890	+17		−0.0851				
63.6050	+10	64.8040	+17		+0.3001	+0.2959			
63.9730	+10	64.4270	+17		+0.6726				
65.0800	+18	63.3260	+10		+1.7774				
65.4420	+18	62.9580	+10		+2.1424	+2.1450			
65.8170	+12	62.5865	+10		+2.5153				
66.8800	+10	61.5310	+11		+3.5744				
67.2510	+10	61.1580	+11		+3.9464	+3.9456			
67.6155	+20	60.7845	+11		+4.3159				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
61.3935	+11	66.9980	+8		−1.9022	−0.4709						
63.1215	+10	65.2690	+16		−0.1741	−0.4700	−0.4690	−0′.4659	+0′.0003	+0′.0008	+0.0002	−0′.4646
64.9740	+17	63.4165	+9		+1.6791	−0.4659						
66.7730	+9	61.6200	+9		+3.4764	−0.4692						
61.1040	+11	66.2870	+11		−1.1916	+0.2397						
63.8310	+10	64.5580	+17		+0.5361	+0.2402	+0.2404	+0.2388	−0.0001	−0.0005	+0′.0002	+0.2384
65.6880	+12	62.7075	+10		+2.3903	+0.2453						
67.4775	+10	60.9130	+11		+4.1822	+0.2366						
62.1920	+12	66.1960	+12		−1.1020	+0.3293						
63.9200	+11	64.4690	+10		+0.6255	+0.3296	+0.3306	+0.3284	−0.0003	−0.0010	+0.0002	+0.3273
65.7750	+13	62.6150	+11		+2.4800	+0.3350						
67.5680	+21	60.8205	+12		+4.2742	+0.3286						
60.0100	+14	68.3825	+19		−3.2866	−1.8553						
61.7410	+9	66.6480	+9		−1.5536	−1.8495	−1.8510	−1.8389	+0.0014	+0.0006	+0.0002	−1.8367
63.5975	+8	64.7975	+17		+0.2995	−1.8455						
65.3880	+16	63.0050	+10		+2.0918	−1.8538						

Scheinbare Decldiff. wie 57 A.

$f^\circ_\delta = 0.99342$ $i^\circ_\delta = +0.00013$

$f_\delta = 0.99289$ $i_\delta = 0.00000$ $\measuredangle\, i_\delta = 0'.0$

$f'_\delta = 0.99344$ $J_\delta = +0.00018$

$\delta_♃ = +21^\circ\ 2'.2$

58 A. 1896. März 31.

Æ **144**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**59.1811**		**69.2019**							
T	59.1801	+10	69.2006	+13	0	0.0000				2
M	56.0078	+ 2	72.3743	+14	0	− 3.1734				2
N	11.8724	+24	116.5120	+ 6	+30	−47.3055				2
Q	64.5984	+25	63.7859	+14	− 1	+ 5.4171		**10^h 18^m 54^s**		2
R	14.2898	+33	114.0870	+ 8	+32	−44.8838				1—2
V	50.7085	+16	77.6720	+13	+ 1	− 8.4711				2
W	51.8862	+26	76.4938	+23	+ 4	− 7.2928				1—2
♃ a_w	63.2130	+10	65.1855	+16		+ 4.0238				
a_c	63.5950	+ 9	64.8010	+16		+ 4.4070	+ 4.4068	10 9 24		2—3
a_o	63.9810	+ 9	64.4220	+16		+ 4.7896				
♃ b_w	63.1840	+10	65.2145	+16		+ 3.9948				
b_c	63.5675	+ 9	64.8395	+16		+ 4.3740	+ 4.3717	10 46	**10^h 11^m 4^s**	2—3
b_o	63.9405	+ 9	64.4690	+ 8		+ 4.7462				
♃ c_w	63.2270	+ 9	65.1705	+16		+ 4.0383				
c_c	63.6080	+ 8	64.7910	+16		+ 4.4185	+ 4.4199	11 36		2—3
c_o	63.9950	+ 8	64.4100	+ 8		+ 4.8029				
♃ d_w	63.1800	+ 9	65.2150	+16		+ 3.9926				
d_c	63.5615	+ 8	64.8390	+16		+ 4.3712	+ 4.3706	12 31		2—3
d_o	63.5385	+ 8	64.4635	+ 8		+ 4.7479				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	61.9690	+10	66.4210	+11		+ 2.7844	−1.6224						2—3
b	61.9370	+10	66.4555	+11		+ 2.7511	−1.6206	−1.6207	−1.ʹ6097	+0.ʹ0002	−0.ʹ0027	**−1.ʹ6122**	2
c	61.9850	+ 9	66.4080	+11		+ 2.7988	−1.6211						2—3
d	61.9385	+ 9	66.4550	+11		+ 2.7520	−1.6186						2
II a	66.6345	+ 9	61.7525	+ 9		+ 7.4514	+3.0446						2
b	66.6000	+ 8	61.7890	+ 9		+ 7.4158	+3.0441	+3.0430	+3.0224	−0.0004	−0.0027	**+3.0193**	2
c	66.6460	+ 8	61.7450	+10		+ 7.4608	+3.0409						2
d	66.5975	+ 8	61.7925	+10		+ 7.4128	+3.0422						2—3
III a	59.0645	+11	69.3220	+14		− 0.1185	−4.5253						2—3
b	59.0285	+11	69.3600	+13		− 0.1554	−4.5271	−4.5294	−4.4987	+0.0006	−0.0027	**−4.5008**	2—3
c	59.0710	+11	69.3170	+13		− 0.1127	−4.5326						2
d	59.0210	+10	69.3650	+13		− 0.1618	−4.5324						2—3
IV a	72.1935	+12	56.1950	− 1		+13.0103	+8.6035						1—2
b	72.1585	+11	56.2330	0		+12.9738	+8.6021	+8.6025	+8.5414	−0.0011	−0.0027	**+8.5406**	2—3
c	72.2070	+11	56.1840	0		+13.0224	+8.6025						2
d	72.1580	+11	56.2350	0		+12.9724	+8.6018						2—3

Scheinbare Ædiff: M—Centrum = − 3.ʹ3502
N— » = −50.0308
Q— » = + 5.7068
R— » = −47.3298
V— » = − 8.9388
W— » = − 7.7347

$\alpha_♃ = 8^h\ 5^m.9$

$f^\circ_\alpha = 0.99323$
f_α = **0.99292**
f'_α = **0.99324**

$-i^\circ_\alpha = +0.00004$
$-i_\alpha$ = **−0.00001**
Refr. = + 5
$Tx_♃$ = + 49
Jx = **+0.00053**

$\sphericalangle\ i_\alpha = 0.ʹ0$

1896, März 31.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	(♃$_n$ + ♃$_c$ + ♃$_s$) / 3	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.0440		**64.3424**							
64.0430	+ 10	64.3415	+ 9	0	0.0000		0.0000	0.0000	
72.4116	+ 14	55.9772	+ 2	0	+ 8.3670		— 0.0005	+ 8.3665	
72.9825	+ 34	55.4041	+ 17	— 6	+ 8.9386		— 0.1182	+ 8.8204	
44.7972	+ 18	83.5932	— 7	+ 2	—19.2474		— 0.0015	—19.2489	Bilder 2—3. Undurchsichtige Luft.
44.8569	+ 36	83.5266	+ 10	+ 13	—19.1830		— 0.1038	—19.2868	
50.0025	+ 10	78.3840	+ 14	+ 1	—14.0416		— 0.0037	—14.0453	
100.3345	+ 7	28.0524	+ 26	— 14	+ 36.2879		— 0.0029	+ 36.2850	
67.5630	+ 8	60.8560	+ 10		+ 3.5026				
67.1980	+ 8	61.2150	+ 10		+ 3.1406	+ 3.1403			
66.8300	+ 8	61.5730	+ 9		+ 2.7776				
65.8710	+ 10	62.5310	+ 9		+ 1.8192				
65.5160	+ 10	62.8850	+ 9		+ 1.4648	+ 1.4654			
65.1625	+ 16	63.2370	+ 9		+ 1.1123				
64.2420	+ 8	64.1655	+ 8		+ 0.1874				
63.8820	+ 8	64.5255	+ 16		— 0.1730	— 0.1704			
63.5270	+ 8	64.8760	+ 16		— 0.5257				
62.6210	+ 9	65.7780	+ 10		— 1.4294				
62.2600	+ 9	66.1460	+ 10		— 1.7938	— 1.7913			
61.9020	+ 9	66.5020	+ 10		— 2.1508				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.5960	+ 19	60.7960	+ 10		+ 3.5496	+ 0.4093						
65.9240	+ 11	62.4690	+ 9		+ 1.8768	+ 0.4114	+ 0.4098	+ 0′.4071	— 0′.0001	+ 0′.0007	+ 0′.0002	**+ 0′.4079**
64.2875	+ 9	64.1085	+ 8		+ 0.2388	+ 0.4092						
62.6660	+ 10	65.7280	+ 10		— 1.3818	+ 0.4095						
66.4290	+ 10	61.9610	+ 10		+ 2.3832	— 0.7571						
64.7550	+ 16	63.6380	+ 9		+ 0.7080	— 0.7574	— 0.7580	— 0.7530	+ 0.0001	— 0.0019	+ 0.0002	**— 0.7546**
63.1160	+ 9	65.2750	+ 17		— 0.9307	— 0.7603						
61.4975	+ 9	66.8925	+ 9		— 2.5483	— 0.7570						
68.2725	+ 20	60.1160	+ 15		+ 4.2277	+ 1.0874						
66.6010	+ 10	61.7880	+ 10		+ 2.5557	+ 1.0903	+ 1.0890	+ 1.0818	— 0.0002	+ 0.0011	+ 0.0002	**+ 1.0829**
64 9650	+ 18	63.4270	+ 10		+ 0.9186	+ 1.0890						
63.3400	+ 11	65.0420	+ 17		— 0.7021	+ 1.0892						
65.1520	+ 18	63.2400	+ 12		+ 1.1055	— 2.0348						
63.4760	+ 11	64.9130	+ 19		— 0.5697	— 2.0351	— 2.0352	— 2.0218	+ 0.0003	— 0.0083	+ 0.0002	**— 2.0296**
61.8395	+ 11	66.5520	+ 11		— 2.2070	— 2.0366						
60.2190	+ 16	68.1685	+ 21		— 3.8258	— 2.0345						

Scheinbare Decldiff: M— Centrum $= + 8'.3183$ $\quad f^\circ_\delta = 0.99341 \quad i^\circ_\delta = + 0.00002$

N— » $= + 8.7655$

Q— » $= -19.1182 \quad$ **$f_\delta = 0.99289$** $\quad$ **$i_\delta = -0.00009$** $\quad \measuredangle\, i_\delta = -0'.3$

R— » $= -19.1538$

V— » $= -13.9505 \quad$ **$f'_\delta = 0.99341$** $\quad$ **$J_\delta = + 0.00004$**

W— » $= + 36.0482$

$\delta_♃ = + 21^\circ\ 1'.9$

58 B. 1896. März 31.

ℛ 145

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	**erne**	**wie 58 A.**							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
$♃ f_w$	53.7880	+ 4	74.6195	+10		— 5.4056				
f_c	54.1670	+ 4	74.2375	+12		— 5.0252	— 5.0211	$10^h\ 24^m\ 24^s$		3
f_o	54.5570	0	73.8415	+12		— 4.6324				
$♃ g_w$	53.7890	+ 4	74.6170	+10		— 5.4039				
g_c	54.1610	+ 4	74.2365	+12		— 5.0278	— 5.0272	25 36		2—3
g_o	54.5395	0	73.8590	+12		— 4.6500			$10^h\ 26^m\ 0^s$	
$♃ h_w$	53.8225	+ 3	74.5855	+10		— 5.3714				
h_c	54.1945	+ 3	74.2170	+12		— 5.0013	— 4.9958	26 31		2—3
h_o	54.5750	— 1	73.8240	+12		— 4.6148				
$♃ i_w$	53.7770	+ 3	74.6255	+13		— 5.4144				
i_c	54.1505	+ 3	74.2530	+13		— 5.0414	— 5.0423	27 29		2
i_o	54.5195	— 1	73.8810	+13		— 4.6710				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	52.5735	+ 8	75.8160	+ 7		— 6.6108	—1.5897						2
g	52.5720	+ 8	75.8195	+ 7		— 6.6133	—1.5861	—1.5838	—1′.5731	—0′.0002	—0′.0027	**—1′.5760**	2
h	52.6090	+ 7	75.7840	+ 7		— 6.5771	—1.5813						2—3
i	52.5650	+ 7	75.7270	+ 8		— 6.6206	—1.5783						2
II f	57.2040	+10	71.1830	+12		— 1.9792	+3.0419						2
g	57.2005	+ 9	71.1905	+12		— 1.9848	+3.0424	+3.0438	+3.0231	+0.0004	—0.0027	**+3.0208**	2
h	57.2350	+ 9	71.1575	+12		— 1.9510	+3.0448						2—3
i	57.1900	+ 9	71.2025	+13		— 1.9960	+3.0463						2—3
III f	49.6170	+ 6	78.7695	+ 6		— 9.5658	—4.5447						2—3
g	49.6110	+ 6	78.7750	+ 6		— 9.5716	—4.5444	—4.5450	—4.5142	—0.0005	—0.0027	**—4.5174**	2
h	49.6430	+ 6	78.7445	+ 6		— 9.5404	—4.5446						2
i	49.5960	+ 5	78.7935	+ 7		— 9.5884	—4.5461						2
IV f	62.7610	+10	65.6290	+10		+ 3.5764	+8.5975						3
g	62.7570	+ 9	65.6375	+10		+ 3.5701	+8.5973	+8.5986	+8.5406	+0.0010	—0.0027	**+8.5389**	2—3
h	62.7900	+ 9	65.6060	+11		+ 3.6023	+8.5981						2
i	62.7480	+ 9	65.6500	+11		+ 3.5593	+8.6016						3 unterexponiert

Scheinbare ℛdiff. wie 58 A.

$f^\circ_\alpha = 0.99323$ $\quad -i^\circ_\alpha = +0.00004$

$f_\alpha = \mathbf{0.99292}$ $\quad -i_\alpha = \mathbf{-0.00001}$ $\quad ♃\ i_\alpha = 0'.0$

$\quad$ *Refr.* $= + \quad 7$

$\quad Tx_♃ = - \quad 56$

$f'_\alpha = \mathbf{0.99325}$ $\quad J_\alpha = \mathbf{-0.00050}$

$\alpha_♃ = 8^h\ 5^m.9$

1896. März 31.

Reihe. Decl.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 58 A.**							
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
67.5810	+12	60.8305	+13		+3.5244				
67.2180	+12	61.1870	+13		+3.1656	+3.1606			
66.8450	+12	61.5600	+12		+2.7917				
65.9220	+14	62.4865	+12		+1.8670				
65.5550	+14	62.8365	+12		+1.5086	+1.5101			
65.2070	+20	63.1965	+12		+1.1548				
64.1810	+12	64.2320	+11		+0.1238				
63.8215	+12	64.5800	+19		−0.2304	−0.2343			
63.4560	+12	64.9460	+19		−0.5962				
62.4900	+13	65.9130	+13		−1.5623				
62.1395	+13	66.2605	+13		−1.9113	−1.9123			
61.7895	+13	66.6150	+11		−2.2634				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.6115	+22	60.7820	+15		+3.5643	+0.4037	+0.4025	+0'.3999	−0'.0001	−0'.0011	+0'.0002	**+0'.3989**
65.9630	+14	62.4300	+14		+1.9157	+0.4056						
64.2110	+12	64.1800	+13		+0.1646	+0.3989						
62.5380	+13	65.8570	+15		−1.5104	+0.4019						
66.4440	+13	61.9460	+10		+2.3984	−0.7622	−0.7632	−0.7582	+0.0002	+0.0012	+0.0002	**−0.7566**
64.7950	+19	63.5960	+9		+0.7492	−0.7609						
63.0455	+12	65.3435	+17		−1.0000	−0.7657						
61.3705	+13	67.0220	+9		−2.6764	−0.7641						
68.3020	+23	60.0850	+20		+4.2578	+1.0972	+1.0980	+1.0908	−0.0003	−0.0037	+0.0002	**+1.0870**
66.6575	+13	61.7340	+15		+2.6108	+1.1007						
64.9070	+21	63.4810	+15		+0.8625	+1.0968						
63.2295	+14	65.1570	+22		−0.8150	+1.0973						
65.1640	+17	63.2300	+9		+1.1166	−2.0440	−2.0448	−2.0314	+0.0006	+0.0007	+0.0002	**−2.0299**
63.5170	+9	64.8780	+16		−0.5316	−2.0417						
61.7660	+10	66.6260	+8		−2.2807	−2.0464						
60.0875	+15	68.3045	+18		−3.9594	−2.0471						

Scheinbare Decldiff. wie 58 A.

$f^0_\delta = 0.99341$ $i^0_\delta = +0.00002$

$f_\delta = \mathbf{0.99289}$ $i_\delta = \mathbf{-0.00009}$ $\measuredangle\, i_\delta = -0'.3$

$f'_\delta = \mathbf{0.99343}$ $J_\delta = \mathbf{+0.00007}$

$\delta_♃ = +21°\ 1'.9$

59 A. 1896. April 8.

Æ **146**

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.0723**		**64.3119**							
S	64.0715	+ 8	64.3111	+ 8	0	0.0000				3
M	Durch e	in J	upitersbild	verd	eckt.					
N	24.9029	+26	103.9799	+ 6	+17	−39.1660				3 ellipt. in Æ.
Q	77.6654	+21	50.7184	+20	− 3	+13.5930			**10^h 55^m 30^s**	1—2
R	27.3456	+35	101.0330	+13	+21	−36.7207				2—3 ellipt.
V	63.7709	+18	64.6060	+23	0	− 0.2980				2—3
W	64.9180	+28	63.4685	+24	0	+ 0.8448				2
♃ a_w	68.3760	+19	60.0300	+14		+ 4.2930				
a_c	68.7675	+14	59.6335	+14		+ 4.6868	+ 4.6871	10 40 43		2—3
a_o	69.1620	+14	59.2390	+10		+ 5.0815				
♃ b_w	68.3645	+18	60.0330	+14		+ 4.2858				
b_c	68.7525	+13	59.6590	+14		+ 4.6665	+ 4.6664	42 20		1—2
b_o	69.1280	+13	59.2740	+10		+ 5.0470				
♃ c_w	68.3830	+18	60.0190	+15		+ 4.3020			**10^h 42^m 51^s**	
c_c	68.7690	+13	59.6430	+15		+ 4.6827	+ 4.6822	43 30		2
c_o	69.1460	+13	59.2620	+11		+ 5.0619				
♃ d_w	68.3860	+18	60.0110	+15		+ 4.3074				
d_c	68.7620	+13	59.6420	+15		+ 4.6797	+ 4.6814	44 52		1—2
d_o	69.1395	+13	59.2650	+11		+ 5.0572				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_{♃}$	Mittel.	$f'_\alpha(x_t - x_{♃})$	$J_\alpha(y_t - y_{♃})$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	70.2455	+17	58.1460	+ 5		+ 6.1702	+1.4831						1—2
b	70.2215	+16	58.1690	+ 5		+ 6.1466	+1.4802	+1.4767	+1.′4662	−0.′0001	−0.′0028	**+1.′4633**	2
c	70.2350	+16	58.1545	+ 6		+ 6.1606	+1.4784						2
d	70.2205	+16	58.1680	+ 6		+ 6.1466	+1.4652						1
II	Geht du	rch	die Jupiter	sche	ibe.								
III *a*	64.3105	+ 9	64.0780	+ 8		+ 0.2361	−4.4510						1—2
b	64.2915	+ 8	64.0960	+ 8		+ 0.2176	−4.4488	−4.4483	−4.4167	+0.0004	−0.0028	**−4.4191**	2
c	64.3110	+ 8	64.0740	+ 8		+ 0.2383	−4.4439						1—2
d	64.3055	+ 8	64.0815	+ 9		+ 0.2318	−4.4496						2
IV *a*	60.4300	+15	67.9560	+19		− 3.6434	−8.3305						2—3
b	60.4110	+15	67.9765	+18		− 3.6631	−8.3295	−8.3319	−8.2728	+0.0007	−0.0028	**−8.2749**	2—3
c	60.4255	+14	67.9620	+18		− 3.6486	−8.3308						2—3
d	60.4180	+14	67.9680	+18		− 3.6554	−8.3368						2

Scheinbare Ædiff: *M*—Centrum = + 5.′2703 $f^\circ_\alpha = 0.99290$ $-i^\circ_\alpha = -0.00014$

N— » = −41.4107

Q— » = +14.3275 f_α = **0.99257** $-i_\alpha$ = **−0.00022** ∡ i_α = + 0.′8

R— » = −38.7095 *Refr.* = + 8

V— » = − 0.3183 $Tx_{♃}$ = + 52

W— » = + 0.8857 f'_α = **0.99291** J_α = **+0.00038**

$\alpha_{♃} = 8^h\ 7.^m0$

1896. April 8.

Reihe. Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.3570		**65.0337**							
63.3561	+ 9	65.0321	+16	0	0.0000		0.0000	0.0000	Bilder 3.
Durch e	in J	upitersbild	verd	eckt.					
66.9265	+25	61.4636	+27	− 1	+ 3.5696		− 0.0811	+ 3.4885	
38.7570	+30	89.6299	− 3	+ 5	−24.5960		− 0.0094	−24.6054	
38.7900	+39	89.5899	+ 8	+14	−24.5586		− 0.0694	−24.6280	
43.9550	+19	84.4265	− 7	+ 2	−19.3959		0.0000	−19.3959	
94.3071	− 3	34.0846	+20	− 9	+30.9476		0.0000	+30.9476	
66.8680	+ 9	61.5510	+10		+ 3.4968				
66.4960	+11	61.9130	+10		+ 3.1299	+ 3.1297			
66.1250	+11	62.2770	+10		+ 2.7624				
65.1470	+17	63.2625	+10		+ 1.7810				
64.7805	+17	63.6330	+ 9		+ 1.4125	+ 1.4173			
64.4220	+17	63.9825	+ 9		+ 1.0585				
63.5345	+10	64.8720	+16		+ 0.1693				
63.1790	+10	65.2310	+16		− 0.1880	− 0.1894			
62.8140	+10	65.5895	+11		− 0.5494				
61.8590	+10	66.5500	+ 9		− 1.5071				
61.5020	+10	66.9140	+ 9		− 1.8676	− 1.8644			
61.1435	+11	67.2575	+ 9		− 2 2186				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta\,(y_t - y_♃)$	$J_\delta\,(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.1105	+11	62.2780	+11		+ 2.7546	−0.3751						
64.3650	+ 9	63.9935	+10		+ 1.0390	−0.3783	−0.3755	−0.′3729	+0.′0005	−0.′0009	+0.′0002	**−0.′3731**
62.7910	+10	65.5990	+12		− 0.5658	−0.3764						
61.1190	+11	67.2690	+10		− 2.2366	−0.3722						
Geht du	rch	die Jupiter	sche	ibe.								
67.6150	+18	60.7740	+10		+ 4.2592	+1.1295						
65.8980	+10	62.4895	+ 9		+ 2.5426	+1.1253	+1.1264	+1.1187	−0.0014	+0.0012	+0.0002	**+1.1187**
64.2905	+ 8	64.0975	+ 8		+ 0.9348	+1.1242						
62.6175	+ 9	65.7700	+10		− 0.7380	+1.1264						
68.4730	+19	59.9190	+14		+ 5.1156	+1.9859						
66.7530	+ 9	61.6390	+ 9		+ 3.3954	+1.9781	+1.9820	+1.9684	−0.0028	+0.0005	+0.0002	**+1.9663**
65.1490	+17	63.2420	+ 9		+ 1.7922	+1.9816						
63.4755	+10	64.9155	+16		+ 0.1180	+1.9824						

Scheinbare Decldiff: M— Centrum $= + 3.'0035$ $\quad f^\circ_\delta = 0.99315 \quad i^\circ_\delta = +0.00032$

N— » $= + 3.4507$

Q— » $= -24.4330$ $\quad f_\delta = \mathbf{0.99259} \quad i_\delta = \mathbf{+0.00016} \quad ♃\ i_\delta = + 0.'6$

R— » $= -24.4690$

V— » $= -14.2653$ $\quad f'_\delta = \mathbf{0.99315} \quad J_\delta = \mathbf{+0.00034}$

W— » $= +30.7335$

$\delta_♃ = +20^\circ\ 58.'3$

59 B. 1896. April 8.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne wie 59 A.									
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
♃ g_w	58.9480	+11	69.4530	+13		−5.1328				
g_c	59.3500	+11	69.0495	+13		−4.7300	−4.7285	$11^h\ 3^m\ 50^s$		3—4
g_o	59.7555	+15	68.6405	+13		−4.3226				
♃ h_w	58.9600	+10	69.4490	+13		−5.1248				
h_c	59.3580	+10	69.0595	+13		−4.7311	−4.7281	4 52		3
h_o	59.7540	+14	68.6505	+13		−4.3284			$11^h\ 5^m\ 22^s$	
♃ i_w	58.9660	+10	69.4410	+13		−5.1178				
i_c	59.3580	+10	69.0480	+13		−4.7254	−4.7253	5 52		2
i_o	59.7480	+14	68.6530	+13		−4.3326				
♃ k_w	58.9470	+10	69.4581	+13		−5.1359				
k_c	59.3400	+10	69.0685	+14		−4.7446	−4.7446	6 52		2
k_o	59.7310	+14	68.6771	+13		−4.3532				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I g	60.7635	+11	67.6250	+18		−3.3113	+1.4172						3
h	60.7700	+10	67.6225	+18		−3.3068	+1.4213	+1.4151	+1'.4051	+0'.0002	−0'.0028	**+1'.4025**	3—4
i	60.7660	+10	67.6250	+19		−3.3102	+1.4151						3
k	60.7390	+10	67.6535	+19		−3.3379	+1.4067						3
II	Geht durch die Jupiterscheibe.												
II g	54.9280	0	73.4655	+13		−9.1496	−4.4211						3
h	54.9325	0	73.4580	+13		−9.1436	−4.4155	−4.4168	−4.3856	−0.0007	−0.0028	**−4.3891**	3
i	54.9370	−1	73.4560	+13		−9.1404	−4.4151						3
k	54.9175	−1	73.4755	+14		−9.1600	−4.4154						2—3
III g	51.0165	+11	77.3770	+10		−13.0604	−8.3319						3
h	51.0225	+11	77.3715	+9		−13.0546	−8.3265	−8.3300	−8.2712	−0.0013	−0.0028	**−8.2753**	3
i	51.0230	+11	77.3710	+9		−13.0541	−8.3288						3
k	51.0000	+10	77.3940	+10		−13.0772	−8.3326						2—3

Scheinbare Ædiff. wie 59 A.

$f^\circ_\alpha = 0.99290$ $\quad -i^\circ_\alpha = -0.00014$

$f_\alpha = \mathbf{0.99257}$ $\quad -i_\alpha = \mathbf{-0.00022}$ $\quad ∡\, i_\alpha = +\, 0'.8$

$Refr. = +\ 10$

$Tx_♃ = -\ 53$

$f'_\alpha = \mathbf{0.99294}$ $\quad J_\alpha = \mathbf{-0.00065}$

$\alpha_♃ = 8^h\ 7^m.0$

1896. April 8.

Reihe. **Decl.**

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 59 A.**							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm 66.7550	+ 9	mm 61.6540	+10		mm + 3.3888	mm			Bilder 4.
66.3720	+11	62.0310	+10		+ 3.0089	+ 3.0074			
65.9910	+11	62.4190	+10		+ 2.6244				
65.0100	+17	63.3930	+10		+ 1.6472				
64.6300	+17	63.7810	+ 9		+ 1.2632	+ 1.2687			
64.2635	+ 9	64.1490	+ 9		+ 0.8956				
63.2980	+10	65.1075	+17		— 0.0668				
62.9300	+10	65.4720	+17		— 0.4330	— 0.4353			
62.5600	+10	65.8490	+11		— 0.0862				
61.5665	+11	66.8370	+ 9		— 1.7968				
61.1975	+11	67.2120	+ 9		— 2.1688	— 2.1685			
60.8315	+11	67.5870	+19		— 2.5398				

						Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
66.0080	+11	62.3880	+ 9		+ 2.6484	—0.3590						
64.2660	+ 9	64.1290	+ 8		+ 0.9069	—0.3618	—0.3602	—0'.3577	+0'.0006	+0'.0006	+0'.0002	—0'.3563
62.5620	+10	65.8340	+10		— 0.7976	—0.3623						
60.8320	+11	67.5600	+18		— 2.5260	—0.3575						
Geht du	rch	die Jupiter	sche	ibe.								
67.4920	+21	60.8990	+13		+ 4.1352	+1.1278						
65.7575	+13	62.6375	+12		+ 2.3984	+1.1297	+1.1267	+1.1190	—0.0017	—0.0035	+0.0002	+1.1140
64.0460	+11	64.3470	+11		+ 0.6878	+1.1231						
62.3160	+12	66.0770	+13		— 1.0422	+1.1263						
68.3600	+23	60.0360	+19		+ 5.0006	+1.9932						
66.6225	+13	61.7765	+14		+ 3.2613	+1.9926	+1.9929	+1.9793	—0.0032	—0.0083	+0.0002	+1.9680
64.9150	+21	63.4815	+14		+ 1.5554	+1.9907						
63.1850	+14	65.2080	+21		— 0.1735	+1.9950						

Scheinbare Decldiff. wie 59 A.

$f^\circ_\delta = 0.99315$ $i^\circ_\delta = +0.00032$

$f_\delta = \mathbf{0.99259}$ $i_\delta = \mathbf{+0.00016}$ $\measuredangle\, i_\delta = +0'.6$

$f'_\delta = \mathbf{0.99318}$ $J_\delta = \mathbf{+0.00038}$

$\delta_♃ = +20°\ 58'.3$

60 A. 1896. April 10.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	66.8068		61.5736							
M	66.8060	+ 8	61.5727	+ 9	0	0.0000				2
N	22.6692	+24	105.7152	+ 6	+25	−44.1362				2
Q	75.4368	+24	52.9480	+19	− 5	+ 8.6275		11^h 57^m 9^s		2
R	25.1241	+39	103.2573	+17	+35	−41.6786				2
V	61.5419	+20	66.8357	+16	+ 1	− 5.2632				2
W	62.6590	+20	65.7237	+24	+ 2	− 4.1490				1—2
♃ a_w	71.1245	+13	57.2760	+ 9		+ 4.3078				
a_c	71.5080	+12	56.8935	+ 9		+ 4.6908	+ 4.6907	11 44 59		1—2
a_o	71.8935	+12	56.5135	+ 9		+ 5.0736				
♃ b_w	71.1575	+12	57.2510	+ 9		+ 4.3368				
b_c	71.5425	+11	56.8600	+ 9		+ 4.7198	+ 4.7195	46 19		1
b_o	71.9210	+11	56.4845	+ 9		+ 5.1018			11^h 48^m 13^s	
♃ d_w	71.1110	+12	57.2935	+10		+ 4.2922				
d_c	71.4765	+12	56.9300	+10		+ 4.6568	+ 4.6615	50 1		1—2
d_o	71.8580	+11	56.5540	+10		+ 5.0354				
♃ e_w	71.1315	+13	57.2740	+10		+ 4.3124				
e_c	71.4930	+13	56.9075	+10		+ 4.6763	+ 4.6773	51 34		1
e_o	71.8650	+12	56.5455	+10		+ 5.0432				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Geht du	rch	die Jupiter	sche	ibe.								
II a	72.6490	+14	55.7410	− 1		+ 5.8382	+1.1475						2
b	72.6835	+13	55.7065	− 1		+ 5.8726	+1.1531	+1.1582	+1′.1503	−0′.0004	−0′.0028	**+1′.1471**	2
d	72.6385	+13	55.7535	0		+ 5.8266	+1.1651						2
e	72.6575	+14	55.7370	0		+ 5.8444	+1.1671						2—3
III a	74.0810	+13	54.3060	+ 3		+ 7.2714	+2.5807						2
b	74.1135	+12	54.2755	+ 3		+ 7.3028	+2.5833	+2.5876	+2.5699	− 0.0009	−0.0028	**+2.5662**	2—3
d	74.0655	+12	54.3215	+ 4		+ 7.2558	+2.5943						2
e	74.0805	+13	54.3095	+ 5		+ 7.2693	+2.5920						2—3
IV a	64.7085	+17	63.6855	+ 9		− 2.1047	−6.7954						2
b	64.7325	+17	63.6590	+ 8		− 2.0794	−6.7989	−6.7954	−6.7490	+0.0026	−0.0028	**−6.7492**	2—3
d	64.6805	+16	63.7115	+ 8		− 2.1317	−6.7932						2—3
e	64.6980	+16	63.6995	+ 9		− 2.1170	−6.7943						3 unterexponier

Scheinbare Ædiff: N— Centrum = −46′.6810
Q— » = + 9.0572
R— » = −43.9798
V— » = − 5.5887
W— » = − 4.3847

$f^\circ_\alpha = 0.99314$ $\quad -i^\circ_\alpha = +0.00097$

$f_\alpha = \mathbf{0.99274}$ $\quad -i_\alpha = \mathbf{+0.00082}$ $\quad \measuredangle\, i_\alpha = -\ 2'.8$

Refr. = + 17

$Tx_♃$ = + 52

$f'_\alpha = \mathbf{0.99317}$ $\quad J_\alpha = \mathbf{+0.00151}$

$\alpha_♃ = 8^h\ 7^m.4$

1896. April 10.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{\text{♃}_n + \text{♃}_c + \text{♃}_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.6808**	$\frac{mm}{10000}$	mm **64.7006**	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.6800	+ 8	64.6989	+17	c	0.0000		0.0000	0.0000	
64.2160	+24	64.1753	+27	0	+ 0.5301		− 0.1029	+ 0.4272	
36.0731	+26	92.3171	+10	+17	−27.6090		− 0.0038	−27.6128	Bilder 4.
36.0863	+38	92.2943	− 2	+36	−27.5891		− 0.0896	−27.6787	
41.2613	+25	87.1208	− 4	+ 3	−22.4181		− 0.0014	−22.4195	
91.6069	− 5	36.7815	+22	− 6	+27.9206		− 0.0009	+27.9197	
67.2420	+10	61.1665	+13		+ 3.5475				
66.8870	+10	61.5230	+12		+ 3.1918	+ 3.1902			Bilder 4.
66.5260	+10	61.8830	+12		+ 2.8313				
65.5340	+18	62.8765	+12		+ 1.8390				
65.1670	+18	63.2380	+12		+ 1.4747	+ 1.4762			
64.8065	+18	63.5970	+12		+ 1.1150				
62.0400	+11	66.3660	+13		− 1.6532				
61.6915	+11	66.7200	+11		− 2.0044	− 2.0035			
61.3400	+12	67.0660	+11		− 2.3530				
60.3300	+16	68.0720	+21		− 3.3614				
59.9815	+16	68.4210	+21		− 3.7101	− 3.7082			
59.6400	+16	68.7660	+16		− 4.0531				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{\text{♃}}$	Mittel.	$f'_\delta (y_t - y_{\text{♃}})$	$J_\delta (x_t - x_{\text{♃}})$	$-(x_t^2 - x^2_{\text{♃}})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht du	rch	die Jupiter	sche	ibe.								
66.6355	+11	61.7570	+12		+ 2.9491	−0.2411						
64.9160	+19	63.4710	+12		+ 1.2328	−0.2434	−0.2442	−0.′2426	−0.′0006	−0.′0007	+ 0.′0002	**−0.′2437**
61.4360	+13	66.9520	+11		− 2.2480	−0.2445						
59.7290	+17	68.6610	+16		− 3.9560	−0.2478						
66.2915	+13	62.0960	+13		+ 2.6076	−0.5826						
64.5775	+19	63.8120	+12		+ 0.8930	−0.5832	−0.5852	−0.5813	−0.0013	−0.0017	+0.0002	**−0.5841**
61.0930	+13	67.2920	+12		− 2.5896	−0.5861						
59.3875	+13	69.0115	+17		− 4.2973	−0.5891						
68.5660	+13	59.8260	+14		+ 4.8798	+1.6896						
66.8560	+ 8	61.5360	+ 9		+ 3.1698	+1.6936	+1.6912	+1.6798	+0.0036	+0.0010	+0.0002	**+1.6846**
63.3790	+ 9	65.0145	+16		− 0.3082	+1.6953						
61.6670	+ 9	66.7310	+ 8		− 2.0220	+1.6862						

Scheinbare Decldiff: N—Centrum = + 0.′4472 $f^\circ_\delta = 0.99325$ $i^\circ_\delta = -0.00056$

Q— » = −27.4365

R— » = −27.4725 f_δ = **0.99257** i_δ = **−0.00085** $\measuredangle\, i_\delta = -\,2.′9$

V— » = −22.2688

W— » = +27.7300 f'_δ = **0.99327** J_δ = **−0.00053**

$\delta_{\text{♃}} = +20°\ 57.′0$

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Æ

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltsterne		**wie 60 A.**							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
♃ f_w	61.7050	+ 9	66.7010	+ 9		− 5.1146				
f_c	62.0810	+ 9	66.3135	+11		− 4.7330	− 4.7309	12^h 4^m 57^s		2—3
f_o	62.4775	+ 9	65.9340	+11		− 4.3450				
♃ g_w	61.7345	+ 9	66.6710	+ 8		− 5.0848				
g_c	62.1140	+ 9	66.2895	+10		− 4.7044	− 4.7029	6 29		2
g_o	62.5030	+ 9	65.9090	+10		− 4.3196			**12^h 7^m 6^s**	
♃ h_w	61.7350	+10	66.6690	+ 8		− 5.0835				
h_c	62.1080	+10	66.2990	+10		− 4.7121	− 4.7076	7 59		1—2
h_o	62.4950	+10	65.9160	+10		− 4.3271				
♃ i_w	61.7195	+10	66.6820	+ 8		− 5.0978				
i_c	62.0955	+10	66.3150	+10		− 4.7264	− 4.7251	9 1		1
i_o	62.4705	+10	65.9395	+10		− 4.3511				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I	Geht du	rch	die Jupiter	sche	ibe.								
II f	63.2945	+ 9	65.0915	+17		− 3.5155	+1.2154						2
g	63.3195	+ 9	65.0650	+16		− 3.4897	+1.2132	+1.2202	+1.′2119	−0.′0001	−0.′0028	**+1.′2090**	2
h	63.3290	+ 9	65.0540	+16		− 3.4794	+1.2282						1—2
i	63.3100	+10	65.0780	+16		− 3.5009	+1.2242						2
III f	64.7065	+16	63.6800	+ 9		− 2.1030	+2.6279						2
g	64.7325	+16	63.6565	+ 8		− 2.0782	+2.6247	+2.6309	+2.6130	−0.0003	−0.0028	**+2.6099**	2
h	64.7395	+16	63.6475	+ 8		− 2.0702	+2.6374						2
i	64.7195	+17	63.6705	+ 8		− 2.0916	+2.6335						2
IV f	55.3080	− 1	73.0805	+13		−11.5036	−6.7729						2
g	55.3300	− 1	73.0600	+13		−11.4823	−6.7794	−6.7724	−6.7264	+0.0009	−0.0028	**−6.7283**	2—3
h	55.3375	0	73.0510	+13		−11.4740	−6.7664						2
i	55.3185	0	73.0755	+14		−11.4958	−6.7707						2—3

Scheinbare Ædiff. wie 60 A.

$f^\circ_\alpha = 0.99314$ $\quad -i^\circ_\alpha = +0.00097$

$f_\alpha = \mathbf{0.99274}$ $\quad -i_\alpha = \mathbf{+0.00082}$ $\quad \measuredangle\, i_\alpha = -2.''8$

$Refr. = +\ 21$

$Tx_♃ = -\ 52$

$f'_\alpha = \mathbf{0.99320}$ $\quad J_\alpha = \mathbf{+0.00051}$

$\alpha_♃ = 8^h\ 7.^m4$

1896. April 10.

Decl.

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Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{\mathfrak{2}_n + \mathfrak{2}_c + \mathfrak{2}_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne wie 60 A.									
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
61.7725	+10	66.0360	+ 8		− 1.9419				Bilder 3.
62.1290	+10	66.2760	+10		− 1.5636	− 1.5677			
62.4960	+10	65.9110	+10		− 1.1976				
63.3140	+10	65.0890	+16		− 0.3779				
63.6760	+ 9	64.7320	+16		− 0.0184	− 0.0190			
64.0310	+ 9	64.3720	+ 8		+ 0.3394				
65.0840	+17	63.3260	+ 9		+ 1.3893				
65.4370	+17	62.9585	+ 9		+ 1.7496	+ 1.7483			
65.7990	+11	62.6070	+ 9		+ 2.1060				
66.8320	+ 9	61.5710	+ 9		+ 3.1404				
67.2020	+ 9	61.2070	+10		+ 3.5074	+ 3.5004			
67.5450	+ 9	60.8580	+10		+ 3.8534				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_{\mathfrak{2}}$	Mittel.	$f'_\delta(y_t - y_{\mathfrak{2}})$	$J_\delta(x_t - x_{\mathfrak{2}})$	$-(x_t^2 - x^2_{\mathfrak{2}})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht durch die Jupiterscheibe.												
61.8645	+10	66.5220	+ 8		− 1.8188	−0.2511						
63.4040	+10	64.9820	+16		− 0.2794	−0.2604	−0.2501	−0'.2484	−0'.0005	+0'.0005	+0'.0002	**−0'.2482**
65.1700	+17	63.2140	+ 9		+ 1.4883	−0.2600						
66.9170	+ 9	61.4740	+10		+ 3.2314	−0.2690						
61.5245	+ 9	66.8630	+ 8		− 2.1593	−0.5916						
63.0650	+ 9	65.3210	+16		− 0.6184	−0.5994	−0.5987	−0.5947	−0.0012	+0.0010	+0.0002	**−0.9547**
64.8310	+16	63.5535	+ 8		+ 1.1490	−0.5993						
66.5810	+ 8	61.8090	+ 9		+ 2.8958	−0.6046						
63.8210	+11	64.5680	+19		+ 0.1360	+1.7037						
65.3620	+19	63.0255	+12		+ 1.6785	+1.6975	+1.6972	+1.6859	+1.0032	−0.0061	+0.0002	**+1.6832**
67.1300	+11	61.2585	+13		+ 3.4456	+1.6973						
68.8780	+16	59.5160	+17		+ 5.1908	+1.6904						

Scheinbare Decldiff. wie 60 A.

$f^\circ_\delta = 0.99325$ $\quad i^\circ_\delta = -0.00056$

$f_\delta = \mathbf{0.99257}$ $\quad i_\delta = \mathbf{-0.00085}$ $\quad \measuredangle\, i_\delta = -\,2'.9$

$f'_\delta = \mathbf{0.99334}$ $\quad J_\delta = \mathbf{-0.00047}$

$\delta_{\mathfrak{2}} = +20^\circ\ 57'.0$

61 A. 1896. April 14.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	62.1483		66.2386							
Y	62.1474	+ 9	66.2376	+10	0	0.0000				2
M	72.8289	+17	55.5505	+ 3	− 1	+10.6850				2−3
N	28.6804	+23	99.6994	+ 6	+11	−33.4624				2
Q	81.4551	+22	46.9317	+14	− 4	+19.3068		$11^h\ 16^m\ 0^s$		2−3
R	31.1333	+25	97.2410	+ 6	+13	−31.0064				2 etwas ellipt.
V	67.5570	+23	60.8217	+15	0	+ 5.4132				2
W	68.6752	+30	59.7074	+30	− 4	+ 6.5286				2−3
♃ a_w	66.4275	+ 9	61.9775	+ 9		+ 4.2702				
a_c	66.8110	+ 9	61.5855	+ 9		+ 4.6579	+ 4.6574	11 7 13		2−3
a_o	67.2030	+ 9	61.2050	+10		+ 5.0441				
♃ b_w	66.4230	+ 8	61.9805	+ 9		+ 4.2664				
b_c	67.8130	+ 8	61.5950	+ 9		+ 4.6541	+ 4.6531	8 10		2−3
b_o	67.1980	+ 8	61.2105	+10		+ 5.0388			$11^h\ 8^m\ 36^s$	
♃ c_w	66.4350	+ 8	61.9690	+10		+ 4.2780				
c_c	66.8200	+ 8	61.5885	+10		+ 4.6608	+ 4.6641	8 50		2
c_o	67.2115	+ 8	61.1945	+11		+ 5.0535				
♃ e_w	66.4505	+ 9	61.9525	+10		+ 4.2941				
e_c	66.8220	+ 9	61.5820	+10		+ 4.6651	+ 4.6663	10 12		2
e_o	67.1970	+ 9	61.2080	+11		+ 5.0396				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	64.9735	+17	63.4165	+ 9		+ 2.8240	−1.8334						3
b	64.9710	+17	63.4220	+ 9		+ 2.8200	−1.8331	−1.8318	−1.8189	+0.0002	−0.0028	**−1.8215**	2−3
c	64.9835	+16	63.4050	+10		+ 2.8347	−1.8294						2−3
e	64.9850	+16	63.4060	+10		+ 2.8350	−1.8313						2−3
II a	69.4430	+14	58.9440	+10		+ 7.2948	+2.6374						2−3
b	69.4400	+13	58.9480	+10		+ 7.2913	+2.6382	+2.6403	+2.6217	−0.0002	−0.0028	**+2.6187**	2−3
c	69.4540	+13	58.9340	+11		+ 7.3052	+2.6411						3
e	69.4590	+14	58.9280	+11		+ 7.3108	+2.6445						2−3
III a	63.1245	+10	65.2615	+16		+ 0.9764	−3.6810						2−3
b	63.1155	+10	65.2690	+16		+ 0.9681	−3.6850	−3.6826	−3.6566	+0.0003	−0.0028	**−3.6591**	2−3
c	63.1310	+ 9	65.2530	+17		+ 0.9838	−3.6803						3
e	63.1310	+ 9	65.2560	+17		+ 0.9822	−3.6841						2−3
IV a	70.9210	+13	57.4700	+ 9		+ 8.7710	+4.1136						2−3
b	70.9205	+12	57.4715	+ 9		+ 8.7698	+4.1167	+4.1186	+4.0896	−0.0003	−0.0028	**+4.0865**	2−3
c	70.9355	+12	57.4550	+10		+ 8.7855	+4.1214						2−3
e	70.9405	+13	57.4530	+10		+ 8.7890	+4.1227						2−3

Scheinbare Ædiff: M—Centrum = +11.3000 $f^0_\alpha = 0.99294$ $-i^0_\alpha = -0.00018$

N— » = −35.3808

Q— » = +20.3575 f_α = **0.99259** $-i_\alpha$ = **−0.00028** $\sphericalangle\ i_\alpha = +1.0$

R— » = −32.6797 Refr. = + 11

V— » = + 5.7115 $Tx_♃$ = + 52

W— » = + 6.7152 f'_α = **0.99296** J_α = **+0.00035**

$\alpha_♃ = 8^h\ 8.^m4$

1896. April 14.

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Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y-\frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.7388		**64.6540**							
63.7379	+9	64.6524	+16	0	0.0000		0.0000	0.0000	
74.5689	+13	53.8122	+6	−1	+10.8362		−0.0060	+10.8302	
75.0948	+24	53.2940	+23	−4	+11.3576		−0.0592	+11.2984	
46.9597	+16	81.4286	+20	+3	−16.7768		−0.0191	−16.7959	Bilder 4. Undurchsichtige Luft.
46.9627	+20	81.4153	+30	+7	−16.7685		−0.0495	−16.8180	
52.1475	+11	76.2346	+8	+1	−11.5857		−0.0015	−11.5872	
102.4940	+6	25.8940	+25	−17	+38.7550		−0.0023	+38.7527	
67.2770	+8	61.1305	+11		+3.5307				Bilder 3.
66.9045	+8	61.5000	+11		+3.1597	+3.1595			
66.5320	+8	61.8710	+10		+2.7880				
65.5505	+16	62.8590	+10		+1.8036				
65.1800	+16	63.2250	+10		+1.4354	+1.4391			
64.8220	+16	63.5810	+9		+1.0784				
63.8000	+8	64.6095	+17		+0.0524				
63.4325	+9	64.9715	+17		−0.3123	−0.3124			
63.0680	+9	65.3370	+17		−0.6773				
60.3915	+14	68.0110	+19		−3.3524				
60.0330	+14	68.3720	+19		−3.7122	−3.7084			
59.6825	+14	68.7190	+14		−4.0606				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.3560	+8	61.0365	+10		+3.6172	+0.4577						
65.6350	+10	62.7590	+9		+1.8956	+0.4565	+0.4589	+0'.4558	−0'.0007	+0'.0008	+0'.0002	**+0'.4561**
63.8850	+8	64.5070	+16		+0.1462	+0.4586						
60.4940	+14	67.9000	+18		−3.2456	+0.4628						
66.2420	+11	62.1470	+11		+2.5051	−0.6544						
64.5200	+17	63.8690	+10		+0.7834	−0.6557	−0.6538	−0.6494	+0.0010	−0.0018	+0.0002	**−0.6500**
62.7720	+10	65.6205	+12		−0.9668	−0.6544						
59.3790	+11	69.0120	+15		−4.3591	−0.6507						
67.7800	+19	60.6105	+10		+4.0428	+0.8833						
66.0590	+11	62.3280	+9		+2.3232	+0.8841	+0.8853	+0.8793	−0.0014	+0.0012	+0.0002	**+0.8793**
64.3080	+9	64.0790	+8		+0.5722	+0.8846						
60.9180	+11	67.4720	+8		−2.8192	+0.8892						
65.9990	+11	62.3940	+11		+2.2601	−0.8994						
64.2765	+9	64.1152	+10		+0.5382	−0.9009	−0.9000	−0.8939	+0.0015	−0.0031	+0.0002	**−0.8953**
62.5245	+10	65.8675	+12		−1.2140	−0.9016						
59.1330	+11	69.2610	+15		−4.6066	−0.8982						

Scheinbare Decldiff: M—Centrum $= +10'.7648$ $\quad f^\circ_\delta = 0.99322 \quad i^\circ_\delta = +0.00034$

N— » $= +11.2118$

Q— » $= -16.6718$ $\quad f_\delta = \mathbf{0.99263} \quad i_\delta = \mathbf{+0.00014} \quad ♃\ i_\delta = +0'.5$

R— » $= -16.7078$

V— » $= -11.5042$ $\quad f'_\delta = \mathbf{0.99323} \quad J_\delta = \mathbf{+0.00037}$

W— » $= +38.4948$

$\delta_{♃} = +20^\circ\ 53'.9$

61 B. 1896. April 14.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	Anhaltst	**erne**	**wie 61 A.**							
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
$♃ f_w$	57.0860	+ 9	71.3250	+13		− 5.0746				
f_c	57.4400	+ 9	70.9625	+13		− 4.7163	− 4.7132	$11^h\ 21^m\ 38^s$		2—3 Ostrand v waschen.
f_o	57.8080	+ 5	70.5950	+13		− 4.3488				
$♃ h_w$	57.0630	+10	71.3390	+12		− 5.0930				
h_c	57.4355	+10	70.9645	+12		− 4.7194	− 4.7176	23 3		2—3
h_o	57.8160	+ 6	70.5865	+12		− 4.3404			$11^h\ 23^m\ 18^s$	
$♃ i_w$	57.0410	+10	71.3550	+12		− 5.1120				
i_c	57.4130	+10	70.9930	+12		− 4.7450	− 4.7412	23 48		2—3
i_o	57.7960	+ 6	70.6190	+12		− 4.3666				
$♃ k_w$	57.0515	+11	71.3520	+13		− 5.1052				
k_c	57.4325	+11	70.9790	+13		− 4.7282	− 4.7288	24 45		2—3
k_o	57.8070	+ 7	70.6025	+13		− 4.3529				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I f	55.6100	− 1	72.7890	+14		− 6.5451	−1.8319						3 unterexponiert
h	55.6030	0	72.7920	+13		− 6.5500	−1.8324	−1.8293	−1.′8164	+0.′0003	−0.′0028	**−1.′8189**	3—4
i	55.5875	0	72.8075	+13		− 6.5655	−1.8243						3
k	55.5935	+ 1	72.7975	+14		− 6.5575	−1.8287						3
II f	60.0945	+14	68.2940	+19		− 2.0548	+2.6584						2—3
h	60.0945	+14	68.2935	+18		− 2.0546	+2.6630	+2.6643	+2.6456	+0.0004	−0.0028	**+2.6432**	3
i	60.0795	+15	68.3135	+18		− 2.0720	+2.6692						3
k	60.0880	+15	68.3025	+19		− 2.0623	+2.6665						3
III f	53.7300	+ 3	74.6610	+11		− 8.4208	−3.7076						2—3
h	53.7255	+ 4	74.6645	+10		− 8.4246	−3.7070	−3.7067	−3.6807	−0.0006	−0.0028	**−3.6841**	3
i	53.7060	+ 4	74.6835	+10		− 8.4439	−3.7027						3
k	53.7105	+ 5	74.6770	+11		− 8.4384	−3.7096						2—3
IV f	61.5770	+ 9	66.8170	+ 9		− 0.5748	+4.1384						2 unterexponiert
h	61.5745	+ 9	66.8190	+ 8		− 0.5770	+4.1406	+4.1434	+4.1143	+0.0006	−0.0028	**+4.1121**	3—4 »
i	61.5575	+10	66.8370	+ 8		− 0.5945	+4.1467						3 »
k	61.5720	+10	66.8240	+ 9		− 0.5808	+4.1480						3 »

Scheinbare Ædiff. wie 61 A.

$f^\circ_\alpha = 0.99294$ $\quad -i^\circ_\alpha = -0.00018$

$f_\alpha = \mathbf{0.99259}$ $\quad -i_\alpha = \mathbf{-0.00028}$ $\quad ∢\, i_\alpha = +1.'0$

$Refr. = + \quad 13$

$Tx_♃ = - \quad 53$

$f'_\alpha = \mathbf{0.99298}$ $\quad J_\alpha = \mathbf{-0.00068}$

$\alpha_♃ = 8^h\ 8.^m4$

1896. April 14.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltsterne		**wie 61 A.**							
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
61.8355	+11	66.5790	+11		−1.9142				Bilder 3—4. Durch Wolken.
62.1710	+11	66.2350	+11		−1.5744	−1.5711			
62.5210	+11	65.8855	+11		−1.2246				
65.4320	+18	62.9820	+10		+1.6830				
65.7850	+12	62.6180	+10		+2.0412	+2.0396			
66.1410	+12	62.2670	+10		+2.3947				
67.1770	+10	61.2315	+11		+3.4303				
67.5245	+20	60.8840	+11		+3.7783	+3.7808			
67.8795	+20	60.5280	+11		+4.1338				
68.9570	+15	59.4510	+11		+5.2108				
69.3155	+15	59.0890	+11		+5.5710	+5.5687			
69.6710	+18	58.7385	+11		+5.9242				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
62.6300	+12	65.7685	+13		−1.1117	+0.4594						
66.2415	+13	62.1555	+12		+2.5006	+0.4610	+0.4588	+0′.4557	−0′.0007	−0′.0012	+0.0002	**+0′.4540**
67.9785	+21	60.4180	+17		+4.2380	+0.4572						
69.7660	+19	58.6295	+13		+6.0262	+0.4575						
61.5110	+10	66.8860	+9		−2.2298	−0.6587						
65.1205	+17	63.2755	+10		+1.3804	−0.6592	−0.6608	−0.6563	+0.0011	+0.0010	+0′.0002	**−0.6540**
66.8580	+9	61.5360	+10		+3.1186	−0.6622						
68.6460	+14	59.7500	+15		+4.9056	−0.6631						
63.0640	+13	65.3310	+20		−0.6762	+0.8949						
66.6760	+12	61.7185	+13		+2.9363	+0.8967	+0.8959	+0.8899	−0.0015	−0.0027	+0.0002	**+0.8859**
68.4145	+22	59.9785	+18		+4.6758	+0.8950						
70.2030	+20	58.1880	+9		+6.4656	+0.8969						
61.2610	+11	67.1380	+8		−2.4808	−0.9097						
64.8720	+17	63.5320	+8		+1.1280	−0.9116	−0.9116	−0.9054	+0.0017	+0.0012	+0.0002	**−0.9023**
66.6110	+9	61.9705	+9		+2.8678	−0.9130						
68.3960	+19	59.9980	+14		+4.6568	−0.9119						

Scheinbare Decldiff. wie 61 A.

$f^{\circ}_\delta = 0.99322$ $\quad i^{\circ}_\delta = +0.00034$

$f_\delta = \mathbf{0.99263}$ $\quad i_\delta = \mathbf{+0.00014}$ $\quad ∡\, i_\delta = +0'.5$

$f'_\delta = \mathbf{0.99325}$ $\quad J_\delta = \mathbf{+0.00040}$

$\delta_♃ = +20°\ 53'.9$

62 A. 1896. April 19.

Æ 152

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.9103**		**65.4697**							
T	62.9094	+ 9	65.4680	+17	0	0.0000				2
M	66.6505	+11	61.7269	+12	0	+ 3.7414				2
N	22.5049	+28	105.8712	+ 9	+20	−40.4005				2
Q	75.2866	+18	53.0956	+13	− 1	+12.3753		**11^h 38^m 30^s**		1—2
R	24.9704	+33	103.4093	+11	+19	−37.9368				2
V	61.3835	+15	66.9919	+13	0	− 1.5244				1—2
W	62.4911	+25	65.8924	+26	0	− 0.4210				2
♃ a_w	65.6460	+11	62.7585	+ 9		+ 2.7236				
a_c	66.0355	+11	62.3665	+ 9		+ 3.1143	+ 3.1166	11 30 30		2
a_o	66.4390	+11	61.9750	+ 9		+ 3.5118				
♃ b_w	65.6165	+10	62.7800	+ 9		+ 2.6980				
b_c	66.0060	+11	62.3920	+ 9		+ 3.0868	+ 3.0833	31 7	**11^h 31^m 20^s** *)	1—2
b_o	66.3890	+11	62.0185	+ 9		+ 3.4650				
♃ c_w	65.6235	+10	62.7765	+ 9		+ 2.7032				
c_c	66.0110	+10	62.3920	+ 9		+ 3.0892	+ 3.0902	31 37		2
c_o	66.4030	+10	62.0060	+ 9		+ 3.4782				
♃ d_w	65.6555	+10	62.7430	+10		+ 2.7360				
d_c	66.0305	+10	62.3730	+10		+ 3.1084	+ 3.1079	32 5		1
d_o	66.4005	+10	62.0010	+10		+ 3.4794				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	65.2160	+17	63.1680	+ 9	+ 2.3041	−0.8125						2
b	65.1870	+17	63.2010	+ 9	+ 2.2731	−0.8102	−0.8152	−0'.8095	+0'.0002	−0'.0028	**−0'.8121**	2—3 verzerrt.
c	65.1860	+16	63.2010	+ 9	+ 2.2726	−0.8176						2—3
d	65.2025	+16	63.1880	+10	+ 2.2873	−0.8206						2—3
II a	64.5250	+17	63.8620	+ 8	+ 1.6116	−1.5050						2
b	64.4995	+17	63.8860	+ 8	+ 1.5869	−1.4964	−1.5031	−1.4927	+0.0004	−0.0028	**−1.4951**	2—3
c	64.5000	+16	63.8875	+ 8	+ 1.5864	−1.5038						2—3
d	64.5140	+16	63.8730	+ 9	+ 1.6006	−1.5073						2
III a	69.9020	+17	58.4850	+ 5	+ 6.9888	+3.8722						2—3
b	69.8670	+16	58.5140	+ 5	+ 6.9568	+3.8735	+3.8705	+3.8436	−0.0011	−0.0028	**+3.8397**	2
c	69.8740	+16	58.5100	+ 5	+ 6.9622	+3.8720						2—3
d	69.8850	+16	58.5010	+ 6	+ 6.9722	+3.8643						
IV a	71.4830	+12	56.9035	+ 9	+ 8.5696	+5.4530						2—3 ellipt.
b	71.4470	+11	56.9420	+ 9	+ 8.5323	+5.4490	+5.4500	+5.4121	−0.0016	−0.0028	**+5.4077**	2—3
c	71.4565	+11	56.9355	+10	+ 8.5402	+5.4500						2—3
d	71.4700	+11	56.9180	+10	+ 8.5558	+5.4479						2

Scheinbare Ædiff.: M—Centrum $= +\ 3'.9700$ $\qquad f^\circ_\alpha = 0.99302$ $\qquad -i^\circ_\alpha = +0.00078$

N— » $= -42.7108$

Q— » $= +13.0277$ $\qquad f_\alpha = \mathbf{0.99264}$ $\qquad -i_\alpha = \mathbf{+0.00065}$ $\qquad \measuredangle\ i_\alpha = -2'.2$

R— » $= -40.0097$ $\qquad$ Refr. $= +\ 14$

V— » $= -\ 1.6183$ $\qquad$ $Tx_♃ = +\ 34$

W— » $= -\ 0.4148$ $\qquad f'_\alpha = \mathbf{0.99304}$ $\qquad J\alpha = \mathbf{+0.00113}$

$\alpha_♃ = 8^h\ 9^m.9$

*) Die Correction des Chronometers ist unbekannt; $=0^s$ angenommen. Der Fehler übersteigt jedenfalls nicht $\pm 5^s$.

1896. April 19.

Decl.

Reihe.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.1516		**65.2274**							
63.1506	+10	65.2258	+26	0	0.0000		0.0000	0.0000	
73.7270	+12	54.6507	0	0	+10.5766		— 0.0007	+10.5759	
74.2466	+28	54.1343	+20	— 6	+11.0938		— 0.0862	+11.0076	
46.1158	+18	82.2630	+ 5	+ 2	—17.0348		— 0.0078	—17.0426	Bilder 4. Mondschein. Undurchsichtige Luft.
46.1133	+31	82.2618	+18	+10	—17.0347		— 0.0742	—17.1089	
51.3080	+11	77.0693	+ 9	0	—11.8426		— 0.0001	—11.8427	
101.6496	+ 5	26.7394	+22	—17	+38.4904		0.0000	+38.4904	
68.2450	+18	60.1680	+15		+ 5.0766				
67.8690	+18	60.5310	+11		+ 4.7072	+ 4.7059			
67.4950	+18	60.9040	+11		+ 4.3338				
66.4415	+10	61.9745	+10		+ 3.2714				
66.0650	+10	62.3360	+10		+ 2.9024	+ 2.9021			
65.6970	+10	62.7075	+10		+ 2.5326				
64.7025	+16	63.7080	+ 9		+ 1.5355				
64.3410	+ 8	64.0635	+ 9		+ 1.1766	+ 1.1723			
63.9690	+ 8	64.4350	+ 9		+ 0.8048				
62.9400	+ 9	65.4675	+11		— 0.2260				
62.5885	+ 9	65.8140	+11		— 0.5750	— 0.5762			
62.2380	+ 9	66.1690	+11		— 0.9277				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.0470	+18	60.3380	+15		+ 4.8926	+0.1867						
66.2445	+10	62.1470	+10		+ 3.0866	+0.1845	+0.1874	+0.′1861	+0.′0004	+0.′0002	+0.′0002	**+0.′1869**
64.5155	+16	63.8740	+ 9		+ 1.3590	+0.1867						
62.7730	+ 9	65.6180	+11		— 0.3847	+0.1915						
68.2060	+18	60.1800	+14		+ 5.0511	+0.3452						
66.3995	+10	61.9900	+ 9		+ 3.2427	+0.3406	+0.3449	+0.3425	+0.0007	+0.0004	+0.0002	**+0.3438**
64.6755	+16	63.7140	+ 8		+ 1.5190	+0.3467						
62.9290	+ 9	65.4620	+16		— 0.2290	+0.3472						
66.8600	+ 9	61.5270	+11		+ 3.7043	—1.0016						
65.0525	+17	63.3300	+11		+ 1.8994	—1.0027	—1.0035	—0.9968	—0.0019	—0.0022	+0.0002	**—1.0007**
63.3215	+10	65.0640	+18		+ 0.1662	—1.0061						
61.5740	+10	66.8090	+10		— 1.5796	—1.0034						
66.4640	+12	61.9250	+12		+ 3.3074	—1.3985						
64.6600	+18	63.7315	+11		+ 1.5025	—1.3996	—1.3998	—1.3905	—0.0027	—0.0035	+0.0002	**—1.3965**
62.9240	+11	65.4655	+19		— 0.2332	—1.4055						
61.1875	+12	67.2065	+11		— 1.9716	—1.3954						

Scheinbare Decldiff: M— Centrum = +10.′5028 $\quad f^\circ_\delta = 0.99337 \quad i^\circ_\delta = -0.00050$

N— » = +10.9497

Q— » = —16.9338 $\quad f_\delta =$ **0.99270** $\quad i_\delta =$ **—0.00076** $\quad \measuredangle\, i_\delta = -2.′6$

R— » = —16.9698

V— » = —11.7662 $\quad f'_\delta =$ **0.99335** $\quad J_\delta =$ **—0.00049**

W— » = +38.2328

$\delta_♃ = +20°\ 49.′3$

62 B. 1896. April 19.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	Anhaltst	erne	wie 62 A.							
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
	mm		mm			mm	mm			
♃ g_w	57.7460	+ 5	70.6585	+13		− 5.1770				
g_c	58.1170	+ 5	70.2820	+17		− 4.8034	− 4.8000	$11^h\ 44^m\ 5^s$		2
g_o	58.5020	+ 5	69.8995	+17		− 4.4196				
♃ h_w	57.8240	+ 5	70.5775	+12		− 5.0974				
h_c	58.2070	+ 5	70.1930	+16		− 4.7138	− 4.7110	44 37		2—3
h_o	58.6005	+ 5	69.8025	+16		− 4.3218			$11^h\ 44^m\ 56^s$ 1)	
♃ i_w	57.7890	+ 6	70.6190	+12		− 5.1356				
i_c	58.1650	+ 6	70.2415	+16		− 4.7590	− 4.7551	45 12		2
i_o	58.5520	+ 6	69.8520	+16		− 4.3708				
♃ k_w	57.7715	+ 6	70.6285	+16		− 5.1493				
k_c	58.1605	+ 6	70.2345	+16		− 4.7578	− 4.7567	45 50		2
k_o	58.5600	+ 6	69.8445	+16		− 4.3630				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I g	57.2475	+ 9	71.1390	+13		− 5.6662	−0.8662						2—3
h	57.3375	+ 9	71.0510	+12		− 5.5772	−0.8662	−0.8669	−0.′8609	+0.′0001	−0.′0028	**−0.′8636**	2—3
i	57.2925	+10	71.0930	+12		− 5.6206	−0.8655						2
k	57.2860	+10	71.0980	+12		− 5.6264	−0.8697						2
II g	56.5750	+ 9	71.8150	+12		− 6.3404	−1.5404						2—3
h	56.6615	+ 9	71.7255	+11		− 6.2524	−1.5414	−1.5411	−1.5304	+0.0001	−0.0028	**−1.5331**	3
i	56.6210	+10	71.7650	+11		− 6.2924	−1.5373						2
k	56.6115	+10	71.7750	+11		− 6.3021	−1.5454						2—3
III g	61.9610	+ 9	66.4210	+11		− 0.9504	+3.8496						2—3
h	62.0575	+ 9	66.3275	+11		− 0.8554	+3.8556	+3.8524	+3.8256	−0.0003	−0.0028	**+3.8225**	2—3
i	62.0115	+ 9	66.3740	+10		− 0.9016	+3.8535						2
k	62.0095	+10	66.3800	+10		− 0.9056	+3.8511						2—3
IV g	63.5380	+ 8	64.8550	+16		+ 0.6208	+5.4208						3—3 unterexp.
h	63.6295	+ 8	64.7605	+17		+ 0.7138	+5.4248	+5.4239	+5.3863	−0.0004	−0.0028	**+5.3831**	3
i	63.5880	+ 8	64.8045	+16		+ 0.6710	+5.4261						2—3
k	63.5835	+ 9	64.8080	+16		+ 0.6671	+5.4238						1—2

Scheinbare Ædiff. wie 62 A.

$f^\circ_\alpha = 0.99302$ $-i^\circ_\alpha = +0.00078$

$f_\alpha = \mathbf{0.99264}$ $-i_\alpha = +\mathbf{0.00065}$ $♃\ i_\alpha = -2.'2$

$Refr. = +\ 16$

$Tx_♃ = -\ 53$

$f'_\alpha = \mathbf{0.99306}$ $J_\alpha = +\mathbf{0.00028}$

$\alpha_♃ = 8^h\ 9.^m9$

1) Die Correction des Chronometers $=0^s$ angenommen. Der Fehler übersteigt jedenfalls nicht $\pm 5^s$.

eihe.

1896. April 19.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
Anhaltst	erne	wie 62 A.							
	$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$					
mm		mm			mm	mm			
61.4130	+12	66.9890	+ 9		− 1.7500				
61.7670	+11	66.6365	+ 9		− 1.3972	− 1.3953			
62.1250	+11	66.2785	+11		− 1.0388				
63.2030	+11	65.2050	+17		+ 0.0366				
63.5600	+10	64.8380	+17		+ 0.3986	+ 0.3955			
63.9265	+10	64.4790	+17		+ 0.7513				
64.8980	+18	63.5010	+10		+ 1.7368				
65.2625	+18	63.1410	+10		+ 2.0990	+ 2.0986			
65.6260	+12	62.7820	+10		+ 2.4600				
66.6720	+18	61.7330	+10		+ 3.5078				
67.0480	+18	61.3545	+11		+ 3.8850	+ 3.8824			
67.4195	+18	60.9870	+11		+ 4.2545				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
61.9750	+12	66.4200	+11		− 1.1846	+0.2107						
63.7580	+11	64.6325	+17		+ 0.6004	+0.2049	+0.2068	+0.′2054	+0.′0004	−0.′0005	+0.′0002	+0.′2055
65.4630	+19	62.9280	+10		+ 2.3058	+0.2072						
67.2430	+11	61.1450	+11		+ 4.0869	+0.2045						
62.1280	+12	66.2660	+12		− 1.0311	+0.3642						
63.9160	+11	64.4715	+18		+ 0.7598	+0.3643	+0.3644	+0.3620	+0.0007	−0.0010	+0.0002	+0.3619
65.6195	+13	62.7680	+11		+ 2.4638	+0.3652						
67.4035	+11	60.9870	+12		+ 4.2461	+0.3637						
60.7620	+11	67.6220	+18		− 2.3924	−0.9971						
62.5500	+10	65.8340	+10		− 0.6041	−0.9996	−0.9989	−0.9923	−0.0017	+0.0012	+0.0002	−0.9926
64.2550	+ 9	64.1290	+ 8		+ 1.1010	−0.9976						
66.0380	+11	62.3515	+ 9		+ 2.8812	−1.0012						
60.3630	+14	68.0275	+18		− 2.7946	−1.3993						
62.1590	+ 9	66.2370	+10		− 0.9962	−1.3917	−1.3959	−1.3867	−0.0024	+0.0012	+0.0002	−1.3877
63.8615	+ 8	64.5265	+16		+ 0.7050	−1.3936						
65.6410	+10	62.7510	+ 9		+ 2.4834	−1.3990						

Scheinbare Decldiff. wie 62 A.

$f^\circ_\delta = 0.99337$ $\quad i^\circ_\delta = -0.00050$

$f_\delta = \mathbf{0.99270}$ $\quad i_\delta = \mathbf{-0.00076}$ $\quad \measuredangle\, i_\delta = -2.'6$

$f'_\delta = \mathbf{0.99338}$ $\quad J_\delta = \mathbf{-0.00045}$

$\delta_{♃} = +20^\circ\ 49.'3$

B. OPPOSITION 1897.

I. HELSINGFORSER CLICHÉS.

63 A. 1897. März 22.

Æ **154**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**65.3417**		**63.0334**							
I	65.3400	+17	63.0325	+ 9	0	0.0000				2—3
J	44.3412	+20	64.0344	— 7	+ 2	—20.9992				2—3 eiförmig.
F	14.7530	+30	113.6212	+ 6	+38	—50.5832		12^h 55^m 22^s		4 ellipt.
H	113.7608	+ 4	14.6158	+27	—33	+48.4139				4—5 ellipt.
L	70.6112	+18	57.7622	+10	— 1	+ 5.2706				3
K	68.7330	+19	59.6470	+21	0	+ 3.3888				2
♃ a_w	57.8530	+ 8	70.5400	+18		— 7.4982				
a_c	58.3460	+ 8	70.0540	+18		— 7.0086	— 7.0091	12 49 43		3
a_o	58.8320	+13	69.5645	+18		— 6.5206				
♃ b_w	57.8575	+ 7	70.5430	+17		— 7.4974				
b_c	58.3340	+ 7	70.0580	+17		— 7.0166	— 7.0150	50 17		3—4
b_o	58.8190	+12	69.5720	+17		— 6.5309				
♃ c_w	57.8745	+ 7	70.5245	+17		— 7.4796				
c_c	58.3490	+ 7	70.0510	+17		— 7.0056	— 7.0034	50 43	12^h 50^m 40^s	3—4
c_o	58.8275	+12	69.5685	+17		— 6.5249				
♃ d_w	57.8775	+ 6	70.5205	+16		— 7.4762				
d_c	58.3690	+ 6	70.0315	+16		— 6.9859	— 6.9873	51 6		3
d_o	58.8530	+11	69.5440	+16		— 6.4999				
♃ e_w	57.8390	+ 6	70.5560	+16		— 7.5132				
e_c	58.3310	+ 6	70.0715	+16		— 7.0249	— 7.0271	51 30		3—4
e_o	58.8075	+11	69.5850	+16		— 6.5432				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	59.0700	+13	69.3110	+15		— 6.2748	+0.7343						3—4
b	59.0740	+12	69.3095	+14		— 6.2720	+0.7430						4
c	59.0905	+12	69.2960	+14		— 6.2570	+0.7464	+0.7432	+0.′7420	—0.′0004	—0.′0007	**+0.′7409**	4
d	59.1005	+11	69.2765	+13		— 6.2422	+0.7451						4
e	59.0650	+11	69.3160	+13		— 6.2798	+0.7473						4
II a	59.4960	+17	68.8740	+15		— 5.8430	+1.1661						3
b	59.4940	+16	68.8765	+14		— 5.8453	+1.1697						2—3
c	59.5050	+15	68.8715	+14		— 5.8374	+1.1660	+1.1658	+1.1639	—0.0005	—0.0007	**+1.1627**	3—4
d	59.5195	+15	68.8570	+13		— 5.8228	+1.1645						3
e	59.4765	+15	68.8975	+13		— 5.8646	+1.1625						3—4 nicht kreisr
III a	61.8560	+11	66.5220	+ 9		— 3.4870	+3.5221						2—3
b	61.8460	+10	66.5260	+ 9		— 3.4941	+3.5209						2—3
c	61.8605	+10	66.5140	+ 8		— 3.4808	+3.5226	+3.5203	+3.5144	—0.0016	—0.0007	**+3.5121**	3
d	61.8710	+10	66.5045	+ 8		— 3.4708	+3.5165						2—3
e	61.8355	+ 9	66.5430	+ 8		— 3.5078	+3.5193						2—3 nicht kreisr
IV	Verfinstert.												

Scheinbare Ædiff: J— Centrum = —23.′4035 F— » = —56.4487 H— » = +53.9938 K— » = + 3.8043 L— » = + 5.8353

$\alpha_♃ = 10^h\ 17^m.9$

$f^\circ_\alpha = 0.99824$ $-i^\circ_\alpha = +0.00130$

$f_\alpha =$ **0.99796** $-i_\alpha =$ **+0.00130** $\measuredangle\ i_\alpha = -\ 4.′5$

Refr. = + 18

$Tx_♃$ = — 43

$f'_\alpha =$ **0.99833** $J_\alpha =$ **+0.00105**

1897. März 22.

leihe.

Decl.

	Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta\sin 1'$	$y-\frac{x^2}{2}tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
♃	**64.3980**		**63.9980**							
I	65.8882	+10	62.4915	+10	0	+ 1.4984		0.0000	+ 1.4984	
J	65.6120	+17	62.7660	+18	0	+ 1.2230		− 0.0317	+ 1.1913	
F	75.0632	+28	53.3185	+24	−10	+10.6716		− 0.1855	+10.4861	
H	69.7182	+33	58.6680	+28	− 4	+ 5.3250		− 0.1695	+ 5.1555	
L	49.7375	+ 6	78.6398	+ 9	+ 1	−14.6512		− 0.0020	−14.6532	
K	80.7602	+15	47.6195	+20	− 1	+16.3700		− 0.0008	+16.3692	
a_n	72.6840	+15	55.7220	0		+ 8.2818				
a_c	72.2280	+13	56.1940	0		+ 7.8176	+ 7.8166			
a_s	71.7490	+13	56.6485	+10		+ 7.3504				
b_n	71.1400	+14	57.2640	+10		+ 6.7382				
b_c	70.6840	+14	57.7280	+ 6		+ 6.7784	+ 6.2791			
b_s	70.2190	+18	58.1790	+ 6		+ 5.8206				
c_n	69.6705	+15	58.7365	+11		+ 5.2672				
c_c	69.2210	+15	59.1960	+11		+ 4.8127	+ 4.8109			
c_s	68.7545	+15	59.6490	+15		+ 4.3528				
d_n	68.2100	+20	60.1865	+15		+ 3.8120				
d_c	67.7555	+20	60.6580	+11		+ 3.3492	+ 3.3504			
d_s	67.2895	+10	61.1095	+11		+ 2.8900				
$♃_n$	66.7180	+10	61.6900	+ 9		+ 2.3140				
$♃_c$	66.2660	+12	62.1470	+10		+ 1.8596	+ 1.8547			
$♃_s$	65.7895	+12	62.6090	+10		+ 1.3904				

Trabant — Jupiterscentrum.

	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
a	71.8370	+13	56.5425	+10		+ 7.4474	−0.3692						
b	70.3010	+18	58.0820	+ 6		+ 5.9101	−0.3690						
c	68.8290	+15	59.5500	+15		+ 4.4395	−0.3714	−0.3704	−0.′3699	−0.′0007	+0.′0003	+0.′0001	**−0.′3702**
d	67.3700	+10	61.0180	+11		+ 2.9760	−0.3744						
e	65.8785	+12	62.5055	+10		+ 1.4866	−0.3681						
a	71.7605	+13	56.6180	+10		+ 7.3714	−0.4452						
b	70.2240	+18	58.1540	+ 6		+ 5.8356	−0.4435						
c	68.7505	+15	59.6240	+15		+ 4.3632	−0.4477	−0.4462	−0.4456	−0.0011	+0.0004	+0.0001	**−0.4462**
d	67.2950	+10	61.0870	+11		+ 2.9040	−0.4464						
e	65.8000	+12	62.5875	+10		+ 1.4064	−0.4483						
a	70.7670	+13	57.6140	+ 5		+ 6.3769	−1.4397						
b	69.2315	+14	59.1450	+10		+ 4.8434	−1.4357						
c	67.7545	+19	60.6170	+10		+ 3.3692	−1.4417	−1.4394	−1.4373	−0.0032	+0.0011	+0.0001	**−1.4393**
d	66.2980	+11	62.0830	+ 9		+ 1.9076	−1.4428						
e	64.8075	+17	63.5735	+ 8		+ 0.4174	−1.4373						
	Verfinst	ert.											

Scheinbare Decldiff. J—Centrum $= -\ 0.'2845$ $\qquad f^\circ_\delta = 0.99816 \qquad i^\circ_\delta = -0.00116$

F— » $= +\ 9.0345$

H— » $= +\ 3.5977$ $\qquad f_\delta = \mathbf{0.99775} \qquad i_\delta = \mathbf{-0.00119} \qquad \sphericalangle\, i_\delta = -4.'1$

K— » $= +14.8397$

L— » $= -16.1255$ $\qquad f'_\delta = \mathbf{0.99855} \qquad J_\delta = \mathbf{-0.00095}$

$\delta_♃ = +12^\circ\ 0.'8$

63 B. 1897. März 26.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**65.3436**		**63.0447**							
I	65.3420	+16	63.0438	+ 9	0	0.0000				3—4
J	44.3355	+19	84.0428	— 7	— 2	—21.0016				2—3
F	14.7498	+29	113.6348	+ 5	+38	—50.5870		**10ʰ 44ᵐ 51ˢ**		4—5 ellipt.
H	113.7555	+ 4	14.6310	+26	—33	+48.4084				4—5
L	70.6070	+19	57.7740	+11	— 1	+ 5.2674				3—4
K	68.7245	+18	59.6525	+20	0	+ 3.3864				2
♃ a_w	59.7995	+14	68.5965	+19		— 5.5482				
a_c	60.2795	+14	68.1225	+19		— 5.0712	— 5.0676	10 39 16		2—3
a_o	60.7610	+10	67.6280	+19		— 4.5834				
♃ b_w	59.8025	+14	68.5975	+27		— 5.5476				
b_c	60.2725	+14	68.1280	+19		— 5.0774	— 5.0771	39 51		2—3
b_o	60.7390	+10	67.6515	+19		— 4.6062				
♃ c_w	59.8235	+15	68.5710	+19		— 5.5234				
c_c	60.2930	+15	68.1020	+19		— 5.0542	— 5.0499	40 20	**10ʰ 40ᵐ 17ˢ**	2
c_o	60.7720	+11	67.6165	+19		— 4.5721				
♃ d_w	59.8055	+15	68.5930	+20		— 5.5434				
d_c	60.2835	+15	68.1175	+20		— 5.0667	— 5.0685	40 45		1—2
d_o	60.7490	+11	67.6400	+20		— 4.5954				
♃ e_w	59.8380	+16	68.5655	+21		— 5.5134				
e_c	60.3180	+16	68.0845	+21		— 5.0330	— 5.0346	42 12		2—3
e_o	60.7890	+12	67.6040	+21		— 4.5574				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	62.2510	+ 9	66.1300	+11		— 3.0890	+1.9786						4
b	62.2335	+ 9	66.1520	+11		— 3.1088	+1.9683						3—4 deformie
c	62.2580	+10	66.1165	+12		— 3.0788	+1.9711	+1.9701	+1'.9666	—0'.0008	—0'.0008	**+1'.9650**	3 dreieckig.
d	62.2335	+10	66.1470	+12		— 3.1063	+1.9622						3—4
e	62.2745	+12	66.1040	+13		— 3.0642	+1.9704						3
II a	59.5340	+14	68.8440	+14		— 5.8044	—0.7368						3—4
b	59.5190	+14	68.8615	+14		— 5.8207	—0.7436						3 deformiert.
c	59.5470	+14	68.8335	+14		— 5.7927	—0.7428	—0.7435	—0.7422	+0.0004	—0.0008	**—0.7426**	3
d	59.5250	+15	68.8570	+15		— 5.8154	—0.7469						3
e	59.5590	+15	68.8245	+16		— 5.7822	—0.7476						3
III a	57.9580	+ 5	70.4190	+17		— 7.3806	—2.3130						2—3
b	57.9450	+ 5	70.4335	+17		— 7.3943	—2.3172						4
c	57.9760	+ 5	70.4000	+17		— 7.3620	—2.3121	—2.3131	—2.3090	+0.0009	—0.0008	**—2.3089**	3—4
d	57.9570	+ 6	70.4175	+18		— 7.3803	—2.3118						3—4
e	57.9930	+16	70.3850	+18		— 7.3460	—2.3114						3
IV a	51.5350	+12	76.8545	+10		—13.8091	—8.7415						3—4
b	51.5185	+11	76.8670	+10		—13.8236	—8.7455						3
c	51.5425	+11	76.8420	+11		—13.7992	—8.7493	—8.7460	—8.7304	+0.0036	—0.0008	**—8.7276**	3—4
d	51.5285	+11	76.8570	+11		—13.8137	—8.7452						3
e	51.5615	+11	76.8290	+11		—13.7832	—8.7486						3—4

Scheinbare Ædiff: J—Centrum $= -23'.4036$ $\qquad f^0_\alpha = 0.99824 \qquad -i^0_\alpha = +0.00126$

F— » $= -56.4491$

H— » $= +53.9942$ $\qquad f_\alpha = \mathbf{0.99794} \qquad -i_\alpha = +\mathbf{0.00128} \qquad \measuredangle\, i_\alpha = -4'.4$

K— » $= +\ 3.8044$ $\qquad$ *Refr.* $= +\ \ 2$

L— » $= +\ 5.8354$ $\qquad Tx_♃ = -\ \ 32$

$\alpha_♃ = 10^h\ 16^m.5$ $\qquad f'_\alpha = \mathbf{0.99822} \qquad J_\alpha = +\mathbf{0.00098}$

1897. März 26.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.3980		63.9980							
64.3972	+ 8	63.9971	+ 9	0	0.0000		0.0000	0.0000	
64.1155	+15	64.2620	+17	0	— 0.2734		— 0.0317	— 0.3051	
73.5705	+30	54.8165	+16	— 7	+ 9.1770		— 0.1856	+ 8.9914	Luft 2.
68.2208	+35	60.1635	+32	— 3	+ 3.8285		— 0.1695	+ 3.6590	
48.2470	+20	80.1410	+10	+ 1	—16.1464		— 0.0020	—16.1484	
79.2612	+ 7	49.1136	+14	— 1	+14.8734		— 0.0028	+14.8726	
63.0080	+10	65.3890	+10		— 1.3905				
62.5570	+10	65.8625	+10		— 1.8528	— 1.8526			
62.0855	+10	66.3145	+10		— 2.3145				
61.5310	+11	66.8680	+ 8		— 2.8684				
61.0790	+11	67.3325	+ 8		— 3.3266	— 3.3254			
60.6160	+11	67.7775	+18		— 3.7811				
60.0795	+15	68.3210	+18		— 4.3209				
59.6200	+15	68.7890	+13		— 4.7844	— 4.7819			
59.1580	+15	69.2400	+13		— 5.2404				
58.5870	+ 6	69.8170	+16		— 5.8155				
58.1415	+ 6	70.2840	+16		— 6.2718	— 6.2703			
57.6765	+ 6	70.7230	+12		— 6.7236				
57.1460	+10	71.2530	+12		— 7.2536				
56.6895	+10	71.7110	+11		— 7.7108	— 7.7137			
56.2230	+10	72.1760	+11		— 8.1766				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta\,(y_t - y_{♃})$	$J_\delta\,(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
61.6950	+10	66.6940	+ 8		— 2.6994	—0.8468						
60.2205	+15	68.1650	+18		— 4.1724	—0.8470						
58.7580	+11	69.6320	+16		— 5.6372	—0.8553	—0.8496	—0'.8482	—0'.0020	+0'.0005	+0'.0002	**—0'.8495**
57.2755	+10	71.1160	+12		— 7.1204	—0.8501						
55.8350	0	72.5585	+13		— 8.5624	—0.8487						
62.9290	+11	65.4515	+17		— 1.4616	+0.3910						
61.4490	+12	66.9310	+ 9		— 2.9408	+0.3846						
59.9860	+16	68.3950	+19		— 4.4046	+0.3773	+0.3861	+0.3855	+0.0007	—0.0002	+0.0002	**+0.3862**
58.5090	+12	69.8770	+17		— 5.8842	+0.3861						
57.0700	+11	71.3140	+13		— 7.3221	+0.3916						
63.4210	+11	64.9570	+17		— 0.9683	+0.8843						
61.9450	+11	66.4370	+11		— 2.4460	+0.8794						
60.4780	+16	67.8965	+19		— 3.9094	+0.8725	+0.8776	+0.8762	+0.0023	—0.0009	+0.0002	**+0.8788**
58.9930	+12	69.3850	+14		— 5.3961	+0.8742						
57.5520	+ 7	70.8235	+13		— 6.8360	+0.8777						
66.2425	+15	62.1540	+14		+ 1.8443	+3.6969						
64.7630	+21	63.6260	+13		+ 0.3689	+3.6943						
63.3020	+14	65.0870	+21		— 1.0928	+3.6891	+3.6930	+3.6869	+0.0087	—0.0051	+0.0002	**+3.6907**
61.8180	+14	66.5740	+13		— 2.5780	+3.6923						
60.3710	+19	68.0135	+23		— 4.0214	+3.6923						

Scheinbare Decldiff:
J—Centrum = + 0'.2845 $\quad f^\circ_\delta = 0.99814 \quad i^\circ_\delta = -0.00112$
F— » = + 9.0346
H— » = + 3.5977 $\quad f_\delta =$ **0.99771** $\quad i_\delta =$ **—0.00103** $\quad \measuredangle\, i_\delta = -\, 3'.5$
L— » = +14.8397
K— » = —16.1256 $\quad f'_\delta =$ **0.99834** $\quad J_\delta =$ **—0.00100**

$\delta_{♃} = +12°\ 8'.3$

63 C. 1897. März 28.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**65.1968**		**63.1930**							
I	65.1952	+16	63.1920	+10	0	0.0000				3
J	44.1860	+19	84.1902	−6	+3	−21.0024				2
F	14.5805	+28	113.8102	+3	+37	−50.6118		**11^h 27^m 0^s**		4
H	118.6185	+3	14.7728	+26	−34	+48.4164				4
L	70.4898	+25	57.8960	+11	−1	+5.2956				3
K	68.5495	+18	59.8218	+19	0	+3.3619				1
♃ a_w	69.5530	+17	58.8440	+13		+4.3528				
a_c	69.9945	+17	58.4000	+8		+4.7958	+4.7993	11 20 30		2
a_o	70.4465	+17	57.9450	+8		+5.2493				
♃ b_w	69.5430	+17	58.8560	+12		+4.3418				
b_c	70.0050	+17	58.4035	+7		+4.7994	+4.7985	21 33		1—2
b_o	70.4500	+17	57.9385	+7		+5.2544				
♃ c_w	69.5410	+16	58.8570	+11		+4.3404				
c_c	69.9945	+16	58.4075	+6		+4.7921	+4.7910	22 20	**11^h 22^m 17^s**	2
c_o	70.4395	+16	57.9560	+6		+5.2404				
♃ d_w	69.5635	+16	58.8390	+11		+4.3606				
d_c	70.0135	+16	58.3915	+6		+4.8096	+4.8103	23 8		2
d_o	70.4595	+16	57.9355	+4		+5.2607				
♃ e_w	69.5425	+16	58.8550	+11		+4.3421				
e_c	69.9985	+16	58.4125	+6		+4.7916	+4.7939	23 53		2
e_o	70.4470	+16	57.9480	+6		+5.2481				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	71.0810	+13	57.3045	+12	+5.8864	+1.0871						3
b	71.0770	+13	57.3040	+11	+5.8847	+1.0862						3
c	71.0705	+12	57.3185	+10	+5.8742	+1.0832	+1.0826	+1.′0805	−0.′0013	−0.′0009	**+1.′0783**	3
d	71.0875	+12	57.2945	+10	+5.8947	+1.0844						2—3
e	71.0615	+12	57.3255	+10	+5.8662	+1.0723						3
II a	71.8690	+13	56.5145	+12	+6.6754	+1.8761						2—3
b	71.8670	+12	56.5155	+11	+6.6738	+1.8753						2—3
c	71.8535	+12	56.5200	+10	+6.6650	+1.8740	+1.8778	+1.8741	−0.0029	−0.0009	**+1.8703**	2—3
d	71.8835	+11	56.4935	+10	+6.6932	+1.8829						2—3
e	71.8685	+11	56.5160	+10	+6.6744	+1.8805						3
III a	74.7555	+12	53.6195	+6	+9.5664	+4.7671						2
b	74.7535	+11	53.6190	+6	+9.5656	+4.7671						2
c	74.7465	+11	53.6285	+5	+9.5574	+4.7664	+4.7682	+4.7588	−0.0068	−0.0009	**+4.7511**	2
d	74.7720	+10	53.6035	+4	+9.5826	+4.7723						1—2
e	74.7505	+10	53.6235	+4	+9.5619	+4.7680						2—3 ellipt.
IV a	62.9575	+9	65.4320	+17	−2.2396	−7.0389						3
b	62.9575	+9	65.4305	+17	−2.2388	−7.0373						2—3
c	62.9455	+9	65.4395	+17	−2.2496	−7.0406	−7.0375	−7.0236	+0.0095	−0.0009	**−7.0150**	3
d	62.9675	+10	65.4125	+16	−2.2247	−7.0350						3
e	62.9530	+10	65.4325	+16	−2.2420	−7.0359						3

Scheinbare Ædiff.:

J— Centrum $= -23.'4037$
F— » $= -56.4493$
H— » $= +53.9944$
K— » $= +3.8044$
L— » $= +5.8354$

$\alpha_♃ = 10^h\ 13.^m8$

$f^\circ_\alpha = 0.99802$ $\quad -i^\circ_\alpha = +0.00295$

$f_\alpha = \mathbf{0.99773}$ $\quad -i_\alpha = \mathbf{+0.00296}$ $\quad ∡\, i_\alpha = -10.'2$

Refr. $= +\ 6$

$Tx_♃ = +\ 30$

$f'_\alpha = \mathbf{0.99803}$ $\quad J_\alpha = \mathbf{+0.00332}$

1897. März 28.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.3980		**63.9980**							
61.3728	+10	67.0168	+ 9	0	− 3.0220		0.0000	− 3.0220	
61.0525	+17	67.3248	+17	+ 1	− 3.3360		− 0.0317	− 3.3677	
70.4735	+34	57.9180	+22	− 5	+ 6.0778		− 0.1856	+ 5.8922	
65.2858	+33	63.1008	+27	0	+ 0.8928		− 0.1695	+ 0.7233	
45.2302	+19	63.1575	+11	+ 2	−19.1630		− 0.0020	−19.1650	
76.2452	+ 9	52.1328	+12	0	+11.8560		− 0.0008	+11.8552	
57.0340	+10	71.3715	+14		− 7.3690				
57.4640	+10	70.9470	+14		− 6.9417	− 6.9414			
57.8860	+ 6	70.5120	+14		− 6.5134				
58.4990	+11	69.8970	+18		− 5.8994				
58.9290	+11	69.4805	+15		− 5.4760	− 5.4739			
59.3560	+11	69.0485	+15		− 5.0464				
59.9410	+15	68.4530	+20		− 4.4562				
60.3700	+15	68.0335	+20		− 4.0320	− 4.0294			
60.8010	+15	67.6005	+20		− 3.6000				
61.3750	+10	67.0180	+10		− 3.0215				
61.8210	+10	66.5970	+10		− 2.5880	− 2.5896			
62.2390	+10	66.1575	+12		− 2.1594				
62.8750	+10	65.5220	+18		− 1.5239				
63.3080	+10	65.1010	+18		− 1.0969	− 1.0983			
63.7235	+ 9	64.6710	+18		− 0.6742				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
57.0290	+10	71.3570	+15		− 7.3642	−0.4228						
58.4910	+ 6	69.8920	+19		− 5.9012	−0.4273						
59.9420	+15	68.4440	+21		− 4.4513	−0.4219	−0.4223	−0.′4216	−0.′0029	−0.′0004	+0.′0002	**−0.′4247**
61.3790	+11	67.0060	+11		− 3.0135	−0.4239						
62.8805	+10	65.5080	+13		− 1.5139	−0.4156						
56.5850	+11	71.8070	+14		− 7.8112	−0.8698						
58.0380	+ 7	70.3423	+19		− 6.3528	−0.8789						
59.4905	+12	68.8920	+16		− 4.9010	−0.8716	−0.8741	−0.8726	−0.0051	−0.0007	+0.0002	**−0.8782**
60.9230	+12	67.4550	+11		− 3.4660	−0.8764						
62.4205	+11	65.9645	+13		− 1.9721	−0.8738						
55.3870	+ 3	72.9900	+17		− 9.0022	−2.0608						
56.8490	+13	71.5285	+15		− 7.5398	−2.0659						
58.3010	+ 9	70.0755	+20		− 6.0878	−2.0584	−2.0620	−2.0585	−0.0129	−0.0022	+0.0002	**−2.0734**
59.7335	+18	68.6405	+17		− 4.6534	−2.0638						
61.2270	+14	67.1455	+12		− 3.1592	−2.0609						
60.3085	+11	68.0800	+18		− 4.0861	+2.8553						
61.7720	+10	66.6190	+ 8		− 2.6234	+2.8505						
63.2150	+10	65.1700	+16		− 1.1778	+2.8516	+2.8521	+2.8472	+0.0190	+0.0005	+0.0002	**+2.8669**
64.6555	+17	63.7350	+ 8		+ 1.2607	+2.8503						
66.1480	+11	62.2395	+ 9		+ 1.7544	+2.8527						

Scheinbare Decldiff. J—Centrum $= -$ 0.′2844; F— » $= +$ 9.0346; H— » $= +$ 3.5976; K— » $= +$14.8397; L— » $= -$16.1257

$f^\circ_\delta = 0.99806$ $\quad i^\circ_\delta = -0.00282$

$f_\delta = \mathbf{0.99765}$ $\quad i_\delta = \mathbf{-0.00278}$ $\quad \measuredangle\, i_\delta = -$ 9.′6

$f'_\delta = \mathbf{0.99830}$ $\quad J_\delta = \mathbf{-0.00270}$

$\delta_♃ = +12^\circ$ 11.′9

63 D. 1897. März 30.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		mm/10000		mm/10000	mm/10000	mm	mm			
Ctr.	mm 65.4268		mm 62.9510							
I	65.4252	+16	62.9500	+10	0	0.0000				2—3
J	44.4180	+20	63.9558	— 6	+ 2	—21.0053				3
F	14.8242	+28	113.5532	+ 3	+38	—50.5974		$11^h\ 15^m\ 17^s$		4 ellipt.
H	113.8458	+ 2	14.5320	+26	—33	+48.4145				4—5 ellipt.
L	70.6850	+21	57.6875	+12	— 1	+ 5.2612				2—3
K	68.8080	+17	59.5655	+18	0	+ 3.3833				1—2
♃ a_w	72.4290	+14	55.9760	— 1		+ 6.9894				
a_c	72.8905	+14	55.5110	— 1		+ 7.4526	+ 7.4583	11 5 2		2—3*)
a_o	73.3680	+14	55.0280	— 1		+ 7.9328				
♃ b_w	72.4395	+14	55.9620	— 1		+ 7.0016				
b_c	72.9240	+14	55.4850	— 1		+ 7.4824	+ 7.4786	5 34		2—3
b_o	73.3815	+14	55.0035	— 1		+ 7.9518				
♃ c_w	72.4375	+14	55.9710	— 1		+ 6.9961				
c_c	72.9020	+14	55.5050	— 1		+ 7.4614	+ 7.4640	6 12	$11^h\ 6^m\ 21^s$	2—3
c_o	73.3675	+14	56.0245	— 1		+ 7.9341				
♃ d_w	72.4245	+15	55.9730	0		+ 6.9886				
d_c	72.9130	+15	55.4950	0		+ 7.4718	+ 7.4730	7 8		2
d_o	73.3910	+15	54.9995	0		+ 7.9586				
♃ e_w	72.4005	+16	56.0050	0		+ 6.9606				
e_c	72.8859	+16	55.5160	0		+ 7.4478	+ 7.4489	7 47		2—3
e_o	73.3665	+16	55.0155	0		+ 7.9384				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I	Geht durch die Jupiterscheibe.												
II *a*	70.1960	+17	58.1760	+ 5		+ 4.7727	—2.6856						3
b	70.2255	+17	58.1500	+ 5		+ 4.8004	—2.6782						3—4
c	70.2050	+18	58.1665	+ 6		+ 4.7820	—2.6820	—2.6824	—2'6773	+0'0020	—0'0010	**—2'6763**	3
d	70.2175	+18	58.1590	+ 6		+ 4.7920	—2.6810						3—4
e	70.1870	+19	58.1850	+ 7		+ 4.7637	—2.6852						3—4
III *a*	73.4225	+14	54.9550	— 1		+ 7.9966	+0.5383						2—3 **)
b	73.4245	+14	54.9270	— 1		+ 8.0216	+0.5430						2—3
c	73.4315	+14	54.9460	— 1		+ 8.0056	+0.5416	+0.5405	+0.5395	—0.0002	—0.0010	**+0.5383**	3
d	73.4360	+15	54.9370	0		+ 8.0124	+0.5394						2—3
e	73.4120	+16	54.9595	0		+ 7.9892	+0.5403						2—3
IV *a*	71.2480	+13	57.1370	+ 9		+ 5.8178	—1.6405						3—4
b	71.2655	+13	57.1220	+ 9		+ 5.8340	—1.6446						3—4
c	71.2540	+14	57.1280	+10		+ 5.8253	—1.6387	—1.6386	—1.6354	+0.0009	—0.0010	**—1.6355**	3
d	71.2650	+14	57.1180	+10		+ 5.8358	—1.6372						4
e	71.2475	+15	57.1380	+11		+ 5.8170	—1.6319						4

Scheinbare Ædiff. *J*—Centrum = —23'4037
F— » = —56.4495
H— » = +53.9945
K— » = + 3.8044
L— » = + 5.8355

$\alpha_♃ = 10^h\ 15^m.2$

$f^\circ_\alpha = 0.99806$ $-i^\circ_\alpha = +0.00116$

$f_\alpha = \mathbf{0.99777}$ $-i_\alpha = \mathbf{+0.00117}$ $\measuredangle\ i_\alpha = -\ 4'0$

Refr. = + 4

$Tx_♃$ = + 47

$f'_\alpha = \mathbf{0.99806}$ $J_\alpha = \mathbf{+0.00168}$

*) Trabant III stört bei Einstellung auf den Ost-Rand.

**) Einstellung schwierig, da der Trabant mit dem ♃-rande zusammenfliesst.

1897. März 30.

Reihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.3980		**63.9980**							
60.0065	+14	68.3810	+19	0	— 4.3875		0.0000	— 4.3875	
59.7250	+21	68.6525	+22	+ 1	— 4.6637		— 0.0317	— 4.6954	
69.1865	+31	59.1994	+27	— 3	+ 4.7934		— 0.1856	+ 4.6078	Durch Wolken.
63.8298	+25	64.5530	+34	0	— 0.5620		— 0.1695	— 0.7315	
43.8545	+20	64.5270	0	+ 2	—20.5350		— 0.0020	—20.5370	
74.8752	+11	53.5058	+ 5	0	+10.4850		— 0.0008	+10.4842	
64.9050	+19	63.4955	+12		+ 0.5051				
65.3535	+19	63.0580	+12		+ 0.9481	+ 0.9543			
65.8050	+19	62.5865	+12		+ 1.4096				
66.3925	+11	62.0090	+12		+ 1.9917				
66.8400	+11	61.5710	+12		+ 2.4344	+ 2.4374			
67.2820	+11	61.1095	+13		+ 2.8862				
67.8340	+21	60.5645	+13		+ 3.4352				
68.2880	+21	60.1280	+13		+ 3.8804	+ 3.8816			
68.7260	+16	59.6680	+13		+ 4.3292				
69.3080	+16	59.0885	+13		+ 4.9099				
69.7655	+19	58.6410	+13		+ 5.3626	+ 5.3652			
70.2190	+19	58.1740	+ 8		+ 5.8230				
70.7400	+15	57.6595	+ 8		+ 6.3406				Windstoss bei der
71.1950	+15	57.2150	+12		+ 6.7902	+ 6.7888			letzten Jupiters-
71.6350	+15	56.7640	+12		+ 7.2356				exposition.

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht du	rch	die Jupiter	sche	ibe.								
66.5485	+ 9	61.8370	+11		+ 2.1556	+1.2013						
68.0245	+19	60.3605	+16		+ 3.6322	+1.1948						
69.4705	+14	58.9105	+12		+ 5.0801	+1.1985	+1.2011	+1.'1991	+0.'0026	+0.'0011	+0.'0002	**+1.'2030**
70.9600	+13	57.4270	+11		+ 6.5666	+1.2014						
72.3910	+12	55.9955	+ 1		+ 7.9983	+1.2095						
65.2250	+19	63.1490	+12		+ 0.8384	—0.1259						
66.7040	+11	61.6740	+12		+ 2.3150	—0.1224						
68.1475	+21	60.2295	+17		+ 3.7592	—0.1224	—0.1204	—0.1202	— 0.0005	—0.0002	+0.0002	**—0.1207**
69.6405	+19	58.7400	+13		+ 5.2506	—0.1146						
71.0650	+15	57.3210	+12		+ 6.6722	—0.1166						
65.8980	+11	62.4980	+12		+ 1.5000	+0.5457						
67.3680	+ 9	61.0215	+13		+ 2.9730	+0.5356						
68.8120	+14	59.5810	+17		+ 4.4154	+0.5338	+0.5403	+0.5394	+0.0016	+0.0007	+0.0002	**+0.5419**
70.3000	+17	58.0900	+ 8		+ 5.9054	+0.5402						
71.7320	+12	56.6625	+12		+ 7.3348	+0.5460						

Scheinbare Decldiff: J—Centrum $= -\,0.'2844$ $f^0_\delta = 0.99813$ $i^0_\delta = -0.00109$

F— » $= +\,9.0347$

H— » $= +\,3.5976$ $f_\delta = \mathbf{0.99771}$ $i_\delta = \mathbf{-0.00103}$ $\sphericalangle\, i_\delta = -3.'5$

K— » $= +14.8397$

L— » $= -16.1257$ $f'_\delta = \mathbf{0.99835}$ $J_\delta = \mathbf{-0.00097}$

$\delta_♃ = +12°\ 15.'2$

64 A. 1896. April 15.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**60.3665**		**68.0103**							
I	60.3650	+15	68.0085	+18	0	0.0000				2—3
J	39.3622	+25	89.0132	— 7	+ 2	—21.0018				2
F	9.7758	+22	118.5990	+ 8	+39	—50.5851		**13^h 41^m 36^s**		3 ellipt.
H	108.7960	+ 6	19.5875	+24	—34	+48.4218				4
K	63.7838	+14	64.5942	+23	— 1	+ 3.4162				2—3
L	65.6082	+16	62.7670	+14	0	+ 5.2426				2
♃ a_w	51.3230	+13	77.0605	+11		— 9.0468				
a_c	51.8420	+14	76.5580	+11		— 8.5360	— 8.5362	13 36 24		3
a_o	52.3435	+14	76.0395	+ 9		— 8.0258				
♃ b_w	51.3555	+12	77.0390	+10		— 9.0198				
b_c	51.8500	+13	76.5515	+10		— 8.5287	— 8.5227	37 4	**13^h 37^m 38^s**	3
b_o	52.3550	+13	76.0385	+ 8		— 8.0196				
♃ c_w	51.3240	+12	77.0630	+10		— 9.0475				
c_c	51.8420	+13	76.5655	+10		— 8.5397	— 8.5415	37 38		3
c_o	52.3375	+13	76.0565	+ 8		— 8.0374				
♃ d_w	51.2960	+11	77.0835	+ 9		— 9.0718				
d_c	51.8115	+12	76.5880	+ 9		— 8.5662	— 8.5653	38 16		3—4
d_o	52.3210	+12	76.0810	+ 7		— 8.0578				
♃ e_w	51.3160	+11	77.0705	+ 9		— 9.0552				
e_c	51.8300	+12	76.5745	+ 9		— 8.5502	— 8.5493	38 48		3
e_o	52.3290	+12	76.0580	+ 7		— 8.0424				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	50.6530	+13	77.7345	+11		— 9.7188	—1.1826						3—4
b	50.6715	+12	77.7195	+ 9		— 9.7020	—1.1793						3—4
c	50.6500	+12	77.7355	+ 9		— 9.7207	—1.1792	—1.1814	—1'.1793	—0'.0004	—0'.0016	**—1'.1813**	3
d	50.6270	+11	77.7605	+ 8		— 9.7447	—1.1794						3—4
e	50.6380	+11	77.7535	+ 8		— 9.7357	—1.1864						3—4
II a	54.5555	+ 2	73.8205	+13		— 5.8112	+2.7250						3—4
b	54.5830	+ 1	73.8055	+13		— 5.7900	+2.7327						3—4
c	54.5550	0	73.8290	+12		— 5.8157	+2.7258	+2.7298	+2.7249	+0.0010	—0.0016	**+2.7243**	3—4
d	54.5405	0	73.8465	+12		— 5.8317	+2.7336						3—4
e	54.5555	0	73.8325	+12		— 5.8172	+2.7321						3—4
III a	47.1280	+12	81.2455	+17	+ 1	—13.2370	—4.7008						3
b	47.1440	+12	81.2315	+16	+ 1	—13.2220	—4.6993						3
c	47.1195	+12	81.2565	+15	+ 1	—13.2466	—4.7051	—4.7014	—4.6931	—0.0016	—0.0016	**—4.6963**	3
d	47.1035	+12	81.2720	+15	+ 1	—13.2624	—4.6971						3—4
e	47.1105	+12	81.2620	+15	+ 1	—13.2539	—4.7046						3—4
IV a	48.5020	+16	79.8840	+11	+ 1	—11.8688	—3.3326						4 unterexponi[illegible]
b	48.5240	+16	79.8640	+10	+ 1	—11.8477	—3.3250						4 »
c	48.4970	+16	79.8895	+ 9	+ 1	—11.8739	—3.3324	—3.3274	—3.3215	—0.0010	—0.0016	**—3.3241**	4 »
d	48.4875	+16	79.9060	+ 9	+ 1	—11.8869	—3.3216						4 »
e	48.4950	+16	79.8895	+ 8	+ 1	—11.8748	—3.3255						4—5 »

Scheinbare Ædiff: J—Centrum = —23'.4042 $f^\circ_\alpha = 0.99808$ $-i^\circ_\alpha = -0.00050$

F— » = —56.4510

H— » = +53.9960 f_α = **0.99778** $-i_\alpha$ = **—0.00051** ∡ i_α = + 1'.8

K— » = + 3.8047 *Refr.* = + 30

L— » = + 5.8358 $Tx_♃$ = — 55

f'_α = **0.99824** J_α = **—0.00076**

$\alpha_♃ = 10^h\ 11^m.7$

1897. April 15.

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Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.2988		66.0918							
65.2458	+17	63.1415	+ 9	0	+ 2.9490		0.0000	+ 2.9490	
65.0035	+26	63.3760	+21	0	+ 2.7105		— 0.0317	+ 2.6788	Luft 3—4.
74.5092	+32	53.8695	+24	—10	+12.2158		— 0.1856	+12.0302	
68.9895	+30	59.3980	+26	— 6	+ 6.6918		— 0.1695	+ 6.5223	
80.1078	+ 8	48.2685	+19	— 2	+17.8154		— 0.0008	+17.8146	
49.0842	+13	79.2970	+ 7	+ 1	—13.2095		— 0.0020	—13.2115	
72.7720	+18	55.6270	+ 4		+10.4697				
72.2970	+16	56.1090	+ 4		+ 9.9911	+ 9.9826			
71.7850	+16	56.6050	+ 4		+ 9.4871				
71.2000	+17	57.1940	+14		+ 8.8996				
70.7340	+17	57.6780	+10		+ 8.4248	+ 8.4212			
70.2360	+21	58.1515	+10		+ 7.9393				
69.8140	+21	58.5860	+15		+ 7.5108				
69.3375	+18	59.0700	+15		+ 7.0304	+ 7.0275			
68.8380	+18	59.5490	+15		+ 6.5412				
68.3480	+23	60.0480	+15		+ 6.0469				
67.8740	+23	60.5350	+15		+ 5.5665	+ 5.5683			
67.3935	+23	61.0040	+15		+ 5.0916				
66.8940	+13	61.5000	+14		+ 4.5934				
66.4200	+15	61.9870	+14		+ 4.1130	+ 4.1071			
65.9230	+15	62.4860	+14		+ 3.6150				

Trabant — Jupiterscentrum.

P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta(y_t - y_{♃})$	$J_\delta(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
72.8115	+18	55.5850	+ 5		+10.5104	+0.5278						
71.2510	+17	57.1360	+15		+ 8.9541	+0.5329						
69.8500	+21	58.5420	+16		+ 7.5508	+0.5233	+0.5273	+0.′5266	—0.′0011	—0.′0008	+0.0004	+0.′5251
68.3870	+23	60.0025	+20		+ 6.0889	+0.5206						
66.9370	+13	61.4515	+16		+ 4.6391	+0.5320						
71.0640	+15	57.3190	+12		+ 8.7692	—1.2134						
69.5065	+19	58.8825	+13		+ 7.2088	—1.2124						
68.1010	+21	60.2860	+17		+ 5.8042	—1.2233	—1.2173	—1.2157	+0.0026	+0.0012	+0.′0004	—1.2115
67.6390	+11	61.7470	+12		+ 4.3424	—1.2259						
65.1910	+19	63.1940	+12		+ 2.8954	—1.2117						
74.2960	+18	54.0860	+10	— 1	+12.0018	+2.0192						
72.7330	+19	55.6550	+ 6	— 1	+10.4360	+2.0148						
71.3295	+18	57.0490	+16	— 1	+ 9.0362	+2.0087	+2.0138	+2.0111	—0.0044	—0.0034	+0.0004	+2.0037
69.8650	+22	58.5110	+17	— 1	+ 7.5736	+2.0053						
68.4190	+24	59.9560	+21	— 1	+ 6.1280	+2.0209						
73.5640	+17	54.8335	+ 6	— 1	+11.2622	+1.2796						
71.9960	+16	56.3975	+ 7	— 1	+ 9.6962	+1.2750						
70.5990	+17	57.8005	+12	— 1	+ 8.2959	+1.2684	+1.2711	+1.2694	—0.0031	—0.0022	+0.0004	+1.2645
69.1265	+23	59.2670	+17	— 1	+ 6.8264	+1.2581						
67.6810	+13	60.7100	+17	— 1	+ 5.3817	+1.2746						

Scheinbare Decldiff: J—Centrum = — 0.′2843 $f^\circ_\delta = 0.99810$ $i^\circ_\delta = +0.00061$

F— » = + 9.0350

H— » = + 3.5975 f_δ = **0.99768** i_δ = **+0.00054** $\sphericalangle\, i_\delta = +1.′9$

K— » = +14.8398

L— » = —16.1262 f'_δ = **0.99867** J_δ = **+0.00094**

$\delta_{♃} = +12^\circ\ 32.′4$

64 B. 1897. April 18.

Æ **159**

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
		$\frac{mm}{10000}$		$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	mm 60.4272		mm 67.9568							
I	60.4258	+14	67.9550	+18	0	0.0000				2
J	39.4142	+24	68.9615	+13	+ 2	−21.0081				2
F	9.8235	+21	118.5520	+ 7	+38	−50.5950		$12^h\ 26^m\ 24^s$		3—4 stark ellipt.
H	108.8488	+ 5	19.5335	+23	−35	+48.4180				3—4 ellipt.
K	63.8175	+13	64.5600	+22	− 1	+ 3.3930				2—3
L	65.6848	+17	62.7012	+15	− 1	+ 5.2566				2
♃ a_w	50.4890	+10	77.8970	+ 8		− 9.9391				
a_c	50.9470	+10	77.4575	+ 9		− 9.4904	− 9.4873	12 20 12		2—3 *)
a_o	51.4015	+10	76.9960	+ 9		− 9.0324				
♃ b_w	50.4780	+10	77.9150	+ 9		− 9.9536				
b_c	50.9380	+10	77.4685	+10		− 9.5004	− 9.5019	20 46	$12^h\ 21^m\ 21^s$	3
b_o	51.3810	+10	77.0140	+10		− 9.0517				
♃ c_w	50.4930	+10	77.8990	+10		− 9.9382				
c_c	50.9430	+10	77.4620	+10		− 9.4947	− 9.4937	21 26		3
c_o	51.3840	+10	77.0100	+10		− 9.0482				
♃ d_w	50.4765	+10	77.9090	+ 9		− 9.9514				
d_c	50.9350	+10	77.4650	+10		− 9.5002	− 9.4986	21 54		2—3
d_o	51.3895	+10	77.0075	+10		− 9.0442				
♃ e_w	50.4920	+11	77.8940	+10		− 9.9362				
e_c	59.9365	+11	77.4580	+11		− 9.4960	− 9.4915	22 26		3
e_o	51.3930	+11	77.0070	+11		− 9.0422				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	52.8090	+ 7	75.5830	+ 8		− 7.6266	+1.8651						3
b	52.7895	+ 7	75.5990	+ 8		− 7.6400	+1.8619						2—3
c	52.8005	+ 7	75.5870	+ 8		− 7.6285	+1.8652	+1.8628	+1ʹ.8592	−0ʹ.0002	−0ʹ.0018	**+1ʹ.8572**	3
d	52.7915	+ 8	75.5955	+ 9		− 7.6372	+1.8614						3—4
e	52.7975	+ 8	75.5890	+10		− 7.6310	+1.8605						3
II	Bedeckt.												
III a	54.6000	− 1	73.7730	+13		− 5.8224	+3.6649						3
b	54.5865	− 1	73.7900	+13		− 5.8376	+3.6643						3
c	54.6025	0	73.7760	+14		− 5.8226	+3.6711	+3.6655	+3.6585	−0.0003	−0.0018	**+3.6564**	3
d	54.5890	0	73.7870	+14		− 5.8349	+3.6637						3
e	54.5945	+ 1	73.7790	+15		− 5.8282	+3.6633						3
IV a	56.2395	− 1	72.1420	+12		− 4.1871	+5.3002						3
b	56.2230	− 1	72.1640	+12		− 4.2064	+5.2955						3
c	56.2395	0	72.1510	+13		− 4.1916	+5.3021	+5.2978	+5.2877	−0.0005	−0.0018	**+5.2854**	3
d	56.2280	0	72.1595	+13		− 4.2016	+5.2970						3
e	56.2325	+ 2	72.1555	+14		− 4.1973	+5.2942						3

Scheinbare Ædiff: J—Centrum = −23ʹ.4043
F— » = −56.4512
H— » = +53.9963
K— » = + 3.8047
L— » = + 5.8359

$\alpha_♃ = 10^h\ 11^m.4$

$f^\circ_\alpha = 0.99804$ $-i^\circ_\alpha = +0.00069$

f_α = **0.99776** $-i_\alpha$ = **+0.00069** $\measuredangle\ i_\alpha = -2ʹ.4$

Refr. = + 13

$Tx_♃$ = − 61

f'_α = **0.99810** $J\alpha$ = **+0.00021**

*) Jupitersbilder von einer leichten Aureole umgeben.

1897. April 18.

Decl.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.2988		**66.0918**							
63.7448	+ 9	64.6408	+16	0	+ 1.4482		0.0000	+ 1.4482	Luft 3.
63.4865	+19	64.8920	+28	0	+ 1.1933		— 0.0317	+ 1.1616	
72.9610	+30	55.4292	+20	— 9	+10.6620		— 0.1856	+10.4764	
67.5410	+41	60.8420	+26	— 4	+ 5.2464		— 0.1695	+ 5.0769	
78.6182	+ 6	49.7632	+ 5	— 1	+16.3240		— 0.0008	+16.3232	
47.5898	+19	80.8010	+15	— 1	—14.7088		— 0.0020	—14.7108	
64.3495	+13	64.0540	+14		+ 2.0442				
63.9240	+13	64.4905	+14		+ 1.6132	+ 1.6090			
63.4670	+13	64.9200	+22		+ 1.1696				
62.9130	+14	65.4820	+16		+ 0.6119				
62.4840	+14	65.9270	+16		+ 0.1749	+ 0.1772			
62.0470	+14	66.3500	+16		— 0.2551				
61.4405	+15	66.9515	+14		— 0.8590				
60.9850	+15	67.4015	+14		— 1.3117	— 1.3002			
60.5670	+15	67.8190	+24		— 1.7300				
59.9915	+19	68.4025	+19		— 2.3090				
59.5650	+19	68.8380	+19		— 2.7400	— 2.7421			
59.1190	+15	69.2660	+19		— 3.1772				
58.5185	+10	69.8990	+22		— 3.7944				
58.0770	+10	70.3170	+22		— 4.2241	— 4.2239			
57.6490	+10	70.7475	+18		— 4.6532				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta(y_t - y_{♃})$	$J_\delta(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
63.1150	+13	65.2760	+21		+ 0.8156	—0.7934						
61.6860	+13	66.7025	+13		— 0.6118	—0.7890						
60.2050	+18	68.1785	+23		— 2.0905	—0.7903	—0.7926	—0.′7911	—0.′0005	+0.′0010	+0.′0004	**—0.′7902**
58.7630	+14	69.6260	+21		— 3.5354	—0.7933						
57.2760	+13	71.1100	+17		— 5.0207	—0.7968						
Bedeckt.												
62.2760	+12	66.1075	+13		— 0.0193	—1.6283						
60.8495	+13	67.5355	+21		— 1.4469	—1.6241						
59.3680	+13	69.0145	+16		— 2.9269	—1.6267	—1.6279	—1.6248	—0.0009	+0.0018	+0.0004	**—1.6235**
57.9220	+ 8	70.4545	+19		— 4.3703	—1.6282						
56.4390	+ 2	71.9430	+14		— 5.8561	—1.6322						
61.5870	+12	66.8060	+10		— 0.7129	—2.3219						
60.1600	+17	68.2300	+20		— 2.1386	—2.3158						
58.6745	+13	69.7130	+18		— 3.6230	—2.3228	—2.3218	—2.3174	—0.0013	+0.0023	+0.0004	**—2.3160**
57.2330	+12	71.1540	+14		— 5.0641	—2.3220						
55.7485	+ 2	72.6410	+15		— 6.5504	—2.3265						

Scheinbare Decldiff: J— Centrum = — 0.′2843 $\quad f^\circ_\delta = 0.99779 \quad i^\circ_\delta = -0.00042$
F— » = + 9.0351
H— » = + 3.5975 $\quad f_\delta = \mathbf{0.99738} \quad i_\delta = \mathbf{-0.00043} \quad ∡\, i_\delta = -1.'5$
K— » = +14.8399
L— » = —16.1263 $\quad f'_\delta = \mathbf{0.99811} \quad J_\delta = \mathbf{-0.00024}$

$\delta_{♃} = +12^\circ\ 33.'7$

64 C. 1897. April 23.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**60.4204**		**67.9677**							
I	60.4190	+14	67.9658	+19	0	0.0000				2—3
J	39.4110	+24	88.9668	— 6	+ 2	—21.0026				2
F	9.8230	+21	118.5618	+ 6	+37	—50.5913		12^h 18^m 59^s		3—4 ellipt.
H	108.8472	+ 5	19.5358	+23	—33	+48.4252				3—4 »
K	63.8142	+13	64.5625	+21	0	+ 3.3991				1—2
L	65.6685	+18	62.7070	+15	— 1	+ 5.2544				3
♃ a_w	64.8450	+17	62.6535	+12		+ 4.4196				
a_c	65.3010	+17	63.1020	+12		+ 4.8734	+ 4.8719	12 15 10		2
a_o	65.7445	+11	63.5460	+12		+ 5.3228				
♃ b_w	64.8120	+17	62.6775	+11		+ 4.3912				
b_c	65.2705	+17	63.1325	+11		+ 4.8430	+ 4.8428	15 40		3
b_o	65.7215	+11	63.5805	+11		+ 5.2942				
♃ c_w	64.8900	+16	62.6140	+10		+ 4.4620				
c_c	65.3280	+16	63.0580	+10		+ 4.9090	+ 4.9121	16 7	12^h 16^m 7^s	2—3
c_o	65.7790	+10	63.4955	+10		+ 5.3654				
♃ d_w	64.8545	+16	62.6520	+10		+ 4.4252				
d_c	65.3050	+16	63.1035	+10		+ 4.8747	+ 4.8771	16 37		2—3
d_o	65.7525	+10	63.5370	+10		+ 5.3314				
♃ e_w	64.8060	+16	62.6820	+10		+ 4.3860				
e_c	65.2610	+16	63.1355	+10		+ 4.8367	+ 4.8372	17 1		2—3
e_o	65.7110	+10	63.5805	+10		+ 5.2889				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_{♃}$	Mittel.	$f'_\alpha(x_t - x_{♃})$	$J_\alpha(y_t - y_{♃})$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	66.6355	+10	61.7480	+12		+ 6.2173	+1.3454						2—3
b	66.6085	+ 9	61.7780	+11		+ 6.1888	+1.3460						2—3
c	66.6670	+ 9	61.7160	+11		+ 6.2490	+1.3369	+1.3428	+1′.3402	—0′.0004	—0′.0019	**+1′.3379**	3
d	66.6410	+ 8	61.7440	+10		+ 6.2220	+1.3449						2
e	66.5990	+ 8	61.7900	+10		+ 6.1780	+1.3408						2—3
II a	66.2780	+12	62.1110	+12		+ 5.8572	+0.9753						3
b	66.2510	+11	62.1320	+11		+ 5.8332	+0.9804						3—4
c	66.3195	+11	62.0650	+11		+ 5.9009	+0.9888	+0.9856	+0.9837	—0.0004	—0.0019	**+0.9814**	3
d	66.2895	+10	62.0960	+10		+ 5.8704	+0.9933						2—3
e	66.2465	+10	62.1395	+10		+ 5.8272	+0.9900						3
III a	61.3610	+11	67.0130	+10		+ 0.9477	—3.9242						2
b	61.3325	+10	67.0390	+ 9		+ 0.9204	—3.9224						2
c	61.4045	+10	66.9710	+ 9		+ 0.9904	—3.9217	—3.9211	—3.9136	+0.0013	—0.0019	**—3.9142**	2—3
d	61.3735	+10	67.0015	+ 8		+ 0.9598	—3.9173						2
e	61.3330	+10	67.0455	+ 8		+ 0.9175	—3.9197						2
IV a	69.5850	+19	58.7990	+13		+ 9.1670	+4.2951						3
b	69.5590	+17	58.8275	+13		+ 9.1396	+4.2968						3
c	69.6230	+17	58.7635	+12		+ 9.2036	+4.2915	+4.2950	+4.2868	—0.0014	—0.0019	**+4.2835**	3—4
d	69.5935	+16	58.7895	+11		+ 9.1759	+4.2988						3
e	69.5490	+16	58.7365	+11		+ 9.1302	+4.2930						3

Scheinbare Ædiff.: J—Centrum = —23′.4045
F— » = —56.4516
H— » = +53.9967
K— » = + 3.8047
L— » = + 5.8360

$\alpha_{♃} = 10^h\ 11^m.1$

$f^\circ_\alpha = 0.99805$ $-i^\circ_\alpha = +0.00042$
$f_\alpha =$ **0.99777** $-i_\alpha =$ **+0.00040** $\measuredangle\ i_\alpha = -1′.4$
Refr. = + 12
$Tx_{♃}$ = + 32
$f'_\alpha =$ **0.99810** $J_\alpha =$ **+0.00084**

1897. April 23.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 62.2988	mm/10000	mm 66.0918	mm/10000	mm/10000	mm	mm	mm	mm	
62.2978	+10	66.0908	+10	0	0.0000		0.0000	0.0000	
62.0362	+19	66.3430	+22	0	−0.2570		−0.0317	−0.2887	
71.5165	+34	56.8722	+29	−7	+9.2182		−0.1856	+9.0326	
66.0850	+27	62.3000	+25	−3	+3.7888		−0.1695	+3.6193	
77.1685	+9	51.2115	+10	0	+14.8750		−0.0008	+14.8742	
46.1332	+14	82.2488	+2	−1	−16.1606		−0.0020	−16.1626	
56.5270	+9	71.8740	+12		−5.7772				
56.9530	+9	71.4540	+13		−5.3542	−5.3489			
57.3885	+9	71.0120	+13		−4.9154				
58.0185	+5	70.3820	+17		−4.2858				
58.4645	+5	69.9445	+17		−3.8441	−3.8479			
58.8900	+9	69.5100	+17		−3.4139				
59.5090	+14	68.8900	+14		−2.7940				
59.9430	+14	68.4580	+19		−2.3612	−2.3626			
60.3690	+14	68.0265	+19		−1.9325				
60.9520	+10	67.4425	+9		−1.3487				
61.3900	+10	67.0150	+9		−0.9160	−0.9163			
61.8205	+9	66.5820	+9		−0.4842				
62.3730	+10	66.0210	+11		+0.0724				
62.8060	+9	65.5935	+11		+0.5026	+0.5021			
63.2350	+9	65.1625	+17		+0.9314				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
56.4120	−1	71.9765	+12		−5.8864	−0.5375						
57.9095	+5	70.4725	+17		−4.3856	−0.5377						
59.4010	+10	68.9880	+14		−2.8972	−0.5346	−0.5346	−0.′5335	−0.′0002	−0.′0005	+0.′0004	**−0.′5338**
60.8430	+10	67.5380	+19		−1.4514	−0.5351						
62.2710	+9	66.1160	+11		−0.0261	−0.5282						
56.4810	−1	71.9180	+13		−5.8227	−0.4738						
57.9820	+5	70.4080	+18		−4.3172	−0.4693						
59.4730	+10	68.9180	+15		−2.8262	−0.4636	−0.4670	−0.4661	−0.0002	−0.0003	+0.0004	**−0.4662**
60.9170	+10	67.4720	+20		−1.3815	−0.4652						
62.3365	+9	66.0515	+12		+0.0388	−0.4633						
58.5500	+11	69.8340	+16		−3.7458	+1.6031						
60.0480	+15	68.3315	+18		−2.2454	+1.6025						
61.5340	+10	66.8460	+8		−0.7594	+1.6032	+1.6040	+1.6008	+0.0007	+0.0008	+0.0004	**+1.6027**
62.9795	+10	65.3940	+16		+0.6890	+1.6053						
64.4030	+9	63.9800	+8		+2.1080	+1.6059						
55.2490	0	73.1420	+15		−7.0508	−1.7019						
56.7480	+10	71.6425	+13		−5.5509	−1.7030						
58.2360	+6	70.1550	+18		−4.0636	−1.7010	−1.6983	−1.6950	−0.0007	−0.0019	+0.0004	**−1.6972**
59.6850	+15	68.7035	+15		−2.6128	−1.6965						
61.1055	+11	67.2815	+10		−1.1914	−1.6893						

Scheinbare Decldiff: J—Centrum $= -0.'2843$ $\quad f^\circ_\delta = 0.99772$ $\quad i^\circ_\delta = -0.00034$

F— » $= +9.0352$

H— » $= +3.5974$ $\quad f_\delta = \mathbf{0.99731}$ $\quad i_\delta = \mathbf{-0.00034}$ $\quad \sphericalangle\, i_\delta = -1.'2$

K— » $= +14.8400$

L— » $= -16.1264$ $\quad f'_\delta = \mathbf{0.99802}$ $\quad J_\delta = \mathbf{-0.00017}$

$\delta_♃ = +12^\circ\ 34.'6$

64 D. 1897. April 24.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**60.4194**		**67.9684**							
I	60.4180	+14	67.9665	+19	0	0.0000				2—3
J	39.4080	+24	88.9665	— 6	+ 2	—21.0030				2
F	9.8190	+20	118.5668	+ 4	+38	—50.5948		12^h 35^m 9^s		4 ellipt.
H	108.8402	+ 4	19.5448	+23	—33	+48.4180				3—4 ellipt.
K	63.8150	+12	64.5598	+21	0	+ 3.4016				1—2
L	65.6750	+19	62.5042	+15	— 1	+ 5.2600				2—3
♃ a_w	67.3235	+ 8	60.1805	+14		+ 6.9049				
a_c	67.7695	+18	60.6160	+10		+ 7.3516	+ 7.3492	12 31 12		3
a_o	68.2135	+18	61.0625	+10		+ 7.7912				
♃ b_w	67.3100	+ 9	60.1695	+14		+ 6.8897				
b_c	67.7800	+19	60.6330	+10		+ 7.3484	+ 7.3475	31 40		2—3
b_o	68.2290	+19	61.0795	+10		+ 7.8045				
♃ c_w	67.3465	+ 9	60.1700	+14		+ 6.9262				
c_c	67.7825	+19	60.6100	+10		+ 7.3612	+ 7.3634	32 14	12^h 32^m 12^s	1—2
c_o	68.2260	+19	61.0430	+10		+ 7.8028				
♃ d_w	67.3240	+ 9	60.1845	+15		+ 6.9012				
d_c	67.7800	+19	60.6350	+11		+ 7.3474	+ 7.3456	32 43		2
d_o	68.2115	+19	61.0695	+11		+ 7.7882				
♃ e_w	67.3235	+10	60.1540	+15		+ 6.9042				
e_c	67.7835	+20	60.6130	+11		+ 7.3602	+ 7.3602	33 9		3
e_o	68.2370	+20	61.0640	+11		+ 7.8162				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I *a*	66.2710	+11	62.1160	+ 9	+ 5.8521	—1.4971						2
b	66.2460	+11	62.1440	+ 9	+ 5.8256	—1.5219						2—3
c	66.2800	+11	62.1130	+ 9	+ 5.8581	—1.5053	—1.5096	—1'.5068	+0'.0007	—0'.0020	**—1'.5081**	3
d	66.2565	+12	62.1315	+10	+ 5.8371	—1.5085						2—3
e	66.2670	+13	62.1265	+10	+ 5.8449	—1.5153						2—3
II *a*	64.9770	+17	63.4070	+ 9	+ 4.5599	—2.7893						2—3
b	64.9515	+17	63.4325	+ 9	+ 4.5344	—2.8131						3
c	64.9895	+17	63.4005	+10	+ 4.5694	—2.7940	—2.8000	—2.7948	+0.0014	—0.0020	**—2.7954**	2—3
d	64.9640	+18	63.4185	+10	+ 4.5476	—2.7980						2
e	64.9720	+19	63.4125	+11	+ 4.5546	—2.8056						2—3
III *a*	67.1850	+ 9	61.1900	+10	+ 6.7720	—0.5772						2
b	67.1620	+ 9	61.2080	+10	+ 6.7514	—0.5961						2—3
c	67.1975	+ 9	61.1775	+10	+ 6.7844	—0.5790	—0.5837	—0.5826	+0.0002	—0.0020	**—0.5844**	2—3
d	67.1755	+10	61.1965	+11	+ 6.7640	—0.5816						2
e	67.1870	+10	61.1845	+11	+ 6.7757	—0.5845						2—3
IV *a*	69.1585	+13	59.2290	+10	+ 8.7394	+1.3902						2—3
b	69.1300	+14	59.2555	+10	+ 8.7120	+1.3645						3
c	69.1640	+14	59.2240	+10	+ 8.7447	+1.3813	+1.3768	+1.3742	—0.0005	—0.0020	**+1.3717**	3
d	69.1405	+14	59.2445	+10	+ 8.7227	+1.3771						2—3
e	69.1495	+15	59.2370	+11	+ 8.7310	+1.3708						2—3

Scheinbare Ædiff.: *J*—Centrum = —23'.4045
F— » = —56.4517
H— » = +53.9968
K— » = + 3.8047
L— » = + 5.8360

$f^\circ_\alpha = 0.99807$ $-i^\circ_\alpha = +0.00052$

f_α = **0.99779** $-i_\alpha$ = **+0.00052** ∢ i_α = — 1'.8

Refr. = + 15

$Tx_♃$ = + 48

f'_α = **0.99814** J_α = **+0.00115**

$\alpha_♃ = 10^h\ 11^m.0$

1897. April 24.

eihe. **Decl.**

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.2988		**66.0918**							
60.8760	+11	67.5118	+18	0	— 1.4218		0.0000	— 1.4218	
60.6192	+20	67.7585	+30	0	— 1.6736		— 0.0317	— 1.7053	
70.0918	+39	58.2838	+25	— 8	+ 7.8004		— 0.1856	+ 7.6148	Luft 2.
64.6600	+33	63.7248	+24	— 1	+ 2.3644		— 0.1695	+ 2.1949	
75.7460	+ 7	52.6350	+ 7	0	+13.4520		— 0.0008	+13.4512	
44.7158	+18	83.6662	— 6	+ 2	—17.5773		— 0.0020	—17.5793	
64.2220	+ 8	64.1785	+13		+ 1.9180				
64.6430	+16	63.7570	+13		+ 2.3396	+ 2.3400			Luft 3—2.
65.0615	+16	63.3300	+14		+ 2.7624				
65.7280	+10	62.6690	+14		+ 3.4258				
66.1700	+10	62.2330	+14		+ 3.8648	+ 3.8614			
66.5940	+10	61.7995	+14		+ 4.2936				
67.1110	+ 8	61.2920	+15		+ 4.8056				
67.5335	+18	60.8630	+15		+ 5.2319	+ 5.2299			
67.9510	+18	60.4400	+15		+ 5.6522				
68.5830	+13	59.8195	+19		+ 6.2780				
69.0110	+13	59.3855	+15		+ 6.7092	+ 6.7090			
69.4370	+13	58.9500	+15		+ 7.1399				
70.0120	+16	58.3900	+10		+ 7.7128				
70.4570	+16	57.9495	+10		+ 8.1506	+ 8.1523			
70.8935	+12	57.4995	+10		+ 8.5936				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta\,(y_t - y_{♃})$	$J_\delta\,(x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
65.2825	+16	63.1025	+10		+ 2.9868	+0.6468						
66.7990	+ 8	61.5910	+10		+ 4.5004	+0.6390						
68.1750	+18	60.2090	+15		+ 5.8796	+0.6497	+0.6450	+0.′6439	+0.′0001	+0.′0007	+0.′0004	**+0.′6451**
69.6470	+16	58.7395	+11		+ 7.3505	+0.6415						
71.0980	+12	57.2910	+10		+ 8.8001	+0.6478						
65.8500	+10	62.5320	+10		+ 3.5555	+1.2155						
67.3670	+ 8	61.0190	+11		+ 5.0704	+1.2090						
68.7435	+13	59.6410	+15		+ 6.4476	+1.2177	+1.2131	+1.2110	+0.0001	+0.0011	+0.0004	**+1.2126**
70.2160	+16	58.1685	+ 6		+ 7.9208	+1.2118						
71.6580	+11	56.7240	+10		+ 9.3636	+1.2113						
64.7820	+16	63.5920	+ 9		+ 2.4918	+0.1518						
66.2940	+10	62.0810	+10		+ 4.0030	+0.1416						
67.6700	+18	60.7015	+11		+ 5.3811	+0.1512	+0.1467	+0.1464	0.0000	+0.0003	+0.0004	**+0.1471**
69.1440	+13	59.2305	+11		+ 6.8534	+0.1444						
70.5885	+12	57.7890	+ 6		+ 8.2966	+0.1443						
64.1710	+ 9	64.2150	+10		+ 1.8744	—0.4656						
65.6885	+11	62.7000	+11		+ 3.3908	—0.4706						
67.0635	+ 9	61.3180	+12		+ 4.7691	—0.4608	—0.4647	—0.4639	—0.0001	—0.0007	+0.0004	**—0.4643**
68.5400	+14	59.8460	+16		+ 6.2434	—0.4656						
69.9890	+17	58.4000	+ 7		+ 7.6915	—0.4608						

Scheinbare Decldiff: J— Centrum $= -\ 0.'2843$ $\quad f^\circ_\delta = 0.99794 \quad i^\circ_\delta = -0.00025$

F— » $= +\ 9.0352$

H— » $= +\ 3.5974$ $\quad f_\delta = \mathbf{0.99753} \quad i_\delta = \mathbf{-0.00026} \quad \sphericalangle\, i_\delta = -\ 0.'9$

K— » $= +14.8400$

L— » $= -16.1264$ $\quad f'_\delta = \mathbf{0.99829} \quad J_\delta = \mathbf{-0.00005}$

$\delta_{♃} = +12^\circ\ 34.'6$

65 A. 1897. April 25.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.9798**		**66.4018**							
I	61.9788	+10	66.4008	+10	0	0.0000				2—3
J	40.9742	+25	87.4060	— 4	+ 2	—21.0032				2
F	11.3670	+24	117.0122	+ 7	+37	—50.6070				3—4 ellipt.
H	110.4002	+ 5	17.9802	+25	—33	+48.4167		12h 34m 2s		4 ellipt.
K	65.3622	+22	63.0150	+16	— 1	+ 3.3848				1—2
L	67.2410	+14	61.1305	+15	0	+ 5.2662				2
♃ a_w	53.8675	+ 6	74.5250	+14		— 8.1182				
a_c	54.3290	+ 6	74.0755	+14		— 7.6626	— 7.6643	12 30 41		3
a_o	54.7700	+ 2	73.6150	+14		— 7.2121				
♃ b_w	53.8765	+ 5	74.5175	+13		— 8.1099				
b_c	54.3340	+ 5	74.0770	+13		— 7.6609	— 7.6591	31 4		3
b_o	54.7810	+ 1	73.6150	+13		— 7.2066				
♃ c_w	53.8650	+ 5	74.5310	+13		— 8.1224				
c_c	54.3240	+ 5	74.0690	+13		— 7.6619	— 7.6636	31 34	12h 31m 32s	3
c_o	54.7775	+ 1	73.6110	+13		— 7.2064				
♃ d_w	53.8910	+ 4	74.5140	+12		— 8.1009				
d_c	54.3360	+ 4	74.0660	+12		— 7.6544	— 7.6519	31 58		3
d_o	54.7860	0	73.6075	+12		— 7.2004				
♃ e_w	53.8940	+ 4	74.5000	+12		— 8.0924				
e_c	54.3375	+ 4	74.0540	+12		— 7.6476	— 7.6468	32 24		2—3
e_o	54.7855	0	73.6070	+12		— 7.2004				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	56.1250	+ 2	72.2510	+13		— 5.8526	+1.8117						
b	56.1335	+ 1	72.2475	+12		— 5.8466	+1.8125						
c	56.1280	0	72.2515	+12		— 5.8514	+1.8122	+1.8128	+1'.8093	—0'.0007	—0'.0020	**+1'.8066**	3
d	56.1400	0	72.2415	+11		— 5.8403	+1.8116						
e	56.1500	0	72.2330	+11		— 5.8310	+1.8158						
II	Bedeckt.												
III a	57.4445	+11	70.9310	+13		— 4.5324	+3.1319						
b	57.4535	+10	70.9220	+13		— 4.5234	+3.1357						
c	57.4505	+10	70.9220	+12		— 4.5258	+3.1378	+3.1361	+3.1302	—0.0013	—0.0020	**+3.1269**	2—3
d	57.4615	+10	70.9155	+12		— 4.5161	+3.1358						
e	57.4695	+ 9	70.9060	+12		— 4.5074	+3.1394						
IV a	52.6370	+10	75.7505	+10		— 9.3458	—1.6815						
b	52.6440	+10	75.7405	+ 8		— 9.3372	—1.6781						
c	52.6475	+ 9	75.7460	+ 8		— 9.3382	—1.6746	—1.6786	—1.6754	+0.0007	—0.0020	**—1.6767**	3
d	52.6550	+ 8	75.7375	+ 7		— 9.3302	—1.6783						
e	52.6540	+ 8	75.7305	+ 7		— 9.3272	—1.6804						

Scheinbare Ædiff: J— Centrum = —23'.4046 $f^\circ_\alpha = 0.99801$ $-i^\circ_\alpha = +0.00126$

F— » = —56.4518

H— » = +53.9969 f_α = **0.99773** $-i_\alpha$ = **+0.00126** $\measuredangle\, i_\alpha = -\,4'.3$

K— » = + 3.8047 $Refr.$ = + 15

L— » = + 5.8360 $Tx_♃$ = — 50

f'_α = **0.99808** J_α = **+0.00091**

$\alpha_♃ = 10^h\ 11^m.0$

1897. April 25.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.7315		65.6585							
65.6745	+11	63.2998	+ 9	0	+ 2.9510		0.0000	+ 2.9510	
65.3982	+24	62.9775	+20	0	+ 2.6740		— 0.0317	+ 2.6423	
74.8490	+32	53.5278	+21	— 8	+12.1238		— 0.1856	+11.9382	
69.5065	+35	58.8755	+27	— 7	+ 6.7787		— 0.1695	+ 6.6092	Luft 3—2.
80.5500	+14	47.8270	+20	— 2	+17.8245		— 0.0008	+17.8237	
49.5235	+ 5	78.8512	+ 7	+ 1	—13.2004		— 0.0020	—13.2024	
72.7320	+17	55.6620	+ 2		+ 9.9992				
72.2960	+15	56.1070	+ 2		+ 9.5586	+ 9.5552			
71.8395	+15	56.5520	+ 2		+ 9.1079				
71.2585	+16	57.1385	+12		+ 8.5237				
70.8240	+16	57.5865	+ 8		+ 8.0826	+ 8.0862			
70.3860	+16	58.0090	+ 8		+ 7.6524				
69.8140	+20	58.5845	+13		+ 7.0786				
69.3780	+17	59.0195	+13		+ 6.6430	+ 6.6388			
68.9270	+17	59.4650	+13		+ 6.1947				
68.3250	+22	60.0660	+14		+ 5.5934				
67.8865	+22	60.5130	+10		+ 5.1508	+ 5.1528			
67.4485	+22	60.9485	+10		+ 4.7141				
66.8180	+12	61.5770	+ 9		+ 4.0836				
66.3870	+14	62.0110	+ 9		+ 3.6518	+ 3.6494			
65.9480	+14	62.4500	+ 9		+ 3.2128				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
71.4950	+15	56.8780	+ 9		+ 8.7723	—0.7829						
70.0290	+19	58.3470	+ 5		+ 7.3052	—0.7810						
68.5885	+16	59.7975	+14		+ 5.8591	—0.7797	—0.7810	—0.′7797	—0.′0018	+0.′0008	+0.′0004	**—0.′7803**
67.0930	+11	61.2800	+10		+ 4.3700	—0.7828						
65.5985	+13	62.7845	+ 9		+ 2.8707	—0.7787						
Bedeckt.												
70.8730	+14	57.5030	+ 9		+ 8.1588	—1.3964						
69.4080	+15	58.9635	+10		+ 6.6860	—1.4002						
67.9560	+20	60.4155	+14		+ 5.2340	—1.4048	—1.4033	—1.4010	—0.0031	+0.0012	+0.0004	**—1.4025**
66.4670	+12	61.9080	+ 9		+ 3.7432	—1.4096						
64.9665	+18	63.4070	+ 9		+ 2.2437	—1.4057						
73.0895	+17	55.3005	+ 4		+10.3586	+0.8034						
71.6250	+15	56.7625	+14		+ 8.8948	+0.8086						
70.1735	+20	58.2175	+10		+ 7.4420	+0.8032	+0.8069	+1.8056	+0.0017	—0.0009	+0.0004	**+0.8068**
68.6885	+17	59.6970	+19		+ 5.9592	+0.8064						
67.1940	+12	61.1960	+15		+ 4.4624	+0.8130						

Scheinbare Decldiff. J—Centrum = — 0.′2843 f^0_δ = 0.99800 i^0_δ = —0.00122
F— » = + 9.0353
H— » = + 3.5974 f_δ = **0.99759** i_δ = **—0.00123**   ∡ i_δ = —4.′2
K— » = +14.8401
L— » = —16.1264 f'_δ = **0.99834** J_δ = **—0.00102**

$\delta_♃ = +12° \; 34.'5$

65 B. 1897. April 26.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.9100**		**66.4705**							
I	61.9091	+ 9	66.4695	+10	0	0.0000				2—3
J	40.9060	+24	67.4750	— 4	+ 2	—21.0026				2
F	11.2995	+23	117.0878	+ 6	+39	—50.6092				4 ellipt.
H	110.3355	+ 4	18.0500	+24	—33	+48.4187		$12^h\ 25^m\ 49^s$		3—4 ellipt.
K	65.2922	+21	63.0880	+16	0	+ 3.3826				2
L	67.1720	+15	61.2015	+16	0	+ 5.2654				2—3
♃ a_w	52.7515	+ 7	75.6440	+ 7		— 9.1660				
a_c	53.2210	+ 7	75.1680	+10		— 8.6934	— 8.6933	12 22 26		2—3
a_o	53.6945	+ 3	74.6955	+10		— 8.2206				
♃ b_w	52.7815	+ 7	75.7105	+ 8		— 9.1343				
b_c	53.2495	+ 7	75.1630	+11		— 8.6767	— 8.6794	22 54		2—3
b_o	53.6910	+ 3	74.7050	+11		— 8.2272				
♃ c_w	52.7705	+ 7	75.6180	+ 8		— 9.1436				
c_c	53.2395	+ 7	75.1470	+11		— 8.6737	— 8.6811	23 17	$12^h\ 23^m\ 17^s$	2
c_o	53.6915	+ 3	74.7030	+11		— 8.2259				
♃ d_w	52.7765	+ 7	75.6170	+ 8		— 9.1400				
d_c	53.2375	+ 7	75.1585	+11		— 8.6804	— 8.6839	23 42		2—3
d_o	53.6860	+ 3	74.7085	+11		— 8.2314				
♃ e_w	52.7805	+ 8	75.6125	+ 9		— 9.1358				
e_c	53.2390	+ 8	75.1575	+12		— 8.6792	— 8.6797	24 7		2—3
e_o	53.6915	+ 4	74.6995	+12		— 8.2242				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	51.4545	+10	76.9340	+ 9		—10.4594	—1.7661						3—4
b	51.4710	+10	76.9140	+ 9		—10.4412	—1.7618						2—3
c	51.4705	+10	76.9190	+10		—10.4440	—1.7629	—1.7618	—1′.7584	+0′.0006	—0′.0021	**—1′.7599**	2—3
d	51.4695	+10	76.9140	+10		—10.4420	—1.7581						3
e	51.4735	+11	76.9135	+11		—10.4398	—1.7601						3
II a	56.0625	— 1	72.3200	+12		— 5.8492	+2.8441						3—4
b	56.0755	— 1	72.3035	+12		— 5.8344	+2.8450						3
c	56.0740	0	72.3035	+12		— 5.8351	+2.8460	+2.8470	+2.8415	—0.0011	—0.0021	**+2.8383**	2—3
d	56.0805	0	72.3010	+13		— 5.8306	+2.8533						3
e	56.0765	+ 1	72.3020	+14		— 5.8332	+2.8465						
III a	57.8230	+ 5	70.5565	+13		— 4.0869	+4.6064						3
b	57.8360	+ 5	70.5410	+13		— 4.0726	+4.6068						2—3
c	57.8350	+ 6	70.5435	+14		— 4.0744	+4.6067	+4.6076	+4.5986	—0.0017	—0.0021	**+4.5948**	2—3
d	57.8370	+ 6	70.5445	+14		— 4.0739	+4.6100						2—3
e	57.8370	+ 7	70.5400	+15		— 4.0716	+4.6081						2—3
IV a	48.7390	+14	79.6480	+ 8		—13.1740	—4.4807						3—4
b	48.7625	+13	79.6250	+ 8		—13.1508	—4.4714						3
c	48.7605	+13	79.6270	+ 9		—13.1528	—4.4717	—4.4733	—4.4646	+0.0017	—0.0021	**—4.4650**	3
d	48.7635	+13	79.6310	+ 9		—13.1533	—4.4694						2—3
e	48.7590	+13	79.6260	+ 9		—13.1530	—4.4733						3

Scheinbare Ædiff.: J—Centrum $= -23'.4046$ $\quad f^\circ_\alpha = 0.99798 \quad -i^\circ_\alpha = +0.00130$

F— » $= -56.4509$

H— » $= +53.9970 \quad f_\alpha = \mathbf{0.99770} \quad -i_\alpha = \mathbf{+0.00130} \quad \measuredangle\, i_\alpha = -4'.5$

K— » $= +\ 3.8047 \quad$ *Refr.* $= +\ 13$

L— » $= +\ 5.8360 \quad Tx_♃ = -\ 56$

$f'_\alpha = \mathbf{0.99804} \quad J_\alpha = \mathbf{+0.00087}$

$\alpha_♃ = 10^h\ 11^m.0$

1897. April 26.

Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	(♃n + ♃c + ♃s)/3	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.7315		65.6585							
64.1620	+ 9	64.2242	+ 8	0	+ 1.4324		0.0000	+ 1.4324	
63.8815	+16	64.4995	+19	0	+ 1.1544		— 0.0317	+ 1.1227	
73.3298	+35	55.0544	+17	—11	+10.6010		— 0.1856	+10.4154	Luft 2—3.
67.9962	+35	60.3885	+31	— 4	+ 5.2672		— 0.1695	+ 5.0977	
79.0346	+ 6	49.3460	+14	0	+16.3074		— 0.0008	+ 6.3066	
48.0015	+19	80.3726	+ 9	0	—14.7216		— 0.0020	—14.7236	
64.4010	+12	63.9940	+12		+ 1.6670				
63.9620	+12	64.4400	+12		+ 1.2245	+ 1.2228			
63.5200	+12	64.8930	+12		+ 0.7770				
62.9330	+13	65.4640	+14		+ 0.1980				
62.5035	+13	65.9085	+14		— 0.2390	— 0.2413			
62.0570	+13	66.3500	+14		— 0.6830				
61.4620	+14	66.9310	+12		— 1.2709				
61.0240	+14	67.3790	+12		— 1.7139	— 1.7144			
60.5805	+14	67.8245	+12		— 2.1584				
59.9770	+18	68.4140	+17		— 2.7550				
59.5540	+18	68.8525	+17		— 3.1857	— 3.1853			
59.1260	+14	69.2830	+17		— 3.6152				
58.5160	+ 9	69.8815	+20		— 4.2198				
58.0850	+ 9	70.3130	+20		— 4.6510	— 4.6508			
57.6560	+ 9	70.7450	+20		— 5.0816				

P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
64.6770	+21	63.7110	+13		+ 1.9469	+0.7241						
63.2060	+14	65.1800	+21		+ 0.4762	+0.7175						
61.7385	+14	66.6600	+13		— 0.9972	+0.7172	+0.7194	+0'.7181	+0'.0026	—0'.0011	+0'.0004	**+0'.7200**
60.2695	+19	68.1225	+23		— 2.4632	+0.7221						
58.7990	+15	69.5950	+21		— 3.9348	+0.7160						
62.7245	+12	65.6670	+12		— 0.0078	—1.2306						
61.2540	+13	67.1370	+10		— 1.4778	—1.2365						
59.7750	+17	68.6040	+15		— 2.9509	—1.2365	—1.2335	—1.2313	—0.0043	+0.0013	+0.0004	**—1.2339**
58.3140	+ 8	70.0705	+18		— 4.4152	—1.2299						
56.8455	+12	71.5415	+13		— 5.8846	—1.2338						
61.9940	+11	66.3870	+11		— 0.7330	—1.9558						
60.5270	+12	67.8540	+19		— 2.2004	—1.9591						
59.0520	+12	69.3255	+14		— 3.6734	—1.9590	—1.9583	—1.9547	—0.0070	+0.0019	+0.0004	**—1.9594**
57.5855	+ 7	70.7925	+13		— 5.1403	—1.9550						
56.1110	+ 1	72.2640	+12		— 6.6136	—1.9628						
65.9110	+15	62.4810	+16		+ 3.1784	+1.9556						
64.4370	+13	63.9545	+15		+ 1.7046	+1.9459						
62.9700	+14	65.4240	+23		+ 0.2360	+1.9504	+1.9524	+1.9489	+0.0067	—0.0032	+0.0004	**+1.9528**
61.5050	+14	67.8860	+15		— 1.2270	+1.9583						
60.0315	+19	68.3560	+25		— 2.6990	+1.9518						

Scheinbare Decldiff: J— Centrum = — 0'.2843 $\qquad f^\circ_\delta = 0.99787 \qquad i^\circ_\delta = -0.00132$

F— » = + 9.0353

H— » = + 3.5974 $\qquad f_\delta = \mathbf{0.99746} \qquad i_\delta = \mathbf{-0.00132} \qquad \sphericalangle\, i_\delta = -4'.5$

K— » = +14.8401

L— » = —16.1264 $\qquad f'_\delta = \mathbf{0.99818} \qquad J_\delta = \mathbf{-0.00151}$

$\delta_{♃} = +12^\circ\ 34'.4$

65 C. 1897. April 28.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	Scalenablesung. P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**61.9200**		**66.4709**							
I	61.9191	+ 9	66.4698	+11	0	0.0000				3
J	40.9052	+24	87.4822	— 3	+ 2	—21.0115				3
F	11.2998	+23	117.0792	+ 5	+37	—50.6096		$12^h\ 35^m\ 50^s$		4 ellipt.
H	110.3380	+ 4	18.0482	+24	—33	+48.4160				3—4
K	65.2942	+21	63.0902	+15	0	+ 3.3778				2—3
L	67.1820	+16	61.1995	+16	— 1	+ 5.2666				3
♃ a_w	68.3170	+20	60.0810	+17		+ 6.3936				
a_c	68.8005	+15	59.5850	+17		+ 6.8831	+ 6.8872	12 31 36		2—3
a_o	69.3050	+15	59.0855	+13		+ 7.3848				
♃ b_w	68.3280	+19	60.0660	+16		+ 6.4066				
b_c	68.8180	+14	59.5930	+16		+ 6.8878	+ 6.8877	32 14		3
b_o	69.2915	+14	59.1050	+12		+ 7.3688				
♃ c_w	68.3085	+19	60.0840	+16		+ 6.3878				
c_c	68.8135	+14	59.5880	+16		+ 6.8881	+ 6.8907	32 41	$12^h\ 32^m\ 43^s$	3—4
c_o	69.3235	+14	59.0820	+12		+ 7.3963				
♃ d_w	68.3280	+13	60.0690	+15		+ 6.4048				
d_c	68.8220	+13	59.5880	+15		+ 6.8924	+ 6.8921	33 16		3
d_o	69.3030	+13	59.0960	+11		+ 7.3790				
♃ e_w	68.3030	+18	60.0720	+15		+ 6.3911				
e_c	68.8115	+13	59.5845	+15		+ 6.8888	+ 6.8846	33 48		3—4
e_o	69.2940	+13	59.0970	+11		+ 7.3740				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	67.8895	+20	60.5120	+17		+ 5.9644	—0.9228						3
b	67.9000	+19	60.4905	+16		+ 5.9804	—0.9073						3
c	67.8965	+19	60.4960	+15		+ 5.9759	—0.9148	—0.9086	—0′.9068	+0′.0007	—0′.0021	**—0′.9082**	4
d	67.9090	+18	60.4820	+15		+ 5.9891	—0.9030						3
e	67.9080	+18	60.4800	+15		+ 5.9896	—0.8950						3—4
II a	66.2610	+11	62.1250	+11		+ 4.3434	—2.5438						3
b	66.2735	+11	62.1155	+10		+ 4.3545	—2.5332						3
c	66.2710	+10	62.1165	+10		+ 4.3528	—2.5379	—2.5339	—2.5289	+0.0022	—0.0021	**—2.5288**	3—4
d	66.2810	+10	62.1050	+10		+ 4.3634	—2.5287						3
e	66.2770	+10	62.1105	+10		+ 4.3587	—2.5259						3
III a	67.7630	+20	60.6205	+13		+ 5.8470	—1.0402						3
b	67.7710	+19	60.6090	+12		+ 5.8568	—1.0309						3
c	67.7720	+19	60.6080	+11		+ 5.8578	—1.0329	—1.0332	—1.0311	+0.0011	—0.0021	**—1.0321**	3—4
d	67.7710	+18	60.6040	+11		+ 5.8593	—1.0328						3
e	67.7700	+18	60.6105	+11		+ 5.8556	—1.0290						3—4
IV a	60.9290	+11	67.4575	+ 9		— 0.9887	—7.8759						3
b	60.9420	+11	67.4485	+ 9		— 0.9777	—7.8654						3—4
c	60.9395	+12	67.4525	+ 9		— 0.9809	—7.8716	—7.8664	—7.8508	+0.0069	—0.0021	**—7.8460**	3—4
d	60.9465	+13	67.4430	+ 8		— 0.9726	—7.8647						3
e	60.9480	+14	67.4390	+ 8		— 0.9668	—7.8544						2—3

Scheinbare Ædiff.: J— Centrum $= -23'.4047$ $\quad f^\circ_\alpha = 0.99795 \quad -i^\circ_\alpha = +0.00150$

F— » $= -56.4520$

H— » $= +53.9971$ $\quad f_\alpha = \mathbf{0.99767} \quad -i_\alpha = \mathbf{+0.00150} \quad \measuredangle\, i_\alpha = -\ 5'.2$

K— » $= +\ 3.8047$ $\quad$ Refr. $= +\ \ 15$

L— » $= +\ 5.8361$ $\quad Tx_♃ = +\ \ 45$

$f'_\alpha = \mathbf{0.99802} \quad J_\alpha = \mathbf{+0.00210}$

$\alpha_♃ = 10^h\ 11^m.1$

1897. April 28.

eihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.7315		**65.6585**							
62.7305	+10	65.6575	+10	0	0.0000		0.0000	0.0000	
62.4532	+17	65.9278	+22	0	− 0.2740		− 0.0317	− 0.3057	
71.9055	+33	56.4815	+17	− 8	+ 9.1755		− 0.1856	+ 8.9899	Luft 3.
66.5720	+25	61.8148	+26	− 2	+ 3.8418		− 0.1695	+ 3.6723	
77.6118	+ 8	50.7725	+11	− 1	+14.8829		− 0.0008	+14.8821	
46.5800	+ 8	81.8078	+ 2	− 1	−16.1500		− 0.0020	−16.1520	
55.9310	0	72.4700	+12		− 6.8066				
56.4045	0	71.9950	+12		− 6.3324	− 6.3295			
56.8870	+10	71.5130	+12		− 5.8496				
57.4270	+ 6	70.9760	+13		− 5.3114				
57.8980	+ 6	70.5080	+13		− 4.8418	− 4.8454			
58.3490	+ 6	70.0400	+17		− 4.3830				
58.8230	+11	69.5690	+14		− 3.9096				
59.3340	+11	69.0880	+14		− 3.4136	− 3.4139			
59.8160	+11	68.5800	+14		− 2.9186				
60.3290	+17	68.0660	+19		− 2.4051				
60.8160	+11	67.5920	+19		− 1.9249	− 1.9235			
61.2950	+11	67.1030	+ 9		− 1.4404				
61.7980	+10	66.6020	+11		− 0.9386				
62.2805	+10	66.1230	+11		− 0.4578	− 0.4593			
62.7530	+10	65.6430	+11		+ 0.0184				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
56.7340	+ 9	71.6550	+12		− 5.9972	+0.3323						
58.2270	+ 5	70.1690	+17		− 4.5081	+0.3373						
59.6480	+14	68.7430	+14		− 3.0840	+0.3299	+0.3315	+0'.3309	+0'.0010	+0'.0004	+0'.0004	**+0'.3327**
61.1425	+10	67.2575	+ 9		− 1.5940	+0.3295						
62.6040	+ 9	65.7925	+11		− 0.1308	+0.3285						
57.4525	+ 9	70.9410	+13		− 5.2810	+1.0485						
58.9375	+10	69.4545	+14		− 3.7952	+1.0502						
60.3630	+14	68.0260	+19		− 2.3682	+1.0457	+1.0456	+1.0436	+0.0027	+0.0009	+0.0004	**+1.0476**
61.8520	+ 9	66.5370	+ 9		− 0.8790	+1.0445						
63.3110	+ 9	65.0780	+17		+ 0.5796	+1.0389						
56.9040	+ 9	71.4770	+12		− 5.8232	+0.5063						
58.3920	+ 5	69.9835	+17		− 4.3328	+0.5126						
59.8245	+14	68.5555	+14		− 2.9020	+0.5119	+0.5091	+0.5081	+0.0011	+0.0004	+0.0004	**+0.5100**
61.3120	+10	67.0695	+ 9		− 1.4152	+0.5083						
62.7745	+ 9	65.6075	+11		+ 0.0469	+0.5062						
59.6820	+15	68.7125	+13		− 3.0516	+3.2779						
61.1730	+11	67.2170	+ 8		− 1.5584	+3.2870						
62.5930	+10	65.7970	+10		− 0.1385	+3.2754	+3.2783	+3.2721	+0.0082	+0.0015	+0.0004	**+3.2822**
64.0865	+ 9	64.3045	+ 8		+ 1.3546	+3.2781						
65.5430	+11	62.8430	+ 9		+ 2.8136	+3.2729						

Scheinbare Decldiff. J—Centrum $= -\ 0'.2843$ $\quad f^\circ_\delta = 0.99775 \quad i^\circ_\delta = -0.00125$

F— » $= +\ 9.0354$

H— » $= +\ 3.5974$ $\quad f_\delta = \mathbf{0.99734} \quad i_\delta = \mathbf{-0.00126} \quad \measuredangle\, i_\delta = -\ 4'.3$

K— » $= +14.8402$

L— » $= -16.1265$ $\quad f'_\delta = \mathbf{0.99810} \quad J_\delta = \mathbf{-0.00105}$

$\delta_♃ = +12^\circ\ 33'.9$

65 D. **1897. Mai 8.**

Æ 16

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.9300**		**66.4561**							
I	61.9291	+ 9	66.4550	+11	0	0.0000				1—2
J	40.9170	+24	87.4582	— 3	+ 3	—21.0059				2
F	11.3078	+22	117.0718	+ 4	+38	—50.6142		**14^h 17^m 24^s**		2—3
H	110.3495	+ 4	18.0390	+24	—33	+48.4140				3
K	65.3052	+21	63.0685	+14	0	+ 3.3818				1—2
L	67.1975	+17	61.1835	+16	— 1	+ 5.2700				2
♃ a_w	69.7020	+16	58.6935	+ 9		+ 7.7676				
a_c	70.1220	+16	58.2735	+ 5		+ 8.1878	+ 8.1838	14 13 4		2—3
a_o	70.5330	+16	57.8680	+ 5		+ 8.5961				
♃ b_w	69.6605	+17	58.7280	+ 9		+ 7.7297				
b_c	70.0945	+17	58.3100	+ 5		+ 8.1559	+ 8.1553	13 42		2
b_o	70.5145	+17	57.8810	+ 5		+ 8.5804				
♃ c_w	69.6765	+17	58.7100	+ 9		+ 7.7467				
c_c	70.0950	+17	58.2900	+ 5		+ 8.1662	+ 8.1666	14 16	**14^h 14^m 11^s**	3
c_o	70.5145	+17	57.8680	+ 5		+ 8.5869				
♃ d_w	69.6590	+17	58.7295	+11		+ 7.7282				
d_c	70.0955	+17	58.3085	+ 6		+ 8.1571	+ 8.1559	14 42		2
d_o	70.5185	+17	57.8810	+ 6		+ 8.5824				
♃ e_w	69.6860	+18	58.7060	+11		+ 7.7534				
e_c	70.1070	+18	58.2900	+ 6		+ 8.1722	+ 8.1722	15 10		2
e_o	70.5225	+18	57.8680	+ 6		+ 8.5910				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	69.2160	+14	59.1655	+10	+ 7.2885	—0.8953						2 deformiert.
b	69.1855	+14	59.2010	+10	+ 7.2555	—0.8998						2—3
c	69.1960	+14	59.1880	+10	+ 7.2672	—0.8994	—0.9023	—0'.9007	+0'.0010	—0'.0023	**—0'.9020**	2—3
d	69.1910	+14	59.2055	+11	+ 7.2560	—0.8999						3 ellipt.
e	69.1870	+15	59.2030	+11	+ 7.2552	—0.9170						2
II a	67.7955	+19	60.5905	+10	+ 5.8660	—2.3178						2
b	67.7655	+19	60.6255	+10	+ 5.8335	—2.3218						2—3
c	67.7795	+19	60.6115	+11	+ 5.8474	—2.3192	—2.3233	—2.3192	+0.0025	—0.0023	**—2.3189**	2
d	67.7655	+19	60.6230	+11	+ 5.8347	—2.3212						2—3 ellipt.
e	67.7665	+20	60.6220	+12	+ 5.8357	—2.3365						2—3
III a	68.4970	+19	59.8870	+14	+ 6.5683	—1.6155						2—3
b	68.4620	+19	59.9230	+14	+ 6.5328	—1.6225						2
c	68.4770	+19	59.9020	+14	+ 6.5508	—1.6158	—1.6183	—1.6155	+0.0015	—0.0023	**—1.6163**	2
d	68.4715	+20	59.9110	+15	+ 6.5436	—1.6123						2—3 ellipt.
e	68.4760	+21	59.9090	+15	+ 6.5468	—1.6254						2
IV a	77.3470	+ 9	51.0480	+11	+15.4124	+7.2286						3
b	77.3165	+ 9	51.0745	+10	+15.3839	+7.2286						3
c	77.3250	+ 9	51.0640	+10	+15.3934	+7.2268	+7.2253	+7.2126	—0.0073	—0.0023	**+7.2030**	3
d	77.3220	+10	51.0750	+10	+15.3864	+7.2305						3—4 geschweif
e	77.3175	+10	51.0745	+10	+15.3844	+7.2122						2—3

Scheinbare Ædiff: J—Centrum = —23'.4050
F— » = —56.4528
H— » = +53.9980
K— » = + 3.8047
L— » = + 5.8363

$\alpha_♃ = 10^h\ 11^m.9$

$f^\circ_\alpha = 0.99797$ $-i^\circ_\alpha = +0.00147$

f_α = **0.99766** $-i_\alpha$ = **+0.00144** $\measuredangle\ i_\alpha = -\ 5'.0$

Refr. = + 47

$Tx_♃$ = + 53

f'_α = **0.99824** J_α = **+0.00244**

1897. Mai 8.

[R]eihe. Decl.

Obj.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
[C]t	**62.7315**		**65.6585**							
I	61.2568	+11	67.1280	+8	0	−1.4720		0.0000	−1.4720	Die Luken waren kurz vorher geöffnet worden.
J	60.9778	+18	67.3958	+19	0	−1.7456		−0.0317	−1.7773	
F	70.4350	+38	57.9508	+23	−7	+7.7056		−0.1856	+7.5200	
H	65.0975	+33	63.2858	+26	−2	+2.3695		−0.1695	+2.2000	
K	76.1315	+7	52.2452	+12	0	+13.4064		−0.0008	+13.4056	
L	45.1060	+18	83.2752	+3	+2	−17.6202		−0.0020	−17.6222	
a	64.2600	+9	64.1495	+10		+1.5187				
a	64.6490	+17	63.7480	+10		+1.9144	+1.9139			
a	65.0430	+17	63.3475	+11		+2.3116				
b	65.7100	+11	62.6850	+11		+2.9760				
b	66.1230	+11	62.2790	+11		+3.3855	+3.3809			
b	66.5125	+11	61.8770	+11		+3.7812				
c	67.1830	+9	61.2240	+12		+4.4428				
c	67.5890	+19	60.8050	+12		+4.8558	+4.8524			
c	67.9915	+19	60.4020	+12		+5.2586				
d	68.6755	+14	59.7165	+16		+5.9429				
d	69.0870	+14	59.3145	+12		+6.3498	+6.3453			
d	69.4760	+14	58.9170	+12		+6.7431				
e	70.0680	+17	58.3380	+7		+7.3290				
e	70.4630	+17	57.9485	+7		+7.7212	+7.7252			
e	70.8560	+13	57.5330	+7		+8.1253				

Trabant — Jupiterscentrum.

Obj.	P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta(y_t - y_{♃})$	$J_\delta(x_t - x_{♃})$	$-(x_t^2 - x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
							mm	mm					
a	65.0430	+17	63.3470	+11		+2.3118	+0.3979						
b	66.5140	+11	61.8770	+11		+3.7820	+0.4011						
c	67.9840	+19	60.4090	+16		+5.2512	+0.3988	+0.3996	+0.′3991	+0.′0007	+0.′0004	+0.′0005	**+0.′4007**
d	69.4745	+14	58.9140	+12		+6.7438	+0.3985						
e	70.8580	+13	57.5320	+7		+8.1268	+0.4016						
a	65.6715	+10	62.7185	+10		+2.9400	+1.0261						
b	67.1400	+8	61.2485	+11		+4.4091	+1.0282						
c	68.6130	+13	59.7750	+15		+5.8824	+1.0300	+1.0281	+1.0268	+0.0017	+0.0010	+0.0005	**+1.0300**
d	70.1035	+16	58.2835	+6		+7.3740	+1.0287						
e	71.4845	+12	56.9060	+10		+8.7528	+1.0276						
a	65.2415	+17	63.1420	+10		+2.5136	+0.5997						
b	66.7100	+9	61.6695	+10		+3.9837	+0.6028						
c	68.1780	+19	60.2010	+15		+5.4522	+0.5998	+0.5988	+0.5981	+0.0012	+0.0007	+0.0005	**+0.6005**
d	69.6750	+17	58.7130	+11		+6.9448	+0.5995						
e	71.0470	+13	57.3395	+10		+8.3174	+0.5922						
a	61.6695	+14	66.7240	+13		−1.0637	−2.9776						
b	63.1420	+14	65.2490	+21		+0.4094	−2.9715						
c	64.6150	+21	63.7800	+13		+1.8814	−2.9710	−2.9739	−2.9702	−0.0054	−0.0055	+0.0005	**−2.9806**
d	66.1050	+15	62.2880	+14		+3.3720	−2.9733						
e	67.4810	+13	60.9090	+15		+4.7494	−2.9758						

Scheinbare Decldiff: J—Centrum $= -\,0.'2843$ $\quad f^\circ_\delta = 0.99796 \quad i^\circ_\delta = -0.00124$

F— » $= +\,9.0357$

H— » $= +\,3.5973$ $\quad f_\delta = \mathbf{0.99752} \quad i_\delta = \mathbf{-0.00135} \quad \measuredangle\, i_\delta = -4.'6$

K— » $= +14.8405$

L— » $= -16.1267$ $\quad f'_\delta = \mathbf{0.99879} \quad J_\delta = \mathbf{-0.00075}$

$\delta_{♃} = +12^\circ\ 27.'4$

66 A. 1897. Mai 15.

Æ

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	61.5852		66.7956							
I	61.5842	+10	66.7948	+ 8	0	0.0000				2
J	40.5758	+25	87.7970	− 6	+ 3	−21.0036				2
F	10.9738	+24	117.4012	+ 7	+39	−50.6038		$14^h\ 45^m\ 21^s$		3 stark ellipt.
H	110.0106	+ 5	18.3732	+25	−33	+48.4196				3
K	64.9540	+22	63.4160	+16	− 1	+ 3.3744				1—2
L	66.8625	+14	61.5120	+15	0	+ 5.2804				2
♃ a_w	55.8145	+ 2	72.5885	+12		− 5.7823				
a_c	56.2110	+ 2	72.1940	+12		− 5.3868	− 5.3905	14 39 40		3
a_o	56.5910	+ 2	71.8050	+12		− 5.0023				
♃ b_w	55.7880	+ 1	72.6110	+12		− 5.8068				
b_c	56.1815	+ 1	72.2265	+12		− 5.4178	− 5.4166	40 17	$14^h\ 40^m\ 48^s$	2
b_o	56.5675	+ 1	71.8270	+12		− 5.0251				
♃ c_w	55.8020	0	72.5895	+11		− 5.7891				
c_c	56.2045	0	72.1945	+11		− 5.3904	− 5.3911	40 51		2—3
c_o	56.5960	0	71.7930	+11		− 4.9938				
♃ d_w	55.7685	0	72.6260	+11		− 5.8241				
d_c	56.1685	0	72.2320	+11		− 5.4271	− 5.4313	41 20		2
d_o	56.5515	0	71.8460	+11		− 5.0426				
♃ e_w	55.8160	0	72.5805	+11		− 5.7776				
e_c	56.2125	0	72.1930	+11		− 5.3856	− 5.3844	41 50		2
e_o	56.6005	0	71.7900	+11		− 4.9901				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	55.7595	+ 2	72.6260	+14		− 5.8286	−0.4381						2—3
b	55.7335	+ 1	72.6540	+14		− 5.8557	−0.4391						2—3
c	55.7545	0	72.6320	+13		− 5.8342	−0.4431	−0.4426	−0'.4419	+0'.0005	−0'.0023	**−1'.4437**	3
d	55.7135	0	72.6745	+13		− 5.8760	−0.4447						2—3
e	55.7550	0	72.6290	+13		− 5.8324	−0.4480						3
II *a*	54.2515	+ 6	74.1345	+14		− 7.3367	−1.9462						2
b	54.2230	+ 5	74.1665	+13		− 7.3670	−1.9504						2—3 deformiert
c	54.2415	+ 5	74.1435	+13		− 7.3462	−1.9551	−1.9521	−1.9491	+0.0020	−0.0023	**−1.9494**	3
d	54.2020	+ 4	74.1830	+12		− 7.3857	−1.9544						2—3
e	54.2460	+ 4	74.1335	+12		− 7.3390	−1.9546						2—3
III *a*	54.0525	+ 6	74.3295	+14		− 7.5337	−2.1432						
b	54.0275	+ 5	74.3530	+13		− 7.5580	−2.1414						
c	54.0535	+ 5	74.3255	+13		− 7.5312	−2.1401	−2.1397	−2.1364	+0.0019	−0.0023	**−2.1368**	2—3
d	54.0175	+ 4	74.3680	+12		− 7.5704	−2.1391						
e	54.0690	+ 4	74.3165	+12		− 7.5190	−2.1346						
IV *a*	48.5545	+17	79.8285	+11		−13.0314	−7.6409						3
b	48.5360	+16	79.8490	+10		−13.0509	−7.6343						2—3
c	48.5585	+16	79.8280	+ 9		−13.0291	−7.6380	−7.6369	−7.6252	+0.0074	−0.0023	**−7.6201**	3
d	48.5220	+15	79.8640	+ 9		−13.0654	−7.6341						2—3
e	48.5655	+14	79.8200	+ 9		−13.0217	−7.6373						2—3

Scheinbare Ædiff: *J*—Centrum = −23'.4051
F— » = −56.4533
H— » = +53.9984
K— » = + 3.8047
L— » = + 5.8363

$\alpha_♃ = 10^h\ 13^m.2$

$f^\circ_\alpha = 0.99810$ $-i^\circ_\alpha = +0.00205$

f_α = **0.99777** $-i_\alpha$ = **+0.00201** $\measuredangle\ i_\alpha = -\ 6'.9$

Refr. = + 66

$Tx_♃$ = − 34

f'_α = **0.99847** J_α = **+0.00233**

1897. Mai 15.

Decl.

Scalenablesung. P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y - \frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
62.1620		**66.2250**							
65.6022	+11	62.7815	+ 9	0	+ 3.4420		0.0000	+ 3.4420	
65.3085	+24	63.0630	+21	0	+ 3.1544		− 0.0317	+ 3.1227	
74.7415	+38	53.6362	+21	−10	+12.5840		− 0.1856	+12.3984	Luft 1—3.
69.4605	+30	58.9240	+17	− 6	+ 7.2993		− 0.1695	+ 7.1298	
80.4782	+ 8	47.8992	+20	− 2	+18.3202		− 0.0008	+18.3194	
49.4555	+13	78.9250	+ 7	+ 1	−12.7028		− 0.0020	−12.7048	
71.6410	+15	56.7590	+11		+ 9.4727				
71.2725	+15	57.1350	+11		+ 9.1004	+ 9.0940			
70.8710	+15	57.5165	+11		+ 8.7090				
70.1540	+19	58.2395	+ 7		+ 7.9894				
69.7780	+19	58.6210	+12		+ 7.6054	+ 7.6065			
69.3880	+19	59.0020	+12		+ 7.2248				
68.6860	+16	59.7170	+16		+ 6.5160				
68.3095	+21	60.0880	+16		+ 6.1425	+ 6.1378			
67.9180	+21	60.4720	+16		+ 5.7548				
67.2285	+11	61.1780	+12		+ 5.0567				
66.8540	+11	61.5480	+11		+ 4.6845	+ 4.6813			
66.4690	+11	61.9265	+11		+ 4.3028				
65.7640	+13	62.6350	+11		+ 3.5961				
65.3960	+19	63.0200	+11		+ 3.2199	+ 3.2181			
65.0030	+19	63.3900	+11		+ 2.8384				

P.-Kr.90°	$t+k$	P.-Kr.270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
71.4635	+15	56.9240	+12		+ 9.3014	+0.2074						
69.9815	+19	58.4045	+ 8		+ 7.8206	+0.2141						
68.5135	+16	59.8770	+17		+ 6.3497	+0.2119	+0.2125	+0'.2123	+0'.0005	−0'.0002	+0'.0005	**+0'.2131**
67.0625	+11	61.3240	+13		+ 4.9006	+0.2193						
65.5915	+13	62.7990	+12		+ 3.4278	+0.2097						
72.1360	+15	56.2510	+ 2		+ 9.9746	+0.8806						
70.6450	+16	57.7435	+ 8		+ 8.4826	+0.8761						
69.1740	+17	59.2060	+13		+ 7.0157	+0.8779	+0.8767	+0.8760	+0.0022	−0.0008	+0.0005	**+0.8779**
67.7210	+22	60.6640	+13		+ 5.5604	+0.8791						
66.2470	+14	62.1350	+12		+ 4.0876	+0.8695						
72.0870	+15	56.2985	+ 2		+ 9.9264	+0.8324						
70.5925	+16	57.7890	+ 8		+ 8.4336	+0.8271						
69.1240	+17	59.2510	+13		+ 6.9682	+0.8304	+0.8284	+0.8277	+0.0025	−0.0009	+0.0005	**+0.8298**
67.6685	+22	60.7170	+13		+ 5.5077	+0.8264						
66.1995	+14	62.1750	+12		+ 4.0438	+0.8257						
74.4490	+17	53.9410	+10		+12.2858	+3.1918						
72.9650	+18	55.4175	+ 6		+10.8058	+3.1993						
71.4940	+17	56.8955	+16		+ 9.3307	+3.1929	+3.1947	+3.1921	+0.0089	−0.0045	+0.0005	**+3.1970**
70.0410	+21	58.3400	+12		+ 7.8824	+3.2011						
68.5670	+18	59.8170	+21		+ 6.4064	+3.1883						

Scheinbare Decldiff: J—Centrum = − 0'.2843 $\quad f^0_\delta = 0.99804 \quad i^0_\delta = -0.00181$
F— » = + 9.0358
H— » = + 3.5970 $\quad f_\delta =$ **0.99758** $\quad i_\delta =$ **−0.00196** $\quad \measuredangle\, i_\delta = -6'.7$
K— » = +14.8403
L— » = −16.1267 $\quad f'_\delta =$ **0.99916** $\quad J_\delta =$ **−0.00116**

$\delta_♃ = +12^\circ\ 19'.1$

66 B. 1897. Mai 17.

Æ 16

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**61.6059**		**66.7778**							
I	61.6050	+ 9	66.7770	+ 8	0	0.0000				2—3
J	40.5920	+24	87.7818	— 6	+ 2	—21.0072				3 eiförmig.
F	10.9910	+23	117.3872	+ 6	+39	—50.6074		**15^h 35^m 56^s**		4 ellipt.
H	110.0305	+ 4	18.3515	+24	—34	+48.4210				4 ellipt.
K	64.9722	+21	62.4020	+15	— 1	+ 3.3712				2
L	66.8805	+15	61.4935	+16	0	+ 5.2794				2—3
♃ a_w	56.9435	+ 9	71.4560	+13		— 4.6705				
a_c	57.3340	+ 9	71.0650	+13		— 4.2798	— 4.2764	15 31 34		2
a_o	57.7305	+ 5	70.6595	+13		— 3.8790				
♃ b_w	56.9505	+ 9	71.4510	+13		— 4.6645				
b_c	57.3365	+ 9	71.0590	+13		— 4.2755	— 4.2767	32 10	**15^h 32^m 48^s**	2
b_o	57.7210	+ 5	70.6720	+13		— 3.8900				
♃ c_w	56.9560	+10	71.4435	+14		— 4.6580				
c_c	57.3445	+10	71.0550	+14		— 4.2695	— 4.2688	32 48		2
c_o	57.7335	+ 6	70.6625	+14		— 3.8790				
♃ d_w	56.9500	+10	71.4470	+14		— 4.6628				
d_c	57.3480	+10	71.0525	+14		— 4.2665	— 4.2689	33 23		2
d_o	57.7330	+ 6	70.6590	+14		— 3.8774				
♃ e_w	57.0000	+11	71.3930	+15		— 4.6108				
e_c	57.4000	+11	71.0025	+15		— 4.2155	— 4.2188	34 3		2
e_o	57.7825	+ 7	70.6140	+15		— 3.8302				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	55.7670	— 1	72.6210	+14		— 5.8418	—1.5654						3
b	55.7645	— 1	72.6250	+14		— 5.8450	—1.5683						2—3
c	55.7680	0	72.6205	+14		— 5.8410	—1.5722	—1.5694	—1'.5676	+0'.0021	—0'.0023	**—1'.5678**	3
d	55.7695	0	72.6180	+15		— 5.8390	—1.5701						3 ellipt. in Decl.
e	55.8190	0	72.5690	+16		— 5.7898	—1.5710						2—3
II a	59.8750	+14	68.5105	+19		— 1.7320	+2.5444						3 geschweift.
b	59.8620	+14	68.5210	+19		— 1.7433	+2.5334						2—3
c	59.8760	+15	68.5065	+20		— 1.7296	+2.5392	+2.5387	+2.5358	—0.0036	—0.0023	**+2.5299**	2—3
d	59.8730	+15	68.5150	+21		— 1.7354	+2.5335						3
e	59.9315	+17	68.4550	+21		— 1.6760	+2.5428						3
III a	61.4505	+10	66.9290	+ 9		— 0.1532	+4.1232						2—3 geschweift
b	61.4410	+11	66.9420	+10		— 0.1640	+4.1127						2—3
c	61.4515	+11	66.9305	+11		— 0.1536	+4.1152	+4.1170	+4.1124	—0.0058	—0.0023	**+4.1043**	2—3
d	61.4530	+12	66.9315	+11		— 0.1532	+4.1157						2—3
e	61.5060	+13	66.8790	+12		— 0.1005	+4.1183						3
IV a	51.2030	+10	77.1880	+ 9		—10.4065	—6.1301						
b	51.2005	+10	77.1895	+10		—10.4086	—6.1319						
c	51.2060	+10	77.1850	+10		—10.4036	—6.1348	—6.1338	—6.1269	+0.0080	—0.0023	**—6.1212**	3
d	51.2010	+10	77.1850	+10		—10.4060	—6.1371						
e	51.2550	+11	77.1345	+11		—10.3538	—6.1350						

Scheinbare ÆRdiff: J—Centrum = —23'.4052
F— » = —56.4535
H— » = +53.9985
K— » = + 3.8047
L— » = + 5.8363

$\alpha_♃ = 10^h\ 13^m.6$

$f^\circ_\alpha = 0.99804$ $-i^\circ_\alpha = +0.00211$

f_α = **0.99767** $-i_\alpha$ = **+0.00204** $\measuredangle\ i_\alpha = -7'.0$

Refr. = + 144

$Tx_♃$ = — 27

f'_α = **0.99887** $J\alpha$ = **+0.00321**

1897. Mai 17.

Decl.

Scalenablesung.				s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$						
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.1620		**66.2250**							
64.1080	+ 9	64.2760	+ 8	0	+ 1.9476		0.0000	+ 1.9476	
63.8202	+16	64.5515	+28	0	+ 1.6652		— 0.0317	+ 1.6335	
73.2598	+35	55.1230	+17	—10	+11.0998		— 0.1856	+10.9142	
67.9602	+35	60.4205	+31	— 7	+ 5.8008		— 0.1695	+ 5.6313	Luft 1.
78.9830	+ 6	49.3942	+14	— 1	+16.8254		— 0.0008	+16.8246	
47.9600	+19	80.4135	+ 9	+ 1	—14.1946		— 0.0020	—14.1966	
62.3710	+12	66.0220	+11		+ 0.2060				
62.0035	+12	66.3910	+11		— 0.1622	— 0.1634			
61.6300	+12	66.7615	+ 9		— 0.5341				
60.9430	+13	67.4530	+19		— 1.2238				
60.5785	+13	67.8260	+19		— 1.5926	— 1.5955			
60.1970	+17	68.2000	+19		— 1.9701				
59.4480	+13	68.9460	+14		— 2.7176				
59.0765	+13	69.3300	+14		— 3.0953	— 3.0967			
58.6840	+13	69.7010	+17		— 3.4772				
58.0210	+ 8	70.3770	+17		— 4.1470				
57.6500	+ 8	70.7520	+13		— 4.5198	— 4.5205			
57.2690	+12	71.1210	+13		— 4.8946				
56.5620	+ 2	71.8290	+12		— 5.6025				
56.1870	+ 2	72.2080	+12		— 5.9795	— 5.9793			
55.8110	+ 2	72.5850	+12		— 6.3560				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
62.6710	+12	65.7130	+13		+ 0.5104	+0.6738						
61.2330	+13	67.1535	+11		— 0.9286	+0.6669						
59.7335	+17	68.6570	+16		— 2.4302	+0.6665	+0.6701	+0'.6705	+0'.0003	—0'.0006	+0'.0005	**+0'.6708**
58.3170	+ 8	70.0700	+19		— 3.8456	+0.6749						
56.8510	+12	71.5355	+14		— 5.3108	+0.6685						
60.8825	+11	67.5015	+ 9		— 1.2779	—1.1145						
59.4400	+11	68.9435	+14		— 2.7204	—1.1249						
57.9465	+ 6	70.4390	+17		— 4.2153	—1.1186	—1.1195	—1.1201	—0.0005	+0.0005	+0.0005	**—1.1196**
56.5230	+10	71.8630	+12		— 5.6386	—1.1181						
55.0635	0	73.3265	+14		— 7.1007	—1.1214						
60.2180	+15	68.1570	+18		— 1.9382	—1.7748						
58.7770	+11	69.6045	+16		— 3.3825	—1.7870						
57.2770	+10	71.1010	+12		— 4.8806	—1.7839	—1.7829	—1.7839	—0.0008	+0.0006	+0.0005	**—1.7836**
55.8590	0	72.5290	+13		— 6.3042	—1.7837						
54.3950	+ 4	73.9865	+12		— 7.7646	—1.7853						
64.5060	+21	63.8780	+13		+ 2.3459	+2.5093						
63.0700	+14	65.3185	+21		+ 0.9069	+2.5024						
61.5710	+14	66.8250	+13		— 0.5954	+2.5013	+2.5034	+2.5047	+0.0012	—0.0028	+0.0005	**+2.5036**
60.1460	+19	68.2375	+23		— 2.0144	+2.5061						
58.6815	+15	69.7065	+21		— 3.4813	+2.4980						

Scheinbare Decldiff: J—Centrum $= -$ 0'.2842 $f^\circ_\delta = 0.99815$ $i^\circ_\delta = -0.00164$
F— » $= +$ 9.0358
H— » $= +$ 3.5969 f_δ **= 0.99762** i_δ **= —0.00186** $\sphericalangle\, i_\delta = -6'.4$
K— » $= +$14.8403
L— » $= -$16.1267 f'_δ **= 1.00052** J_δ **= —0.00020**

$\delta_♃ = +12^\circ\ 16'.2$

66 C. **1897. Mai 18.**

Æ **168**

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	61.5904		66.7937							
I	61.5895	+ 9	66.7928	+ 9	0	0.0000				2—3
J	40.5810	+24	87.7920	— 5	+ 2	—21.0022				2
F	10.9802	+23	117.3935	+ 4	+37	—50.6004		15^h 30^m 38^s		3—4 ellipt.
H	110.0210	+ 4	18.3640	+24	—33	+48.4258				3
K	64.9625	+21	63.4090	+14	0	+ 3.3788				1—2
L	66.8700	+16	61.5085	+16	— 1	+ 5.2823				2
♃ a_w	66.7480	+ 9	61.6570	+12		+ 5.1470				
a_c	67.1345	+ 9	61.2595	+13		+ 5.5390	+ 5.5392	15 24 58		2
a_o	67.5295	+ 9	60.8690	+13		+ 5.9317				
♃ b_w	66.7235	+ 9	61.6735	+11		+ 5.1266				
b_c	67.1185	+ 9	61.2740	+12		+ 5.5238	+ 5.5194	25 44		2—3
b_o	67.5025	+ 9	60.8900	+12		+ 5.9078				
♃ c_w	66.7340	+ 8	61.6640	+10		+ 5.1366				
c_c	67.1350	+ 8	61.2645	+11		+ 5.5368	+ 5.5364	26 18	15^h 26^m 17^s	2—3
c_o	67.5305	+ 8	60.8620	+11		+ 5.9358				
♃ d_w	66.7100	+ 8	61.6915	+10		+ 5.1108				
d_c	67.1075	+ 8	61.2920	+11		+ 5.5092	+ 5.5063	26 56		2—3
d_o	67.4920	+ 8	60.8975	+11		+ 5.8988				
♃ e_w	66.7250	+ 8	61.6705	+10		+ 5.1288				
e_c	67.1270	+ 8	61.2760	+11		+ 5.5270	+ 5.5259	27 30		2—3
e_o	67.5160	+ 8	60.8755	+11		+ 5.9218				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	68.8515	+15	59.5325	+17		+ 7.2610	+1.7218						3
b	68.8265	+14	59.5635	+16		+ 7.2330	+1.7136						3
c	68.8410	+14	59.5465	+16		+ 7.2488	+1.7124	+1.7145	+1′.7125	—0′.0026	—0′.0023	**+1′.7076**	3
d	68.8120	+13	59.5815	+15		+ 7.2168	+1.7105						3
e	68.8325	+13	59.5555	+15		+ 7.2400	+1.7141						3
II	Als Höc	ker	am Ostrand	e er	kenn	bar.							
III *a*	70.7980	+15	57.5870	+ 8		+ 9.2075	+3.6683						
b	70.7730	+13	57.6120	+ 8		+ 9.1824	+3.6630						
c	70.7830	+13	57.5975	+ 7		+ 9.1947	+3.6583	+3.6627	+3.6585	—0.0054	—0.0023	**+3.6508**	3
d	70.7570	+12	57.6290	+ 6		+ 9.1660	+3.6597						
e	70.7800	+12	57.6035	+ 6		+ 9.1902	+3.6643						
IV *a*	63.0620	+10	65.3200	+18		+ 1.4722	—4.0670						
b	63.0400	+ 9	65.3465	+17		+ 1.4480	—4.0714						
c	63.0550	+ 9	65.3340	+17		+ 1.4617	—4.0747	—4.0702	—4.0655	+0.0057	—0.0023	**—4.0621**	3 unterexponi
d	63.0265	+ 9	65.3605	+17		+ 1.4342	—4.0721						
e	63.0520	+ 9	65.3345	+16		+ 1.4600	—4.0659						

Scheinbare Ædiff: *J*—Centrum = —23′.4052
F— » = —56.4536
H— » = +53.9986
K— » = + 3.8047
L— » = + 5.8363

$\alpha_♃ = 10^h\ 13^m.9$

$f^0_\alpha = 0.99810$ $-i^0_\alpha = +0.00196$
f_α = **0.99774** $-i_\alpha$ = **+0.00190** $\sphericalangle\ i_\alpha = -6''.5$
Refr. = + 130
$Tx_♃$ = + 35
f'_α = **0.99885** J_α = **+0.00355**

1897. Mai 18.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta\sin 1'$	$y-\frac{x^2}{2}tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.1620		**66.2250**							
62.1610	+10	66.2240	+10	0	0.0000		0.0000	0.0000	
61.8750	+17	66.5015	+22	0	− 0.2820		− 0.0317	− 0.3137	
71.3132	+34	59.0718	+28	− 7	+ 9.1518		− 0.1856	+ 8.9662	
66.0182	+27	62.3710	+26	− 3	+ 3.8548		− 0.1695	+ 3.6853	
77.0372	+ 9	51.3388	+11	− 1	+14.8805		− 0.0008	+14.8797	
46.0138	+14	82.3585	+ 2	+ 1	−16.1402		− 0.0020	−16.1422	
56.6060	+ 9	71.7890	+12		− 5.5602				
56.9880	+ 9	71.4080	+13		− 5.1787	− 5.1795			
57.3690	+ 9	71.0310	+13		− 4.7997				
58.1010	+ 5	70.2930	+17		− 4.0651				
58.4860	+ 5	69.9170	+17		− 3.6846	− 3.6851			
58.8650	+10	69.5385	+17		− 3.3056				
59.5770	+14	68.8170	+14		− 2.5885				
59.9720	+14	68.4370	+19		− 2.2012	− 2.2003			
60.3580	+14	68.0430	+19		− 1.8112				
60.9940	+10	67.4010	+ 9		− 1.1720				
61.3790	+10	67.0225	+ 9		− 0.7902	− 0.7887			
61.7625	+ 9	66.6330	+ 9		− 0.4038				
62.4600	+ 9	65.9380	+11		+ 0.2924				
62.8430	+ 9	65.5520	+11		+ 0.6769	+ 0.6755			
63.2260	+ 9	65.1740	+17		+ 1.0571				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
56.2420	0	72.1460	+13		− 5.9212	−0.7417						
57.7400	+ 6	70.6510	+14		− 4.4244	−0.7393						
59.2330	+11	69.1590	+15		− 2.9317	−0.7314	−0.7378	−0.'7380	−0.'0006	−0.'0007	+0.'0005	**−0.'7388**
60.6385	+11	67.7505	+20		− 1.5250	−0.7363						
62.0980	+10	66.2900	+12		− 0.0646	−0.7401						
Als Höcker am Ostrande erkennbar.												
55.4530	0	72.9305	+16		− 6.7080	−1.5285						
56.9550	+10	71.4365	+15		− 5.2095	−1.5244						
58.4350	+ 6	69.9395	+19		− 3.7214	−1.5211	−1.5246	−1.5250	−0.0014	−0.0017	+0.0005	**−1.5276**
59.8415	+15	68.5350	+21		− 2.3156	−1.5269						
61.3140	+11	67.0700	+11		− 0.8465	−1.5220						
58.5820	+11	69.8040	+16		− 3.5798	+1.5997						
60.0740	+15	68.3120	+18		− 2.0876	+1.5975						
61.5740	+10	66.8205	+ 8		− 0.5916	+1.6087	+1.6015	+1.6019	−0.0015	+0.0009	+0.0005	**+1.6048**
62.9764	+10	65.4140	+16		+ 0.8124	+1.6011						
64.4395	+ 9	63.9510	+ 8		+ 2.2758	+1.6003						

Scheinbare Decldiff: J— Centrum $= -\ 0.'2842$ $\qquad f^\circ_\delta = 0.99813 \qquad i^\circ_\delta = -0.00166$
F— » $= +\ 9.0358$
H— » $= +\ 3.5969$ $\qquad f_\delta = \mathbf{0.99761} \qquad i_\delta = \mathbf{-0.00188} \qquad ∡\ i_\delta = -6.'5$
K— » $= +14.8402$
L— » $= -16.1267$ $\qquad f'_\delta = \mathbf{1.00027} \qquad J_\delta = \mathbf{-0.00037}$

$\delta_♃ = +12^\circ\ 14.'6$

66 D. 1897. Mai 20.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Helsingforser Sternzeit der Aufnahmen.	Helsingforser Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.6049**		**66.7824**							
I	61.6040	+ 9	66.7815	+ 9	0	0.0000				2—3
J	40.5942	+24	87.7835	— 5	+ 2	—21.0042				2
F	10.9858	+22	117.3890	+ 4	+35	—50.6084		**15ʰ 22ᵐ 40ˢ**		3—4 ellipt.
H	110.0325	+ 4	18.5518	+24	—33	+48.4248				3—4
K	64.9755	+21	63.4008	+14	0	+ 3.3764				2
L	66.8835	+17	61.4960	+16	— 1	+ 5.2844				2—3
♃ a_w	69.9090	+16	58.4850	+ 5		+ 8.3013				
a_c	70.3175	+16	58.0750	+ 5		+ 8.7106	+ 8.7088	15 18 34		1—2
a_o	70.7200	+12	57.6695	+ 5		+ 9.1144				
♃ b_w	69.9190	+17	58.4880	+ 5		+ 8.3048				
b_c	70.3115	+17	58.0850	+ 5		+ 8.7026	+ 8.7012	19 8		1—2
b_o	70.7005	+13	57.6865	+ 5		+ 9.0962				
♃ c_w	69.8995	+17	58.5005	+ 5		+ 8.2888				
c_c	70.3100	+17	58.0795	+ 5		+ 8.7046	+ 8.7026	19 38	**15ʰ 19ᵐ 36ˢ**	2
c_o	70.7180	+13	57.6675	+ 5		+ 9.1144				
♃ d_w	69.9110	+17	58.4950	+ 5		+ 8.3024				
d_c	70.3090	+17	58.0920	+ 5		+ 8.6978	+ 8.6992	20 4		2
d_o	70.7020	+13	57.6855	+ 5		+ 9.0974				
♃ e_w	69.9095	+18	58.4920	+ 6		+ 8.2981				
e_c	70.3090	+18	58.0920	+ 6		+ 8.6978	+ 8.6998	20 36		2
e_o	70.7090	+14	57.6800	+ 6		+ 9.1036				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	71.5290	+12	56.8580	+ 9		+ 9.9244	+1.2156						3
b	71.5105	+12	56.8750	+ 9		+ 9.9066	+1.2054						3
c	71.5165	+13	56.8675	+ 9		+ 9.9134	+1.2108	+1.2061	+1′.2045	—0′.0019	—0′.0023	**+1′.2003**	3—4
d	71.5000	+13	56.8865	+ 9		+ 9.8957	+1.1965						3
e	71.5050	+14	56.8790	+10		+ 9.9020	+1.2022						3 unterexponiert
II	Verfinstert.												
III *a*	67.4580	+ 9	60.9295	+10		+ 5.8530	—2.8558						2—3
b	67.4430	+ 9	60.9395	+10		+ 5.8404	—2.8608						3
c	67.4540	+ 9	60.9390	+10		+ 5.8462	—2.8564	—2.8603	—2.8565	—0.0048	—0.0023	**—2.8636**	3
d	67.4420	+10	60.9480	+11		+ 5.8357	—2.8635						2—3
e	67.4410	+11	60.9490	+11		+ 5.8348	—2.8650						3
IV	Verfinstert.												

Scheinbare Ædiff: J— Centrum = —23′.4052 $\quad f^\circ_\alpha = 0.99801 \quad -i^\circ_\alpha = +0.00211$

F— » = —56.4537

H— » = +53.9987 $\quad f_\alpha = \mathbf{0.99765} \quad -i_\alpha = \mathbf{+0.00205} \quad ∡\, i_\alpha = -\ 7'.0$

K— » = + 3.8047 $\quad Refr. = +\ 116$

L— » = + 5.8363 $\quad Tx_♃ = +\ 55$

$f'_\alpha = \mathbf{0.99867} \quad J_\alpha = \mathbf{+0.00376}$

$\alpha_♃ = 10^h\ 14^m.4$

1897. Mai 20.

eihe. **Decl.**

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
62.1620		**66.2250**							
61.2072	+11	67.1772	+ 8	0	— 0.9534		0.0000	— 0.9534	
60.9190	+18	67.4558	+20	0	— 1.2370		— 0.0317	— 1.2687	
70.3530	+38	58.0318	+23	— 7	+ 8.1922		— 0.1856	+ 8.0066	
65.0618	+33	63.3240	+26	— 2	+ 2.9006		— 0.1695	+ 2.7311	
76.0838	+ 7	52.2945	+12	0	+13.9259		— 0.0008	+13.9251	
45.0604	+18	83.3212	+ 3	+ 2	—17.0980		— 0.0020	—17.1000	
63.9730	+ 9	64.4295	+10		+ 1.8032				
64.3520	+ 9	64.0475	+10		+ 2.1837	+ 2.1865			
64.7370	+ 9	63.6545	+10		+ 2.5727				
65.4800	+11	62.9185	+11		+ 3.3122				
65.8605	+11	62.5410	+11		+ 3.6912	+ 3.6911			
66.2350	+11	62.1580	+11		+ 4.0700				
66.9145	+ 9	61.4845	+12		+ 4.7464				
67.3000	+ 9	61.1025	+12		+ 5.1301	+ 5.1319			
67.6830	+19	60.7085	+12		+ 5.5191				
68.3280	+19	60.0710	+16		+ 6.1602				
68.7175	+14	59.6915	+16		+ 6.5444	+ 6.5450			
69.0975	+14	59.3000	+12		+ 6.9304				
69.8340	+17	58.5705	+ 7		+ 7.6538				
70.2180	+17	58.1830	+ 7		+ 8.0495	+ 8.0457			
70.5975	+17	57.7940	+ 7		+ 8.4338				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
63.8595	+10	64.5350	+19		+ 1.6933	—0.4932						
65.3600	+18	63.0270	+12		+ 3.1983	—0.4928						
66.8000	+10	61.5930	+12		+ 4.6349	—0.4970	—0.4927	—0'.4927	—0'.0007	—0'.0007	+0'.0005	**—0'.4936**
68.2140	+20	60.1740	+17		+ 6.0516	—0.4934						
69.7235	+18	58.6695	+13		+ 7.5588	—0.4869						
Verfinst	ert.											
65.6230	+10	62.7625	+10		+ 3.4618	+1.2753						
67.1230	+ 8	61.2650	+11		+ 4.9604	+1.2693						
68.5675	+13	59.8205	+15		+ 6.4049	+1.2730	+1.2755	+1.2755	+0.0016	+0.0013	+0.0005	**+1.2789**
69.9845	+16	58.4020	+ 6		+ 7.8232	+1.2782						
71.4860	+12	56.8940	+10		+ 9.3276	+1.2819						
Verfinst	ert.											

Scheinbare Decldiff: J—Centrum = — 0'.2842 $\quad f^\circ_\delta = 0.99801 \quad i^\circ_\delta = -0.00172$

F— » = + 9.0358

H— » = + 3.5968 $\quad f_\delta = \mathbf{0.99750} \quad i_\delta = \mathbf{-0.00192} \quad ∢\, i_\delta = -6'.6$

K— » = +14.8402

L— » = —16.1267 $\quad f'_\delta = \mathbf{0.99993} \quad J_\delta = \mathbf{-0.00056}$

$\delta_♃ = +12° \; 11'.4$

B. OPPOSITION 1897.

II. PULKOWAER CLICHÉS.

67. 1897. Februar 5.

℞

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	62.2934		66.0955							
S	62.2925	+ 9	66.0944	+11	0	0.0000				4—5
M	67.2690	+ 9	61.1052	+10	0	+ 4.9829				4—5
N	23.1355	+25	105.2412	+ 7	+18	—39.1491				4—5
Q	75.8782	+20	52.5060	+17	— 3	+13.5870		$8^h\ 23^m\ 22^s$		4
R	25.5715	+37	102.8032	+15	+20	—36.7117				4
V	61.9882	+18	66.3895	+17	0	— 0.2996				4
W	63.1375	+21	65.2438	+30	0	+ 0.8474				4
$♃\ a_w$	61.8340	+10	66.5685	+10		— 0.4662				
a_c	62.2675	+10	66.1240	+10		— 0.0272	— 0.0284	8 34 2		4
a_o	62.7000	+10	65.6855	+10		+ 0.4083				
$♃\ b_w$	61.8499	+10	66.5440	+18		— 0.4484				
b_c	62.2860	+10	66.1110	+10		— 0.0114	— 0.0182	36 30		3—4
b_o	62.6970	+10	65.6895	+10		+ 0.4052				
$♃\ c_w$	61.8385	+ 9	66.5630	+10		— 0.4612				
c_c	62.2595	+ 9	66.1260	+10		— 0.0322	— 0.0315	37 44		3—4
c_o	62.6975	+ 9	65.7020	+10		+ 0.3988			$8^h\ 38^m\ 17^s$	
$♃\ d_w$	61.8340	+ 9	66.5705	+11		— 0.4673				
d_c	62.2545	+ 9	66.1405	+11		— 0.0420	— 0.0430	39 14		3
d_o	62.6740	+ 9	65.7150	+11		+ 0.3804				
$♃\ e_w$	61.8280	+ 9	66.5715	+11		— 0.4708				
e_c	62.2470	+ 9	66.1410	+11		— 0.0460	— 0.0417	40 30		3
e_o	62.6845	+ 9	65.7030	+11		+ 0.3917				
$♃\ f_w$	61.8005	+10	66.6085	+12		— 0.5030				
f_c	62.2440	+10	66.1515	+12		— 0.0528	— 0.0508	41 42		3—4
f_o	62.6940	+10	65.6890	+12		+ 0.4034				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	61.4405	+11	66.9480	+ 8		— 0.8526	—0.8242						4
b	61.4350	+11	66.9530	+ 8		— 0.8578	—0.8396						4—5 unterexp.
c	61.4140	+10	66.9700	+ 8		— 0.8768	—0.8453	—0.8472	—0'.8415	+0'.0001	+0'.0004	—0'.8410	4
d	61.4000	+10	66.9880	+ 9		— 0.8929	—0.8499						4 unterexp.
e	61.3885	+10	66.9955	+ 9		— 0.9024	—0.8607						4
f	61.3780	+11	67.0085	+10		— 0.9142	—0.8634						5 unterexponier
II a	59.1020	+12	69.2850	+14		— 3.1906	—3.1622						4
b	59.1010	+11	69.2850	+13		— 3.1910	—3.1718						4 unterexponier
c	59.0960	+11	69.2950	+13		— 3.1986	—3.1671	—3.1700	—3.1486	+0.0004	+0.0004	—3.1478	4
d	59.0795	+10	69.3100	+13		— 3.2144	—3.1714						3—4
e	59.0780	+10	69.3100	+14		— 3.2152	—3.1735						3—4
f	59.0685	+10	69.3200	+14		— 3.2249	—3.1741						5 unterexponier
III a	64.1590	+ 9	64.2225	+ 8		+ 1.8694	+1.8978						4
b	64.1655	+ 9	64.2150	+ 8		+ 1.8764	+1.8946						4
c	64.1640	+ 8	64.2175	+ 8		+ 1.8743	+1.9058	+1.9038	+1.8909	—0.0002	+0.0004	+1.8911	3—4
d	64.1590	+ 8	64.2290	+ 9		+ 1.8660	+1.9090						4
e	64.1560	+ 9	64.2300	+10		+ 1.8640	+1.9057						4
f	64.1510	+ 9	64.2340	+11		+ 1.8594	+1.9102						5
IV a	53.4360	+10	74.9510	+12		— 8.8566	—8.8282						4
b	53.4415	+ 9	74.9435	+11		— 8.8500	—8.8318						3—4 unterexpo
c	53.4370	+ 9	74.9530	+11		— 8.8570	—8.8255	—8.8295	+8.7698	+0.0010	+0.0004	—8.7684	4 »
d	53.4215	+ 8	74.9660	+10		— 8.8713	—8.8283						4 »
e	53.4185	+ 7	74.9695	+10		— 8.8746	—8.8329						4
f	53.4120	+ 7	74.9755	+11		— 8.8809	—8.8301						5 unterexponier

Scheinbare ℞diff: M—Centrum = + 5'.2700 $f^\circ_\alpha = 0.99319$ $-i^\circ_\alpha = -0.00011$
N— » = —41.4062
Q— » = +14.3237 f_α = **0.99291** $-i_\alpha$ = **—0.00011** ∢ i_α = + 0'.4
R— » = —38.7083 Refr. = — 14
V— » = — 0.3205 $Tx_♃$ = 0
W— » = + 0.8887 f'_α = **0.99324** J_α = **—0.00025**

$\alpha_♃ = 10^h\ 38^m.7$

1897. Februar 5.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.3736**	mm/10000	mm **65.0168**	mm/10000	mm/10000	mm	mm	mm	mm	
63.3726	+10	65.0152	+16	0	0.0000		0.0000	0.0000	Bilder 4—5.
66.3908	+10	61.9920	+10	0	+ 3.0210		— 0.0013	+ 3.0197	
66.9282	+24	61.4560	+27	— 1	+ 3.5574		— 0.0811	+ 3.4763	
38.7860	+29	89.6020	— 4	+ 5	—24.5842		— 0.0094	—24.5936	
38.8060	+41	89.5730	+ 8	+15	—24.5588		— 0.0694	—24.6282	
43.9782	+20	84.4060	— 7	+ 2	—19.3908		0.0000	—19.3908	
94.3142	— 2	34.0780	+20	— 8	+30.9378		0.0000	+30.9378	
68.5110	+19	59.8965	+14		+ 5.1291				
68.0945	+19	60.3125	+14		+ 4.7128	+ 4.7118			Bilder 4.
67.6690	+19	60.7260	+10		+ 4.2936				
66.8945	+ 9	61.5030	+ 9		+ 3.5174				
66.4975	+11	61.9140	+ 9		+ 3.1134	+ 3.1153			
66.0945	+11	62.3075	+ 9		+ 2.7152				
65.3515	+17	63.0500	+ 9		+ 1.9728				
64.9500	+17	63.4620	+ 9		+ 1.5660	+ 1.5616			
64.5160	+17	63.8680	+ 9		+ 1.1460				
62.1970	+10	66.2080	+10		— 1.1839				
61.7860	+10	66.6200	+ 8		— 1.5953	— 1.5922			
61.3790	+10	67.0170	+ 8		— 1.9973				
60.5830	+15	67.8170	+18		— 2.7956				
60.1780	+15	68.2210	+18		— 3.2000	— 3.2019			
59.7625	+15	68.6255	+18		— 3.6100				
59.0280	+11	69.3720	+13		— 4.3505				
58.5940	+11	69.8020	+16		— 4.7826	— 4.7854			
58.1505	+ 6	70.2390	+16		— 5.2232				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.5020	+14	59.8930	+14		+ 5.1261	+0.4143						
66.9145	+ 9	61.4820	+10		+ 3.5378	+0.4225						
65.3645	+17	63.0305	+ 9		+ 1.9890	+0.4274	+0.4259	+0.′4232	+0.′0002	0.′0000	0.′0000	**+0.′4234**
62.2130	+10	66.1835	+10		— 1.1636	+0.4286						
60.6050	+11	67.7915	+18		— 2.7720	+0.4299						
59.0210	+11	69.3700	+13		— 4.3530	+0.4324						
69.5395	+18	58.8515	+11		+ 6.1660	+1.4542						
67.9470	+20	60.4490	+15		+ 4.5708	+1.4555						
66.3960	+12	62.0060	+10		+ 3.0167	+1.4551	+1.4548	+1.4456	+0 0006	0.0000	0.0000	**+1.4462**
63.2405	+11	65.1550	+17		— 0.1360	+1.4562						
61.6270	+11	66.7690	+ 9		— 1.7493	+1.4526						
60.0450	+16	68.3480	+19		— 3.3300	+1.4554						
67.1030	+ 8	61.2810	+10		+ 3.7325	—0.9793						
65.5050	+10	62.8860	+ 9		+ 2.1312	—0.9841						
63.9550	+ 8	64.4390	+ 8		+ 0.5796	—0.9820	—0.9850	—0.9788	—0.0003	—0.0001	0.0000	**—0.9792**
60.7940	+10	67.5940	+18		— 2.5788	—0.9866						
59.1810	+10	69.2090	+13		— 4.1926	—0.9907						
57.5990	+ 5	70.7875	+12		— 5.7730	—0.9876						
71.9500	+15	56.4430	+ 3		+ 8.5757	+3.8639						
70.3505	+20	58.0430	+ 9		+ 6.9759	+3.8606						
68.8050	+17	59.5920	+18		+ 5.4280	+3.8664	+3.8627	+3.8383	+0.0016	—0.0020	0.0000	**+3.8379**
65.6455	+14	62.7490	+13		+ 2.2699	+3.8621						
64.0315	+12	64.3610	+12		+ 0.6568	+3.8587						
62.4555	+13	65.9405	+14		— 0.9210	+3.8644						

Scheinbare Decldiff:

M— Centrum $= + 3'.0032$ $\qquad f^\circ_\delta = 0.99337$ $\qquad i^\circ_\delta = 0.00000$
N— » $= + 3.4543$
Q— » $= -24.4322$ $\qquad f_\delta = \mathbf{0.99288}$ $\qquad i_\delta = \mathbf{+0.00001}$ $\qquad ∢\, i_\delta = 0'.0$
R— » $= -24.4633$
V— » $= -19.2638$ $\qquad f'_\delta = \mathbf{0.99367}$ $\qquad J_\delta = \mathbf{-0.00017}$
W— » $= +30.7313$

$\delta_♃ = +9^\circ\ 57'.3$

69. 1897. März 7.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.4549**		**65.9293**							
S	62.4540	+9	65.9282	+11	0	0.0000				3—4
M	67.4262	+9	60.9500	+10	0	+ 4.9752				3
N	23.2945	+25	105.0882	+7	+17	—39.1570				2—3
Q	76.0610	+20	52.3260	+21	—3	+13.6044		11^h 14^m 45^s		2—3
R	25.7510	+37	102.6248	+15	+20	—36.6966				2—3
V	62.1610	+18	66.2120	+17	0	— 0.2882				2—3
W	63.2760	+21	65.1098	+31	0	+ 0.8198				2—3
♃ a_w	61.9680	+10	65.4205	+10		— 0.4890				
a_c	62.4270	+10	65.9735	+10		— 0.0360	— 0.0338	11 22 55		3
a_o	62.8835	+11	65.5110	+10		+ 0.4235				
♃ b_w	61.9770	+10	66.4165	+10		— 0.4826				
b_c	62.4250	+10	65.9735	+10		— 0.0370	— 0.0398	24 17		3
b_o	62.8685	+10	65.5425	+10		+ 0.4002				
♃ c_w	61.9725	+9	66.4195	+10		— 0.4864				
c_c	62.4150	+9	65.9885	+10		— 0.0496	— 0.0463	25 7		3
c_o	62.8585	+9	65.5385	+10		+ 0.3972			11^h 25^m 52^s	
♃ d_w	61.9645	+9	66.4310	+11		— 0.4962				
d_c	62 4010	+9	65.9970	+11		— 0.0609	— 0.0562	26 23		2—3
d_o	62.8505	+9	65.5475	+11		+ 0.3886				
♃ e_w	62.0075	+9	66.3960	+11		— 0.4572				
e_c	62.4345	+9	65.9665	+11		— 0.0289	— 0.0222	27 35		2—3
e_o	62.8840	+9	65.5195	+11		+ 0.4194				
♃ f_w	61.9825	+10	66.4090	+12		— 0.4762				
f_c	62.4355	+10	65.9670	+12		— 0.0286	— 0.0276	28 57		3
f_o	62.8845	+10	65.5145	+12		+ 0.4221				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	61.7400	+10	66.6510	+8		— 0.7182	—0.6844						3—4
b	61.7280	+10	66.6620	+8		— 0.7297	—0.6899						3
c	61.7185	+9	66.6730	+8		— 0.7400	—0.6937	—0.6994	—0.′6946	+0.′0002	—0.′0002	**—0.′6946**	3—4
d	61.6960	+9	66.6905	+9		— 0.7600	—0.7038						3—4
e	61.7260	+9	66.6635	+9		— 0.7316	—0.7094						3
f	61.7145	+10	66.6750	+10		— 0.7430	—0.7154						3
II a	65.4320	+17	62.9555	+9		+ 2.9758	+3.0096						3
b	65.4230	+16	62.9675	+9		+ 2.9653	+3.0051						3
c	65.4220	+16	62.9665	+10		+ 2.9652	+3.0115	+3.0100	+2.9894	—0.0009	—0.0002	**+2.9883**	3—4 unsymm.Au
d	65.4065	+16	62.9790	+10		+ 2.9512	+3.0074						3—4 [ol
e	65.4470	+17	62.9405	+11		+ 2.9908	+3.0130						3
f	65.4415	+18	62.9445	+12		+ 2.9860	+3.0136						3
III a	67.5035	+19	60.8755	+10		+ 5.0516	+5.0854						3
b	67.4960	+18	60.8835	+10		+ 5.0438	+5.0836						3—4
c	67.4950	+18	60.8905	+11		+ 5.0398	+5.0861	+5.0836	+5.0488	—0.0014	—0.0002	**+5.0472**	3—4
d	67.4760	+19	60.9070	+12		+ 5.0220	+5.0782						3—4
e	67.5175	+19	60.8630	+12		+ 5.0648	+5.0870						3
f	67.5050	+21	60.8730	+13		+ 5.0536	+5.0812						3
IV a	57.4750	+11	70.9165	+13		— 4.9836	—4.9498						3
b	57.4650	+10	70.9245	+13		— 4.9927	—4.9529						3
c	57.4590	+10	70.9310	+12		— 4.9989	—4.9526	—4.9560	—4.9221	+0.0014	—0.0002	**—4.9209**	3—4
d	57.4460	+9	70.9480	+12		— 5.0140	—4.9578						3—4
e	57.4760	+9	70.9120	+13		— 4.9810	—4.9588						3
f	57.4650	+9	70.9230	+13		— 4.9920	—4.9644						3

Scheinbare Ædiff: M—Centrum = + 5.′2703 $f^\circ_\alpha = 0.99322$ $-i^\circ_\alpha = +0.00067$

N— » = —41.4077

Q— » = +14.3248 f_α = **0.99287** $-i_\alpha$ = **+0.00057** $\measuredangle\, i_\alpha = -\,2.′0$

R— » = —38.7098 *Refr.* = + 6

V— » = — 0.3202 $Tx_♃$ = 0

W— » = + 0.8890 f'_α = **0.99316** J_α = **+0.00063**

$\alpha_♃ = 10^h\ 24.^m3$

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eihe. **Decl.**

Scalenablesung.				s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta\sin 1'$	$y-\frac{x^2}{2}tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$						
mm **63.0798**	mm/10000	mm **65.3100**	mm/10000	mm/10000	mm	mm	mm	mm	
63.0788	+10	65.3084	+16	0	0.0000		0.0000	0.0000	Bilder 3. Undurchsichtige Luft.
66.1005	+10	62.2798	+10	0	+ 3.0254		− 0.0013	+ 3.0241	
66.6242	+24	61.7662	+26	− 1	+ 3.5439		− 0.0811	+ 3.4628	
38.4955	+29	89.8955	− 3	+ 4	−24.5829		− 0.0094	−24.5925	
38.4975	+41	89.8790	+ 8	+14	−24.5726		− 0.0694	−24.6420	
43.6850	+20	84.6915	− 2	+ 2	−19.3868		0.0000	−19.3868	
94.0222	− 2	34.3715	+20	−19	+30.9374		0.0000	+30.9374	
68.2630	+19	60.1400	+14		+ 5.1768				
67.8495	+19	60.5530	+10		+ 4.7638	+ 4.7572			
67.4100	+19	60.9790	+10		+ 4.3310				
66.6570	+ 9	61.7350	+ 9		+ 3.5761				
66.2540	+11	62.1640	+ 9		+ 3.1602	+ 3.1627			
65.8350	+11	62.5620	+ 9		+ 2.7517				
64.9220	+17	63.4735	+ 8		+ 1.8398				
64.5150	+17	63.8910	+ 8		+ 1.4326	+ 1.4254			
64.0870	+ 9	64.3095	+ 8		+ 1.0039				
61.9660	+10	66.4270	+ 8		− 1.1155				
61.5620	+10	66.8415	+ 8		− 1.5246	− 1.5275			
61.1425	+11	67.2580	+ 8		− 1.9425				
60.2310	+15	68.1680	+18		− 2.8536				
59.8160	+15	68.5870	+13		− 3.2703	− 3.2742			
59.3860	+15	69.0135	+13		− 3.6986				
58.4905	+ 6	69.9195	+16		− 4.5999				
58.0660	+ 6	70.3465	+16		− 5.0256	− 5.0255			
57.6345	+ 6	70.7660	+12		− 5.4510				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.1800	+19	60.2100	+14		+ 5.1004	+0.3432						
66.5990	+ 9	61.7990	+ 9		+ 3.5151	+0.3524						
64.8550	+17	63.5365	+ 8		+ 1.7748	+0.3494	+0.3531	+0'.3508	+0'.0003	0'.0000	0'.0000	**+0'.3511**
61.9095	+10	66.4855	+10		− 1.1729	+0.3546						
60.1630	+15	68.2245	+18		− 2.9158	+0.3584						
58.4145	+ 6	69.9735	+16		− 4.6649	+0.3606						
66.4715	+10	61.9220	+10		+ 3.3898	−1.3674						
64.8840	+16	63.5045	+ 9		+ 1.8052	−1.3575						
63.1405	+ 9	65.2535	+17		+ 0.0582	−1.3672	−1.3635	−1.3548	−0.0014	−0.0003	0.0000	**−1.3565**
60.1900	+14	68.2000	+19		− 2.8902	−1.3627						
58.4430	+ 5	69.9470	+17		− 4.6375	−1.3633						
56.6915	+ 9	71.6980	+12		− 6.3883	−1.3628						
65.6230	+10	62.7570	+10		+ 2.5481	−2.2091						
64.0405	+ 8	64.3400	+ 9		+ 0.9653	−2.1974						
62.2950	+ 9	66.0915	+11		− 0.7832	−2.2086	−2.2034	−2.1892	−0.0024	−0.0007	0.0000	**−2.1923**
59.3490	+10	69.0350	+14		− 3.7281	−2.2006						
57.5980	+ 5	70.7830	+13		− 5.4778	−2.2036						
55.8480	− 1	72.5300	+14		− 7.2266	−2.2011						
70.1020	+16	58.2935	+ 6		+ 7.0198	+2.2626						
68.5300	+13	59.8710	+15		+ 5.4415	+2.2818						
66.7725	+ 8	61.6260	+10		+ 3.6882	+2.2628	+2.2726	+2.2580	+0.0024	−0.0007	0.0000	**+2.2597**
63.8330	+ 8	64.5620	+17		+ 0.7502	+2.2777						
62.0840	+ 9	66.3110	+11		− 0.9985	+2.2757						
60.3310	+14	68.0610	+19		− 2.7502	+2.2753						

Scheinbare Decldiff. M—Centrum $= +3'.0033$ $\qquad f^\circ_\delta = 0.99351$ $\qquad i^\circ_\delta = -0.00036$

N— » $= +3.4515$

Q— » $= -24.4335$ $\qquad f_\delta = \mathbf{0.99291}$ $\qquad i_\delta = \mathbf{-0.00056}$ $\qquad \measuredangle\, i_\delta = -1'.9$

R— » $= -24.4647$

V— » $= -19.2648$ $\qquad f'_\delta = \mathbf{0.99357}$ $\qquad J_\delta = \mathbf{-0.00048}$

W— » $= +30.7327$

$\delta_♃ = +11° 24'.6$

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Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**66.2385**		**62.1472**							
S	66.2375	+10	62.1462	+10	0	0.0000				2—3
M	71.2125	+13	57.1618	+ 9	0	+ 4.9799				2
N	27.0792	+23	101.2980	+ 3	+18	—39.1522				1—2
Q	79.8190	+21	48.5642	+23	— 3	+13.5814		8^h 54^m 36^s		2
R	29.5108	+30	98.8605	+11	+21	—36.7174				2
V	65.9255	+19	62.4472	+16	0	— 0.3064				2—3
W	67.0842	+20	61.2930	+25	0	+ 0.8497				2
♃ a_w	65.8380	+11	62.5565	+ 9		— 0.4048				
a_c	66.2730	+11	62.1290	+ 9		+ 0.0264	+ 0.0261	11 53 46		3
a_o	66.7015	+ 9	61.6970	+ 9		+ 0.4566				
♃ b_w	65.8300	+11	62.5610	+ 9		— 0.4110				
b_c	66.2550	+11	62.1375	+ 9		+ 0.0132	+ 0.0135	55 8		3
b_o	66.6830	+ 9	61.7150	+ 9		+ 0.4384				
♃ c_w	65.8790	+11	62.5325	+ 9		— 0.3723				
c_c	66.2890	+11	62.1025	+ 9		+ 0.0477	+ 0.0503	56 8		3
c_o	66.7170	+ 9	61.6750	+ 9		+ 0.4754			11^h 56^m 54^s	
♃ d_w	65.8210	+10	62.5700	+10		— 0.4202				
d_c	66.2680	+10	62.1230	+10		+ 0.0268	+ 0.0221	57 46		2—3
d_o	66.7030	+ 8	61.6920	+10		+ 0.4598				
♃ e_w	65.8265	+10	62.5660	+10		— 0.4154				
e_c	66.2440	+10	62.1450	+10		+ 0.0038	+ 0.0082	58 44		2—3
e_o	66.6815	+ 8	61.7175	+10		+ 0.4362				
♃ f_w	65.8365	+11	62.5595	+11		— 0.4072				
f_c	66.2605	+11	62.1310	+11		+ 0.0191	+ 0.0174	59 51		2—3
f_o	66.6840	+ 9	61.7120	+11		+ 0.4402				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	64.3700	+10	64.0165	+ 9		— 1.8688	—1.8949						2
b	64.3570	+ 9	64.0330	+ 8		— 1.8836	—1.8971						2—3
c	64.3955	+ 9	63.9915	+ 8		— 1.8436	—1.8939	—1.8997	—1'.8869	—0'.0002	—0'.0002	**—1'.8873**	2—3
d	64.3610	+ 8	64.0240	+ 9		— 1.8772	—1.8993						2—3
e	64.3445	+ 8	64.0430	+ 9		— 1.8950	—1.9032						2—3
f	64.3455	+ 9	64.0390	+10		— 1.8924	—1.9098						2—3
II a	63.0605	+11	65.3210	+17		— 3.1762	—3.2023						2
b	63.0540	+10	65.3300	+16		— 3.1840	—3.1975						2
c	63.0960	+10	65.2910	+16		— 3.1434	—3.1937	—3.1977	—3.1762	—0.0003	—0.0002	**—3.1767**	2—3
d	63.0630	+ 9	65.3190	+17		— 3.1740	—3.1961						2—3
e	63.0470	+ 9	65.3360	+17		— 3.1906	—3.1988						2—3
f	63.0580	+ 9	65.3265	+17		— 3.1803	—3.1977						2—3
III a	64.5985	+18	63.7875	+ 9		— 1.6397	—1.6658						2—3
b	64.5820	+17	63.8030	+ 8		— 1.6557	—1.6692						2—3
c	64.6225	+17	63.7630	+ 8		— 1.6154	—1.6657	—1.6750	—1.6637	—0.0002	—0.0002	**—1.6641**	2—3
d	64.5825	+16	63.8045	+ 9		— 1.6563	—1.6784						2—3
e	64.5635	+16	63.8200	+ 9		— 1.6736	—1.6818						2—3
f	64.5665	+17	63.8195	+10		— 1.6718	—1.6892						3
IV a	57.4500	+12	70.9335	+14		— 8.7875	—8.8136						1—2
b	57.4380	+11	70.9500	+13		— 8.8018	—8.8153						2
c	57.4790	+11	70.9115	+13		— 8.7620	—8.8123	—8.8169	—8.7576	—0.0008	—0.0002	**—8.7586**	2
d	57.4435	+11	70.9415	+12		— 8.7947	—8.8168						2
e	57.4295	+ 9	70.9615	+13		— 8.8118	—8.8200						2
f	57.4335	+ 9	70.9535	+13		— 8.8058	—8.8232						2

Scheinbare Ædiff: M— Centrum = + 5'.2703 $\quad f^\circ_\alpha = 0.99324 \quad -i^\circ_\alpha = -0.00028$

N— » = —41.4078

Q— » = +14.3248 $\quad f_\alpha =$ **0.99296** $\quad -i_\alpha =$ **—0.00029** $\quad \measuredangle\, i_\alpha = +\, 1'.0$

R— » = —38.7099 $\quad$ *Refr.* = + 9

V— » = — 0.3202 $\quad Tx_♃ = 0$

W— » = + 0.8890 $\quad f'_\alpha =$ **0.99327** $\quad J_\alpha =$ **—0.00020**

$\alpha_♃ = 10^h\ 23^m.4$

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Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.3164**	mm/10000	mm **65.0740**	mm/10000	mm/10000	mm	mm	mm	mm	
63.3155	+9	65.0723	+17	0	0.0000		0.0000	0.0000	
66.3312	+11	62.0460	+12	0	+3.0214		−0.0013	+3.0201	Bilder 2.
66.8808	+24	61.5068	+25	−1	+3.5656		−0.0811	+3.4845	
38.7242	+31	89.6628	−2	+4	−24.5884		−0.0094	−24.5978	
38.7518	+38	89.6212	+8	+13	−24.5631		−0.0694	−24.6325	
43.9192	+19	84.4620	−6	+2	−19.3902		0.0000	−19.3902	
94.2532	−3	34.1352	+21	−8	+30.9358		0.0000	+30.9358	
68.4770	+18	59.9170	+15		+5.1590				
68.0710	+18	60.3305	+15		+4.7492	+4.7468			Bilder 1—2.
67.6510	+18	60.7450	+11		+4.3322				
66.8875	+8	61.5110	+10		+3.5670				
66.4870	+10	61.9265	+10		+3.1590	+3.1616			
66.0820	+10	62.3220	+10		+2.7588				
65.2595	+16	63.1420	+10		+1.9378				
64.8720	+16	63.5365	+9		+1.5469	+1.5430			
64.4705	+16	63.9400	+9		+1.1444				
62.1960	+9	66.1970	+11		−1.1218				
61.7845	+9	66.6210	+9		−1.5394	−1.5393			
61.3620	+10	67.0330	+9		−1.9566				
60.6035	+14	67.7860	+19		−2.7127				
60.2100	+14	68.1880	+19		−3.1104	−3.1126			
59.8050	+14	68.5915	+19		−3.5147				
58.9470	+10	69.4510	+17		−4.3736				
58.5480	+10	69.8485	+17		−4.7718	−4.7697			
58.1600	+5	70.2440	+17		−5.1638				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
68.9090	+13	59.4810	+10		+5.5930	mm +0.8462	mm					
67.3195	+8	61.0725	+10		+4.0022	+0.8406						
65.7070	+10	62.6860	+9		+2.3894	+0.8464	+0.8452	+0.′8399	−0.′0004	−0.′0001	0.′0000	**+0.′8394**
62.6240	+9	65.7690	+10		−0.6938	+0.8455						
61.0490	+10	67.3380	+8		−2.2656	+0.8470						
59.3910	+10	68.9970	+13		−3.9244	+0.8453						
69.4785	+14	58.9110	+10		+6.1628	+1.4160						
67.8870	+19	60.5000	+10		+4.5728	+1.4112						
66.2740	+11	62.1140	+9		+2.9589	+1.4159	+1.4148	+1.4059	−0.0006	−0.0003	0.0000	**+1.4050**
63.1910	+10	65.2000	+16		−0.1260	+1.4133						
61.6230	+10	66.7710	+8		−1.6951	+1.4175						
59.9595	+15	68.4270	+18		−3.3551	+1.4146						
68.9145	+13	59.4730	+10		+5.5997	+0.8529						
67.3290	+8	61.0625	+10		+4.0120	+0.8504						
65.7150	+10	62.6765	+9		+2.3981	+0.8551	+0.8550	+0.8496	−0.0003	−0.0001	0.0000	**+0.8492**
62.6320	+9	65.7575	+10		−0.6840	+0.8553						
61.0620	+10	67.3250	+8		−2.2526	+0.8600						
59.4010	+10	68.9855	+13		−3.9136	+0.8561						
71.8970	+14	56.4940	0		+8.5810	+3.8342						
70.3080	+19	58.0820	+6		+6.9924	+3.8308						
68.6920	+16	59.6960	+15		+5.3768	+3.8338	+3.8330	+3.8087	−0.0017	−0.0023	0.0000	**+3.8047**
65.6080	+16	62.7835	+10		+2.2912	+3.8305						
64.0405	+11	64.3495	+9		+0.7244	+3.8370						
62.3805	+12	66.0140	+11		−0.9379	+3.8318						

Scheinbare Decldiff: M—Centrum $= +3.'0033$
N— » $= +3.4545$
Q— » $= -24.4335$
R— » $= -24.4648$
V— » $= -19.2648$
W— » $= +30.7327$

$f^\circ_\delta = 0.99347$ $\quad i^\circ_\delta = +0.00008$

$f_\delta = \mathbf{0.99298}$ $\quad i_\delta = \mathbf{+0.00006}$ $\quad \measuredangle\, i_\delta = +0.'2$

$f'_\delta = \mathbf{0.99367}$ $\quad J_\delta = \mathbf{+0.00019}$

$\delta_♃ = +11^\circ\ 30.'0$

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	(♃w+♃c+♃o)/3	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
		mm/10000		mm/10000	mm/10000	mm	mm			
Ctr.	mm 62.6870		mm 65.6991							
S	62.6861	+ 9	65.6980	+11	0	0.0000				2—3
M	67.6588	+19	60.7120	+10	0	+ 4.9799				2
N	23.5295	+26	104.8480	+ 7	+18	—39.1504				2
Q	76.2788	+19	52.0998	+21	— 3	+13.5952		8^h 52^m 46^s		2—3
R	25.9725	+36	102.3948	+14	+20	—36.7020				2
V	62.3855	+18	65.9815	+17	0	— 0.2919				2—3
W	63.5190	+20	64.8588	+31	0	+ 0.8356				2
♃ a_w	62.2495	+10	66.1395	+10		— 0.4390				
a_c	62.6900	+10	65.7055	+10		— 0.0017	— 0.0055	8 40 36		3—4
a_o	63.1110	+10	65.2740	+16		+ 0.4242				
♃ b_w	62.2360	+10	66.1590	+10		— 0.4554				
b_c	62.6580	+10	65.7260	+10		— 0.0280	— 0.0326	42 4		3
b_o	63.0745	+10	65.3150	+16		+ 0.3855				
♃ c_w	62.2455	+10	66.1485	+10		— 0.4454				
c_c	62.6590	+10	65.7195	+10		— 0.0242	— 0.0219	43 2		3
c_o	63.0945	+10	65.4980	+16		+ 0.4040			8^h 43^m 48^s	
♃ d_w	62.2410	+ 9	66.1545	+11		— 0.4508				
d_c	62.6740	+ 9	65.7160	+11		— 0.0150	— 0.0145	44 34		3
d_o	63.1105	+ 9	65.2770	+17		+ 0.4224				
♃ e_w	62.2360	+ 9	66.1560	+11		— 0.4540				
e_c	62.6505	+ 9	65.7380	+11		— 0.0378	— 0.0334	45 48		2—3
e_o	63.0850	+ 9	65.3130	+17		+ 0.3916				
♃ f_w	62.2015	+10	66.1875	+12		— 0.4870				
f_c	62.6340	+10	65.7630	+12		— 0.0586	— 0.0655	46 46		2—3
f_o	63.0400	+10	65.3530	+18		+ 0.3492				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	64.5420	+17	63.8415	+ 8		+ 1.8568	+1.8623						2
b	64.5165	+17	63.8685	+ 8		+ 1.8303	+1.8629						2
c	64.5275	+16	63.8595	+ 8		+ 1.8404	+1.8623	+1.8650	+1'.8526	—0'.0004	—0'.0002	**+1'.8520**	2
d	64.5380	+16	63.8485	+ 9		+ 1.8512	+1.8657						2
e	64.5210	+17	63.8630	+10		+ 1.8354	+1.8688						2
f	64.4900	+17	63.8980	+11		+ 1.8024	+1.8679						2
II	Bedeckt.												
III a	58.1415	+ 7	70.2390	+17		— 4.5432	—4.5377						2
b	58.1105	+ 6	70.2700	+16		— 4.5742	—4.5416						2
c	58.1185	+ 6	70.2615	+16		— 4.5660	—4.5441	—4.5434	—4.5131	+0.0009	—0.0002	**— 4.5124**	2
d	58.1240	+ 5	70.2520	+17		— 4.5586	—4.5441						2
e	58.1070	+ 5	70.2715	+17		— 4.5768	—4.5434						2
f	58.0700	+ 5	70.3105	+17		— 4.6148	—4.5493						2
IV a	53.6580	+ 6	74.7230	+12		— 9.0268	—9.0213						2—3
b	53.6270	+ 5	74.7540	+11		— 9.0578	—9.0252						2
c	53.6420	+ 5	74.7440	+11		— 9.0452	—9.0233	—9.0237	—8.9636	+0.0017	—0.0002	**—8.9621**	2
d	53.6510	+ 4	74.7370	+10		— 9.0372	—9.0227						2
e	53.6280	+ 3	74.7555	+10		— 9.0580	—9.0246						2
f	53.5980	+ 3	74.7900	+11		— 9.0904	—9.0249						2—3

Scheinbare Ædiff: M—Centrum = + 5'.2703 $f^\circ_\alpha = 0.99327$ $-i^\circ_\alpha = +0.00028$

N— » = —41.4079

Q— » = +14.3248 f_α = **0.99299** $-i_\alpha$ = **+0.00027** $\measuredangle\, i_\alpha = -$ 0'.9

R— » = —38.7100 Refr. = + 16

V— » = — 0.3202 $Tx_♃$ = 0

W— » = + 0.8890 f'_α = **0.99334** J_α = **+0.00043**

$\alpha_♃ = 10^h\ 23^m.0$

eihe.

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Decl.

Scalenablesung. P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 63.3655	mm/10000	mm 65.0164	mm/10000	mm/10000	mm	mm	mm	mm	
63.3645	+10	65.0148	+16	0	0.0000		0.0000	0.0000	
66.3840	+10	61.9900	+10	0	+ 3.0274		— 0.0013	+ 3.0261	Bilder 2.
66.9140	+24	61.4680	+27	— 1	+ 3.5482		— 0.0811	+ 3.4671	
38.7818	+29	89.6002	— 3	+ 5	—24.5816		— 0.0094	—24.5910	
38.7862	+41	89.5820	+ 8	+13	—24.5695		— 0.0694	—24.6389	
43.9652	+20	84.4058	— 7	+ 2	—19.3933		0.0000	—19.3933	
94.3100	— 2	34.0778	+20	— 8	+30.9396		0.000	+30.9396	
68.4900	+19	59.8900	+14		+ 5.1257				
68.0840	+19	60.3090	+14		+ 4.7132	+ 4.7134			
67.6710	+19	60.7200	+10		+ 4.3014				
66.8890	+ 9	61.5005	+ 9		+ 3.5197				
66.4890	+11	61.9010	+ 9		+ 3.1196	+ 3.1198			
66.0900	+11	62.3010	+ 9		+ 2.7200				
65.3635	+17	63.0330	+ 9		+ 1.9911				
64.9565	+17	63.4290	+ 9		+ 1.5896	+ 1.5898			
64.5570	+17	63.8310	+ 9		+ 1.1888				
62.0505	+10	66.3410	+10		— 1.3198				
61.6305	+10	66.7580	+ 8		— 1.7382	— 1.7352			
61.2220	+11	67.1685	+ 8		— 2.1476				
60.3965	+15	67.9985	+18		— 2.9757				
59.9950	+15	68.3920	+18		— 3.3732	— 3.3754			
59.5955	+15	68.8015	+13		— 3.7774				
58.8760	+ 6	69.5115	+16		— 4.4928				
58.4755	+ 6	69.9065	+16		— 4.8906	— 4.8884			
58.0890	+ 6	70.3025	+16		— 5.2818				

Trabant — Jupiterscentrum.

P.-Kr.90°	t+k	P.-Kr.270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
67.2560	+ 8	61.1250	+11		+ 3.8908	—0.8226						
65.6620	+10	62.7200	+10		+ 2.2964	—0.8234						
64.1300	+ 8	64.2510	+ 9		+ 0.7649	—0.8249	—0.8251	—0.′8199	—0.′0002	—0.′0001	0.′0000	**—0.′8202**
60.8070	+10	67.5750	+19		— 2.5590	—0.8238						
59.1600	+10	69.2205	+14		— 4.2050	—0.8296						
57.6525	+ 5	70.7320	+13		— 5.7147	—0.8263						
Bedeckt.												
70.1180	+12	58.2645	+ 6		+ 6.7525	+2.0391						
68.5250	+15	59.8610	+15		+ 5.1574	+2.0376						
66.9930	+10	61.3910	+11		+ 3.6264	+2.0366	+2.0377	+2.0247	+0.0005	—0.0006	0.0000	**+2.0246**
63.6670	+10	64.7145	+17		+ 0.3014	+2.0366						
62.0270	+11	66.3555	+11		— 1.3388	+2.0366						
60.5215	+12	67.8695	+19		— 2.8489	+2.0395						
71.9300	+15	56.4595	+ 2		+ 8.5614	+3.8480						
70.3315	+20	58.0510	+ 8		+ 6.9663	+3.8465						
68.8030	+17	59.5830	+17		+ 5.4354	+3.8456	+3.8466	+3.8222	+0.0011	—0.0024	0.0000	**+3.8209**
65.4770	+20	62.9055	+12		+ 2.1116	+3.8468						
63.8370	+12	64.5465	+19		+ 0.4704	+3.8458						
62.3250	+13	66.0590	+13		— 1.0416	+3.8468						

Scheinbare Decldiff: M—Centrum = + 3.′0033 $f^\circ_\delta = 0.99334$ $i^\circ_\delta = -0.00032$

N— » = + 3.4545

Q— » = —24.4335 f_δ = **0.99285** i_δ = **—0.00034** $\angle\, i_\delta = -1.′2$

R— » = —24.4648

V— » = —19.2648 f'_δ = **0.99364** J_δ = **—0.00012**

W— » = +30.7327

$\delta_♃ = +11^\circ\ 32.′2$

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**60.8095**		**67.5839**							
S	60.8085	+10	67.5820	+19	0	0.0000				3
M	65.7858	+11	62.5952	+ 9	0	+ 4.9826				2
N	21.6510	+25	106.7408	+ 5	+18	−39.1549				2
Q	74.4008	+25	53.9868	+13	− 3	+13.5945		$9^h\ 30^m\ 15^s$		2
R	24.0950	+38	104.2835	+16	+20	−36.7040				2
V	60.5105	+20	67.8682	+25	0	− 0.2919				1—2
W	61.6382	+21	66.7475	+23	0	+ 0.8324				2—3
♃ a_w	60.3345	+15	68.0720	+18		− 0.4817				
a_c	60.7565	+11	67.6405	+18		− 0.0552	− 0.0559	9 37 25		3
a_o	61.1815	+11	67.2180	+ 8		+ 0.3691				
♃ b_w	60.3530	+15	68.0450	+18		− 0.4590				
b_c	60.7745	+11	67.6170	+18		− 0.0344	− 0.0353	38 23		3
b_o	61.1990	+11	67.1990	+ 8		+ 0.3874				
♃ c_w	60.3285	+15	68.0790	+18		− 0.4882				
c_c	60.7275	+11	67.6585	+18		− 0.0786	− 0.0758	39 21		2—3
c_o	61.1515	+11	67.2475	+ 8		+ 0.3394			$9^h\ 39^m\ 47^s$	
♃ d_w	60.3295	+10	68.0855	+19		− 0.4912				
d_c	60.7390	+10	67.6495	+19		− 0.0685	− 0.0684	41 22		3
d_o	61.1645	+10	67.2300	+ 9		+ 0.3545				
♃ e_w	60.3490	+10	68.0680	+19		− 0.4728				
e_c	60.7565	+10	67.6420	+19		− 0.0560	− 0.0548	42 23		2—3
e_o	61.1750	+10	67.2205	+ 9		+ 0.3645				
♃ f	Verzerrt,	wah	rscheinlich	dur	ch	eine Ersc	hütterung des Fern	rohrs während der	Aufnahme.	

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	58.7670	+11	69.6270	+17		− 2.0431	−1.9872						2—3
b	58.7865	+11	69.6020	+16		− 2.0208	−1.9855						2—3
c	58.7475	+11	69.6440	+16		− 2.0613	−1.9855	−1.9868	−1ʹ.9733	+0ʹ.0002	−0ʹ.0003	**−1ʹ.9734**	2—3
d	58.7510	+10	69.6425	+17		− 2.0589	−1.9905						2—3
e	58.7675	+10	69.6210	+17		− 2.0399	−1.9851						1—2
II a	63.7440	+ 9	64.6455	+16		+ 2.9361	+2.9920						2
b	63.7635	+ 8	64.6260	+16		+ 2.9556	+2.9909						2—3
c	63.7195	+ 8	64.6660	+16		+ 2.9136	+2.9894	+2.9886	+2.9683	−0.0004	−0.0003	**+2.9676**	2—3
d	63.7235	+ 8	64.6660	+17		+ 2.9155	+2.9839						2—3
e	63.7380	+ 9	64.6480	+18		+ 2.9318	+2.9866						2
III a	56.1270	+ 1	72.2610	+12		− 4.6804	−4.6245						2—3
b	56.1500	0	72.2370	+11		− 4.6568	−4.6215						2—3
c	56.1160	0	72.2770	+11		− 4.6938	−4.6180	−4.6201	−4.5886	+0.0005	−0.0003	**−4.5884**	2
d	56.1210	− 1	72.2710	+11		− 4.6884	−4.6200						2
e	56.1370	− 1	72.2530	+12		− 4.6714	−4.6166						2
IV a	52.7175	+10	75.6710	+ 8		− 8.0894	−8.0335						2
b	52.7430	+ 9	75.6495	+ 8		− 8.0660	−8.0307						2
c	52.7065	+ 8	75.6885	+ 7		− 8.1038	−8.0280	−8.0301	−7.9753	+0.0009	−0.0003	**−7.9747**	2
d	52.7115	+ 7	75.6850	+ 7		− 8.0996	−8.0312						2
e	52.7255	+ 7	75.6640	+ 8		− 8.0821	−8.0273						2—3

Scheinbare Ædiff: M— Centrum $= +\ 5ʹ.2703$ $f^\circ_\alpha = 0.99318$ $-i^\circ_\alpha = +0.00034$
N— » $= -41.4079$
Q— » $= +14.3248$ f_α $=$ **0.99289** $-i_\alpha$ $=$ **+0.00032** $\measuredangle\ i_\alpha = -1ʹ.1$
R— » $= -38.7100$ *Refr.* $= -$ 4
V— » $= -\ 0.3202$ $T\alpha_♃$ $=$ 0
W— » $= +\ 0.8890$ f'_α $=$ **0.99318** $J\alpha$ $=$ **+0.00028**

$\alpha_♃ = 10^h\ 22^m.6$

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.1458		**65.2436**							
63.1448	+10	65.2420	+16	0	0.0000		0.0000	0.0000	Bilder 3.
66.1650	+10	62.2155	+10	0	+ 3.0236		— 0.0013	+ 3.0223	
66.6935	+24	61.6920	+26	— 1	+ 3.5494		— 0.0811	+ 3.4683	
38.5590	+27	89.8272	— 4	+ 5	—24.5832		— 0.0094	—24.5926	
38.5680	+41	89.8082	+ 9	+13	—24.5683		— 0.0694	—24.6377	
43.5502	+20	84.6300	— 2	+ 2	—19.3897		0.0000	—19.3897	
94.0845	— 2	34.3000	+20	— 8	+30.9392		0.0000	+30.9392	
68.2610	+19	60.1360	+14		+ 5.1116				
67.8620	+19	60.5345	+10		+ 4.7131	+ 4.7111			Bilder 2—3.
67.4600	+19	60.9415	+10		+ 4.3086				
66.5150	+11	61.8910	+ 9		+ 3.3610				
66.1125	+11	62.2920	+ 9		+ 2.9592	+ 2.9613			
65.7160	+11	62.6865	+ 9		+ 2.5638				
64.8400	+17	63.5565	+ 8		+ 1.6911				
64.4510	+ 9	63.9520	+ 8		+ 1.2984	+ 1.2991			
64.0590	+ 9	64.3415	+ 8		+ 0.9077				
62.0070	+10	66.3910	+ 8		— 1.1445				
61.5980	+10	66.7995	+ 8		— 1.5518	— 1.5462			
61.2145	+11	67.1970	+ 8		— 1.9422				
60.3520	+15	68.0650	+18		— 2.8178				
59.9420	+15	68.4635	+18		— 3.2120	— 3.2113			
59.5475	+15	68.8540	+13		— 3.6042				
Verzerrt,	wah	rscheinlich	durc	h ei	ne Erschü	tterung des Fernrohrs	während der Aufn	ahme.	

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.7090	+15	59.6785	+15		+ 5.5642	+0.8531						
66.9560	+10	61.4290	+11		+ 3.8124	+0.8511						
65.3000	+18	63.0870	+10		+ 2.1558	+0.8567	+0.8523	+0.8468	+0.0007	—0.0001	0.0000	**+0.8474**
62.4510	+11	65.9405	+11		— 0.6958	+0.8504						
60.7830	+12	67.6020	+19		— 2.3610	+0.8503						
66.5610	+ 8	61.8290	+ 9		+ 3.4148	—1.2963						
64.8080	+16	63.5780	+ 8		+ 1.6613	—1.2970						
63.1520	+ 9	65.2360	+16		+ 0.0066	—1.2925	—1.2953	—1.2870	—0.0010	—0.0003	0.0000	**—1.2883**
60.3035	+14	68.0840	+18		— 2.8416	—1.2954						
58.6390	+10	69.7490	+16		— 4.5064	—1.2951						
69.8180	+19	58.5730	+12		+ 6.6718	+1.9607						
68.0630	+21	60.3220	+16		+ 4.9196	+1.9583						
66.4065	+13	61.9810	+11		+ 3.2618	+1.9627	+1.9582	+1.9456	+0.0015	—0.0007	0.0000	**+1.9464**
63.5520	+11	64.8340	+18		+ 0.4076	+1.9538						
61.8875	+12	66.4970	+10		— 1.2558	+1.9555						
71.2115	+16	57.1760	+14		+ 8.0668	+3.3557						
69.4600	+17	58.9270	+15		+ 6.3155	+3.3542						
67.8050	+22	60.5850	+15		+ 4.6592	+3.3601	+3.3557	+3.3341	+0.0027	—0.0020	0.0000	**+3.3348**
61.9565	+20	63.4330	+14		+ 1.8110	+3.3572						
63.2855	+13	65.1020	+21		+ 0.1402	+3.3515						

Scheinbare Decldiff: M—Centrum $= +\ 3'.0033$ $\qquad f^\circ_\delta = 0.99342$ $\qquad i^\circ_\delta = -0.00022$

N— » $= +\ 3.4541$

Q— » $= -24.4336$ $\qquad f_\delta = \mathbf{0.99292}$ $\qquad i_\delta = \mathbf{-0.00028}$ $\qquad \measuredangle\, i_\delta = -1'.0$

R— » $= -24.4649$

V— » $= -19.2649$ $\qquad f'_\delta = \mathbf{0.99358}$ $\qquad J_\delta = \mathbf{-0.00033}$

W— » $= +30.7328$

$\delta_♃ = +11°\ 39'.9$

73. **1897. März 11.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.6704**		**66.7141**							
S	61.6695	+ 9	66.7132	+ 9	0	0.0000				2
M	66.6445	+ 9	61.7290	+ 9	0	+ 4.9796				1—2
N	22.5110	+25	105.8698	+ 6	+18	−39.1548				2
Q	75.2570	+23	53.1262	+17	− 3	+13.5872		**10ʰ 8ᵐ 24ˢ**		2
R	24.9452	+38	103.4248	+15	+20	−36.7148				1—2
V	61.3612	+19	67.0098	+15	0	− 0.3022				2
W	62.5110	+21	65.8685	+25	0	+ 0.8429				2
♃ a_w	60.9160	+11	67.4890	+ 8		− 0.7645				
a_c	61.3500	+11	67.0420	+ 8		− 0.3240	− 0.3211	14 36 29		3
a_o	61.7990	+10	66.5925	+ 8		+ 0.1252				
♃ b_w	60.9435	+11	67.4525	+ 8		− 0.7325				
b_c	61.3770	+11	67.0010	+ 8		− 0.2900	− 0.2877	37 57		3
b_o	61.8330	+10	66.5980	+ 8		+ 0.1594				
♃ c_w	60.9415	+11	67.4555	+ 8		− 0.7350				
c_c	61.3810	+11	67.0120	+ 8		− 0.2935	− 0.2938	39 12	**14ʰ 39ᵐ 23ˢ**	3
c_o	61.8160	+10	66.5720	+ 8		+ 0.1440				
♃ d_w	60.9505	+10	67.4505	+ 9		− 0.7281				
d_c	61.3815	+10	67.0050	+ 9		− 0.2898	− 0.2934	41 5		2—3
d_o	61.8110	+ 9	66.5790	+ 9		+ 0.1378				
♃ e_w	60.9565	+10	67.4420	+ 9		− 0.7208				
e_c	61.3870	+10	67.0155	+ 9		− 0.2924	− 0.2919	42 14		2—3
e_o	61.8110	+10	66.5800	+ 9		+ 0.1374				
♃ f	Nicht ge	mess	en, weil die	Zeit	der	Aufnahme	unsicher ist.			

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	60.0590	+15	68.3190	+18		− 1.6083	−1.2872						3
b	60.1055	+15	68.2820	+18		− 1.5666	−1.2789						3
c	60.0965	+15	68.2875	+18		− 1.5738	−1.2800	−1.2764	−1ʹ.2682	+0ʹ.0003	−0ʹ.0003	**−1ʹ.2682**	3
d	60.1085	+14	68.2700	+19		− 1.5592	−1.2658						2—3
e	60.1165	+14	68.2640	+19		− 1.5522	−1.2603						2
II a	63.7600	+ 9	64.6240	+16		+ 2.0895	+2.4106						2—3
b	63.7940	+ 9	64.5905	+16		+ 2.1232	+2.4109						2—3
c	63.7785	+ 8	64.6045	+16		+ 2.1084	+2.4022	+2.4056	+2.3901	−0.0007	−0.0003	**+2.3891**	2
d	63.7790	+ 8	64.6005	+17		+ 2.1106	+2.4040						2
e	63.7790	+ 8	64.6045	+18		+ 2.1086	+2.4005						2
III a	57.1910	+11	71.1820	+12		− 4.4737	−4.1526						2
b	57.2315	+10	71.1445	+12		− 4.4348	−4.1471						2—3
c	57.2210	+10	71.1560	+12		− 4.4458	−4.1520	−4.1469	−4.1200	+0.0011	−0.0003	**−4.1192**	2
d	57.2305	+ 9	71.1490	+13		− 4.4376	−4.1442						2—3
e	57.2380	+ 9	71.1425	+13		− 4.4306	−4.1387						2
IV a	53.6700	+ 6	74.7140	+11		− 8.0004	−7.6793						2
b	53.7100	+ 5	74.6790	+11		− 7.9630	−7.6753						3
c	53.6960	+ 4	74.6875	+10		− 7.9742	−7.6804	−7.6748	−7.6252	+0.0021	−0.0003	**−7.6234**	2
d	53.7075	+ 3	74.6775	+10		− 7.9635	−7.6701						2
e	53.7080	+ 3	74.6730	+11		− 7.9610	−7.6691						2

Scheinbare Ædiff: wie 72.

$f^\circ_\alpha = 0.99318$ $\quad -i^\circ_\alpha = +0.00010$

$f_\alpha = \mathbf{0.99288}$ $\quad -i_\alpha = \mathbf{+0.00006}$ $\quad ∢\, i_\alpha = -0ʹ.2$

$Refr. = +\ 61$

$Tx_♃ = 0$

$f'_\alpha = \mathbf{0.99354}$ $\quad J_\alpha = \mathbf{+0.00067}$

$\alpha_♃ = 10^h\ 22^m.4$

1897. März 11.

ihe. Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.0808		65.3028							
63.0798	+10	65.3012	+16	0	0.0000		0.0000	0.0000	Bilder 3—4.
66.0980	+10	62.2745	+10	0	+ 3.0228		— 0.0013	+ 3.0215	
66.6452	+24	61.7368	+26	— 1	+ 3.5650		— 0.0811	+ 3.4839	
38.4922	+27	89.8920	— 4	+ 5	—24.5868		— 0.0094	—24.5962	
38.5198	+41	89.8520	+ 8	+13	—24.5522		— 0.0694	—24.6216	
43.6832	+20	84.6888	— 2	+ 2	—19.3905		0.0000	—19.3905	
94.0215	— 2	34.3615	+20	— 8	+30.9391		0.0000	—30.9391	
68.2450	+19	60.1490	+14		+ 5.1592				
67.8265	+19	60.5840	+10		+ 4.7327	+ 4.7341			Bilder 3.
67.3940	+ 9	60.9950	+10		+ 4.3104				
66.7210	+ 9	61.6800	+ 9		+ 3.6315				
66.2875	+11	62.1065	+ 9		+ 3.2016	+ 3.2039			
65.8670	+11	62.5320	+ 9		+ 2.7786				
65.1440	+17	63.2540	+ 9		+ 2.0564				
64.7290	+17	63.6620	+ 8		+ 1.6450	+ 1.6431			
64.3165	+ 9	64.0830	+ 8		+ 1.2278				
62.0010	+10	66.3980	+ 8		— 1.0874				
61.5835	+10	66.8150	+ 8		— 1.5046	— 1.5014			
61.1740	+11	67.2205	+ 8		— 1.9121				
60.4000	+15	67.9970	+18		— 2.6876				
59.9840	+15	68.4060	+18		— 3.1002	— 3.0986			
59.5770	+15	68.8150	+13		— 3.5079				
Nicht ge	mess	en, weil die	Zeit	der	Aufnahme	unsicher ist.			

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.3335	+19	60.0500	+14		+ 5.2530	+0.5189						
66.8045	+ 9	61.5820	+ 9		+ 3.7222	+0.5183						
65.2400	+17	63.1465	+ 9		+ 2.1582	+0.5151	+0.5163	+0'.5134	—0'.0010	—0'.0001	0'.0000	+0'.5123
62.0970	+10	66.2895	+10		— 0.9852	+0.5162						
60.4965	+11	67.8895	+18		— 2.5858	+0.5128						
66.7995	+ 8	61.5890	+ 9		+ 3.7162	—1.0179						
65.2720	+16	63.1100	+ 9		+ 2.1924	—1.0115						
63.7150	+ 8	64.6710	+16		+ 0.6326	—1.0105	—1.0108	—1.0051	+0.0019	—0.0001	0.0000	—1.0033
60.5730	+10	67.8120	+18		— 2.5089	—1.0075						
58.9740	+10	69.4060	+13		— 4.1052	—1.0066						
69.5525	+19	58.8240	+11		+ 6.4756	+1.7415						
68.0205	+19	60.3570	+15		+ 4.9430	+1.7391						
66.4650	+13	61.9170	+10		+ 3.3852	+1.7421	+1.7416	+1.7316	—0.0033	—0.0006	0.0000	+1.7277
63.3280	+12	65.0580	+17		+ 0.2458	+1.7444						
61.7260	+12	66.6630	+ 9		— 1.3574	+1.7412						
71.0220	+16	57.3640	+12		+ 7.9402	+3.2061						
69.4930	+17	58.8920	+13		+ 6.4117	+3.2078						
67.9320	+22	60.4510	+17		+ 4.8518	+3.2087	+3.2090	+3.1910	—0.0059	—0.0019	0.0000	+3.1932
64.7940	+20	63.5925	+11		+ 1.7122	+3.2136						
63.1920	+13	65.1925	+19		+ 0.1104	+3.2090						

Scheinbare Decldiff. wie 72.

$f^\circ_\delta = 0.99341$ $i^\circ_\delta = +0.00016$

$f_\delta = \mathbf{0.99290}$ $i_\delta = \mathbf{+0.00006}$ $\measuredangle\ i_\delta = +0'.2$

$f'_\delta = \mathbf{0.99439}$ $J_\delta = \mathbf{+0.00081}$

$\delta_♃ = +11^\circ\ 35'.5$

74. 1897. März 23.

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.6744**		**66.7109**							
S	61.6735	+ 9	66.7100	+ 9	0	0.0000				1—2
M	66.6468	+ 9	61.7268	+ 9	0	+ 4.9782				1—2
N	22.5178	+25	105.8648	+ 6	+18	—39.1525				1
Q	75.2642	+23	53.1135	+17	— 3	+13.5936		**9h 10m 50s**		1—2
R	24.9552	+37	103.4150	+15	+20	—36.7086				1—2
V	61.3695	+19	67.0000	+15	0	— 0.2968				1—2
W	62.5068	+21	65.8698	+25	0	+ 0.8366				1
♃ a_w	61.2210	+11	67.1820	+ 8		— 0.4621				
a_c	61.6565	+10	66.7380	+ 8		— 0.0224	— 0.0268	9 28 3		2—3
a_o	62.0800	+10	66.3080	+10		+ 0.4042				
♃ b_w	61.2550	+11	67.1430	+ 8		— 0.4256				
b_c	61.6870	+10	66.7110	+ 8		+ 0.0064	+ 0.0063	29 30		3
b_o	62.1190	+10	66.2790	+10		+ 0.4382				
♃ c_w	61.2205	+11	67.1750	+ 8		— 0.4588				
c_c	61.6510	+10	66.7450	+ 8		— 0.0286	— 0.0267	30 42		2
c_o	62.0850	+10	66.3070	+10		+ 0.4072			**9h 31m 16s**	
♃ d_w	61.2475	+10	67.1530	+ 9		— 0.4344				
d_c	61.6740	+ 9	66.7160	+ 9		— 0.0028	— 0.0019	32 0		2—3
d_o	62.1140	+ 9	66.2875	+11		+ 0.4314				
♃ e_w	61.2260	+10	67.1710	+ 9		— 0.4542				
e_c	61.6450	+ 9	66.7505	+ 9		— 0.0345	— 0.0306	33 1		2
e_o	62.0755	+ 9	66.3180	+11		+ 0.3969				
♃ f_w	61.2500	+11	67.1440	+10		— 0.4287				
f_c	61.6660	+10	66.7200	+10		— 0.0088	— 0.0077	34 17		1—2
f_o	62.0960	+10	66.3035	+12		+ 0.4144				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	61.2270	+11	67.1570	+ 8		— 0.4466	—0.4198						1—2
b	61.2485	+11	67.1350	+ 8		— 0.4248	—0.4311						2
c	61.2130	+11	67.1700	+ 8		— 0.4601	—0.4334	—0.4357	—0.′4328	0.′0000	—0.′0007	**—0.′4335**	2
d	61.2325	+10	67.1560	+ 9		— 0.4434	—0.4415						2
e	61.2025	+10	67.1815	+ 9		— 0.4712	—0.4406						1—2
f	61.2175	+11	67.1650	+10		— 0.4554	—0.4477						1
II a	58.8205	+12	69.5590	+17		— 2.8512	—2.8244						1—2
b	58.8540	+11	69.5320	+16		— 2.8210	—2.8273						1—2
c	58.8165	+11	69.5675	+16		— 2.8575	—2.8308	—2.8313	—2.8121	+0.0001	—0.0007	**—2.8127**	2
d	58.8395	+10	69.5465	+17		— 2.8356	—2.8337						2
e	58.8095	+10	69.5750	+17		— 2.8648	—2.8342						1
f	58.8290	+11	69.5550	+18		— 2.8451	—2.8374						1—2
III	Geht du	rch	die Jupiter	sche	ibe.								
IV a	58.9990	+12	69.3820	+14		— 2.6734	—2.6466						1—2
b	59.0310	+11	69.3525	+13		— 2.6426	—2.6489						1—2
c	58.9990	+11	69.3910	+13		— 2.6778	—2.6511	—2.6532	—2.6353	+0.0001	—0.0007	**—2.6359**	2
d	59.0155	+10	69.3670	+14		— 2.6577	—2.6558						2
e	58.9890	+10	69.3970	+14		— 2.6860	—2.6554						1
f	59.0050	+11	69.3790	+15		— 2.6690	—2.6613						1—2

Scheinbare Æ diff.: M— Centrum = + 5.′2703 $\quad f^\circ_\alpha = 0.99324 \quad -i^\circ_\alpha = +0.00016$

N— » = —41.4088

Q— » = +14.3249 $\quad f_\alpha =$ **0.99296** $\quad -i_\alpha =$ **+0.00014** $\quad ∡\, i_\alpha = -$ 0.′5

R— » = —38.7104 $\quad Refr. = -$ 4

V— » = — 0.3202 $\quad Tx_♃ =$ 0

W— » = + 0.8888 $\quad f'_\alpha =$ **0.99325** $\quad J_\alpha =$ **+0.00010**

$\alpha_♃ = 10^h\ 17^m.6$

1897. März 23.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta \sin 1'$	$y-\frac{x^2}{2}tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.2068		65.1766							
63.2058	+10	65.1750	+16	0	0.0000		0.0000	0.0000	Bilder 2—3.
66.2270	+10	62.1535	+10	0	+ 3.0212		— 0.0013	+ 3.0199	
66.7575	+24	61.6215	+26	— 1	+ 3.5527		— 0.0811	+ 3.4716	
38.6188	+28	89.7650	— 4	+ 5	—24.5861		— 0.0094	—24.5955	
38.6318	+41	89.7408	+ 8	+13	—24.5666		— 0.0694	—24.6360	
43.8095	+20	84.5680	— 2	+ 2	—19.3930		0.0000	—19.3930	
94.1490	— 2	34.2332	+20	— 8	+30.9409		0.0000	+30.9409	
68.3240	+19	60.0750	+14		+ 5.1196				
67.9150	+19	60.4860	+14		+ 4.6996	+ 4.7009			Bilder 2.
67.4980	+19	60.9020	+10		+ 4.2834				
66.7615	+ 9	61.6435	+ 9		+ 3.5439				
66.3460	+11	62.0580	+ 9		+ 3.1290	+ 3.1310			
65.9385	+11	62.4685	+ 9		+ 2.7200				
65.0860	+17	63.3090	+ 9		+ 1.8738				
64.6740	+17	63.7210	+ 8		+ 1.4618	+ 1.4637			
64.2750	+17	64.1345	+ 8		+ 1.0556				
62.0675	+10	66.3275	+10		— 1.1451				
61.6510	+10	66.7475	+ 8		— 1.5632	— 1.5599			
61.2470	+11	67.1600	+ 8		— 1.9714				
60.3310	+15	68.0645	+18		— 2.8820				
59.9260	+15	68.4620	+18		— 3.2832	— 3.2843			
59.5295	+15	68.8750	+13		— 3.6878				
58.6120	+11	69.7845	+16		— 4.6016				
58.2160	+ 6	70.1790	+16		— 4.9971	— 4.9947			
57.8305	+ 6	70.5700	+16		— 5.3854				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.1300	+19	60.2530	+14		+ 4.9236	+0.2227						
66.5790	+ 9	61.8140	+ 9		+ 3.3674	+0.2364						
64.9010	+17	63.4840	+ 9		+ 1.6938	+0.2301	+0.2364	+0.'2348	+0.'0001	0.'0000	+0.'0001	**+0.'2350**
61.8840	+10	66.5020	+10		— 1.3241	+0.2358						
60.1685	+15	68.2220	+18		— 3.0420	+0.2423						
58.4535	+ 6	69.9300	+16		— 4.7538	+0.2409						
69.1810	+15	59.2050	+11		+ 5.9731	+1.2722						
67.6170	+20	60.7710	+11		+ 4.4084	+1.2774						
65.9450	+12	62.4400	+10		+ 2.7375	+1.2738	+1.2766	+1.2682	+0.0006	—0.0002	+0.0001	**+1.2687**
62.9240	+11	65.4610	+17		— 0.2838	+1.2761						
61.2050	+12	67.1800	+ 9		— 2.0024	+1.2819						
59.4905	+12	68.8935	+14		— 3.7167	+1.2780						
Geht du	rch	die Jupiter	sche	ibe.								
9.1795	+15	59.2060	+11		+ 5.9718	+1.2709						
7.6110	+20	60.7775	+11		+ 4.4021	+1.2711						
5.9420	+12	62.4460	+10		+ 2.7340	+1.2703	+1.2735	+1.2651	+0.0006	—0.0002	+0.0001	**+1.2656**
2.9225	+11	65.4640	+17		— 0.2862	+1.2737						
1.2010	+12	67.1820	+ 9		— 2.0054	+1.2789						
9.4880	+12	68.8950	+14		— 3.7186	+1.2761						

Scheinbare Decldiff: M—Centrum = + 3.'0033 f°_δ = 0.99327 i°_δ = —0.00011

N— » = + 3.4543

Q— » = —24.4338 f_δ = **0.99278** i_δ = **—0.00015** $\sphericalangle\ i_\delta$ = —0.'5

R— » = —24.4654

V— » = —19.2651 f'_δ = **0.99343** J_δ = **—0.00021**

W— » = +30.7330

$\delta_♃ = +12^\circ\ 2.'5$

75. 1897. März 23.

Æ

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.0474**		**65.3362**							
S	63.0465	+ 9	65.3345	+17	0	0.0000				2—3
M	68.0242	+19	60.3562	+14	0	+ 4.9786				2
N	23.8918	+26	104.4885	+ 7	+18	−39.1512				2
Q	76.6460	+21	51.7348	+21	− 3	+13.5997		**10^h 1^m 50^s**		2
R	26.3380	+36	102.0345	+14	+20	−36.7008				2
V	62.7538	+18	65.6230	+17	0	− 0.2902				2
W	63.8735	+20	64.5000	+31	0	+ 0.8306				
♃ a_w	62.6190	+10	65.7680	+10		− 0.4301				
a_c	63.0770	+10	65.3120	+16		+ 0.0266	+ 0.0215	12 53 16		4—5
a_o	63.5155	+10	64.8675	+16		+ 0.4681				
♃ b_w	62.6415	+10	65.7645	+10		− 0.4171				
b_c	63.0720	+10	65.3155	+16		+ 0.0224	+ 0.0223	54 42		4
b_o	63.5120	+10	64.8770	+16		+ 0.4616				
♃ c_w	62.6450	+10	65.7505	+10		− 0.4084				
c_c	63.0790	+10	65.3170	+16		+ 0.0251	+ 0.0273	55 50		4
c_o	63.5150	+10	64.8730	+16		+ 0.4651			**12^h 56^m 23^s**	
♃ d_w	62.6655	+ 9	65.7345	+11		− 0.3902				
d_c	63.1040	+ 9	65.2895	+17		+ 0.0512	+ 0.0483	57 0		4—5
d_o	63.5360	+ 9	64.8560	+17		+ 0.4840				
♃ e_w	62.6630	+ 9	65.7360	+11		− 0.3922				
e_c	63.0920	+ 9	65.2950	+17		+ 0.0426	+ 0.0420	58 1		4
e_o	63.5260	+ 9	64.8630	+17		+ 0.4755				
♃ f_w	62.6740	+10	65.7145	+12		− 0.3760				
f_o	63.1275	+10	65.2690	+18		+ 0.0732	+ 0.0715	59 28		3—4
f_c	63.5680	+10	64.8215	+18		+ 0.5172				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	61.7690	+11	66.6180	+ 8		− 1.2800	−1.3015						4
b	61.7530	+10	66.6340	+ 8		− 1.2960	−1.3183						3—4
c	61.7645	+10	66.6200	+ 8		− 1.2832	−1.3105	−1.3154	−1′.3066	+0′.0003	−0′.0007	**−1′.3070**	3
d	61.7765	+ 9	66.6095	+ 9		− 1.2721	−1.3204						3—4
e	61.7735	+ 9	66.6145	+ 9		− 1.2761	−1.3181						3—4
f	61.7965	+10	66.5895	+10		− 1.2521	−1.3236						3—4
II a	59.9855	+16	68.4000	+19		− 3.0630	−3.0845						3—4
b	59.9745	+15	68.4100	+18		− 3.0735	−3.0958						3
c	59.9865	+15	68.4000	+18		− 3.0625	−3.0898	−3.0914	−3.0708	+0.0008	−0.0007	**−3.0707**	2—3
d	60.0005	+14	68.3845	+19		− 3.0478	−3.0961						3
e	59.9980	+14	68.3845	+19		− 3.0491	−3.0911						3
f	60.0290	+14	68.3570	+19		− 3.0198	−3.0913						3
III a	62.6195	+10	65.7675	+10		− 0.4296	−0.4511						4
b	62.6070	+10	65.7780	+10		− 0.4411	−0.4634						3—4
c	62.6205	+10	65.7680	+10		− 0.4294	−0.4567	−0.4521	−0.4491	+0.0002	−0.0007	**−0.4496**	3
d	62.6265	+ 9	65.7555	+11		− 0.4202	−0.4685						3
e	62.6270	+ 9	65.7595	+11		− 0.4220	−0.4640						3
f	62.6530	+10	65.7355	+12		− 0.3970	−0.4685						3
IV a	59.9735	+16	68.4140	+19		− 3.0760	−3.0975						3
b	59.9600	+15	68.4230	+18		− 3.0872	−3.1095						3—4
c	59.9735	+15	68.4120	+18		− 3.0750	−3.1023	−3.1061	−3.0853	+0.0008	−0.0007	**−3.0852**	3
d	59.9850	+14	68.3995	+19		− 3.0631	−3.1114						3—4
e	59.9850	+14	68.3995	+19		− 3.0631	−3.1051						3—4
f	60.0115	+14	68.3780	+19		− 3.0391	−3.1106						3

Scheinbare Ædiff. wie 74.

$f^0_\alpha = 0.99326$ $\qquad -i^0_\alpha = +0.00041$

$f_\alpha = \mathbf{0.99296}$ $\qquad -i_\alpha = \mathbf{+0.00037}$ $\qquad ∡\, i_\alpha = -\,1'.3$

$Refr. = +\quad 19$

$Tx_♃ = \quad 0$

$f_\alpha = \mathbf{0.99333}$ $\qquad J_\alpha = \mathbf{+0.00056}$

$\alpha_♃ = 10^h\ 17^m.5$

1897. März 23.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.3385		**64.9794**							
63.3375	+10	64.9778	+16	0	0.0000		0.0000	0.0000	Bilder 1—2.
66.3632	+10	61.9510	+10	0	+3.0266		−0.0013	+3.0253	
66.8765	+25	61.4250	+10	−1	+3.5468		−0.0811	+3.4657	
38.7522	+29	89.5618	−3	+5	−24.5822		−0.0094	−24.5916	
38.7500	+41	89.5478	+8	+13	−24.5755		−0.0694	−24.6449	
43.9425	+20	84.3662	−7	+2	−19.3898		0.0000	−19.3898	
91.2845	−3	34.0292	+20	−8	+30.9462		0.0000	+30.9462	
68.5260	+19	59.7930	+14		+5.1872				
68.1100	+19	60.2230	+14		+4.7642	+4.7636			Bilder 3.
67.6770	+19	60.6400	+10		+4.3394				
66.8920	+9	61.4400	+9		+3.5464				
66.4810	+11	61.8435	+9		+3.1393	+3.1365			
66.0695	+11	62.2630	+9		+2.7238				
65.1560	+17	63.1650	+8		+1.8164				
64.7595	+17	63.5770	+8		+1.4122	+1.4108			
64.3470	+17	63.9810	+8		+1.0039				
62.1925	+10	66.1320	+10		−1.1393				
61.7790	+10	66.5440	+8		−1.5620	−1.5607			
61.3590	+11	66.9620	+8		−1.9809				
60.5880	+15	67.7410	+18		−2.7562				
60.1840	+15	68.1480	+18		−3.1617	−3.1639			
59.7660	+15	68.5540	+18		−3.5737				
59.0170	+11	69.3140	+13		−4.3282				
58.5995	+11	69.7300	+16		−4.7450	−4.7472			
58.1775	+6	70.1540	+16		−5.1683				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta\,(y_t - y_♃)$	$J_\delta\,(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.6885	+14	58.6265	+14		+5.3514	+0.5878						
67.0660	+9	61.2520	+10		+3.7274	+0.5909						
65.3475	+17	62.9690	+9		+2.0101	+0.5993	+0.5940	+0'.5902	+0'.0003	0'.0000	+0'.0001	**+0'.5906**
62.3735	+10	65.9410	+10		−0.9633	+0.5994						
60.7720	+11	67.5445	+18		−2.5662	+0.5977						
59.1790	+11	69.1330	+13		−4.1566	+0.5906						
69.4660	+14	58.8500	+10		+6.1286	+1.3650						
67.8370	+19	60.4750	+14		+4.5017	+1.3652						
66.1145	+11	62.1975	+9		+2.7790	+1.3682	+1.3663	+1.3576	+0.0006	−0.0003	+0.0001	**+1.3580**
63.1425	+10	65.1690	+16		−0.1931	+1.3676						
61.5450	+10	66.7700	+8		−1.7920	+1.3719						
59.9500	+15	68.3655	+18		−3.3874	+1.3598						
68.4080	+19	59.9060	+14		+5.0717	+0.3081						
66.7810	+9	61.5340	+9		+3.4440	+0.3075						
65.0590	+17	63.2555	+9		+1.7226	+0.3118	+0.3105	+0.3085	+0.0001	0.0000	+0.0001	**+0.3087**
62.0850	+10	66.2255	+10		−1.2498	+0.3109						
60.4905	+15	67.8250	+18		−2.8470	+0.3169						
58.8995	+11	69.4190	+13		−4.4394	+0.3078						
69.5535	+17	58.7630	+10		+6.2160	+1.4524						
67.9300	+19	60.3860	+14		+4.5927	+1.4562						
66.2105	+11	62.1040	+9		+2.8738	+1.4630	+1.4579	+1.4486	+0.0006	−0.0003	+0.0001	**+1.4490**
63.2390	+10	65.0790	+16		−0.0998	+1.4609						
61.6370	+10	66.6810	+8		−1.7014	+1.4625						
60.0400	+15	68.2710	+18		−3.2952	+1.4520						

Scheinbare Decldiff. wie 74.

$f^\circ_\delta = 0.99329$ $\quad i^\circ_\delta = -0.00037$

$f_\delta = \mathbf{0.99278}$ $\quad i_\delta = \mathbf{-0.00046}$ $\quad ♃\ i_\delta = -1'.6$

$f'_\delta = \mathbf{0.99360}$ $\quad J_\delta = \mathbf{-0.00020}$

$\delta_♃ = +12°\ 2'.8$

76. **1897. März 27.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	61.8867		66.5030							
S	61.8858	+ 9	66.5020	+10	0	0.0000				2
M	66.8588	+ 9	61.5232	+ 9	0	+ 4.9760				2—3
N	22.7255	+25	105.6625	+ 8	+18	—39.1576				2
Q	75.4888	+23	52.8965	+17	— 3	+13.6043		9^h 34^m 32^s		2
R	25.1730	+38	103.1985	+15	+20	—36.7014				2
V	61.5932	+19	66.7862	+15	0	— 0.2882				2
W	62.7058	+21	65.6768	+25	0	+ 0.8224				2—3
♃ a_w	61.4460	+10	66.9510	+ 8		— 0.4442				
a_c	61.8610	+10	66.5305	+ 8		— 0.0265	— 0.0268	9 39 14		3
a_o	62.2810	+10	66.1165	+10		+ 0.3904				
♃ b_w	61.4740	+10	66.9350	+ 8		— 0.4222				
b_c	61.8680	+10	66.5285	+ 8		— 0.0220	— 0.0182	40 7		2—3
b_o	62.2805	+10	66.1175	+10		+ 0.3896				
♃ c_w	61.4500	+ 9	66.9450	+ 8		— 0.4393				
c_c	61.8600	+ 9	66.5435	+ 8		— 0.0336	— 0.0324	41 42		3
c_o	62.2640	+ 9	66.1290	+10		+ 0.3756			9^h 42^m 6^s	
♃ d_w	61.4690	+ 9	66.9335	+ 9		— 0.4241				
d_c	61.8770	+ 9	66.5235	+ 9		— 0.0151	— 0.0170	42 54		2—3
d_o	62.2790	+ 9	66.1185	+11		+ 0.3883				
♃ e_w	61.4285	+ 9	66.9795	+ 9		— 0.4674				
e_c	61.8410	+ 9	66.5615	+ 9		— 0.0521	— 0.0482	43 49		3—4
e_o	62.2650	+ 9	66.1310	+11		+ 0.3750				
♃ f_w	61.4720	+10	66.9255	+10		— 0.4186				
f_c	61.8860	+10	66.5135	+10		— 0.0056	— 0.0060	44 53		3
f_o	62.2975	+10	66.1010	+12		+ 0.4063				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	59.9830	+15	68.4015	+19		— 1.9013	—1.8745						2—3
b	59.9945	+15	68.3910	+18		— 1.8902	—1.8720						2
c	59.9875	+15	68.3975	+18		— 1.8970	—1.8646	—1.8684	—1ʹ.8556	+0ʹ.0004	—0ʹ.0009	**—1ʹ.8561**	2
d	59.9995	+14	68.3885	+19		— 1.8866	—1.8696						2
e	59.9730	+14	68.4135	+19		— 1.9124	—1.8642						2—3
f	60.0115	+15	68.3705	+20		— 1.8716	—1.8656						2
II *a*	58.8755	+12	69.5080	+17		— 3.0084	—2.9816						2—3
b	58.8865	+11	69.4990	+16		— 2.9984	—2.9802						2
c	58.8755	+11	69.5070	+16		— 3.0078	—2.9754	—2.9767	—2.9564	+0.0007	—0.0009	**—2.9566**	2
d	58.8905	+10	69.4945	+17		— 2.9942	—2.9772						2
e	58.8665	+10	69.5235	+17		— 3.0207	—2.9725						3
f	58.9045	+11	69.4790	+17		— 2.9794	—2.9734						2
III *a*	63.5165	+ 9	64.8625	+16		+ 1.6348	+1.6616						2
b	63.5315	+ 9	64.8545	+16		+ 1.6463	+1.6645						2—3
c	63.5255	+ 8	64.8605	+16		+ 1.6402	+1.6726	+1.6716	+1.6602	—0.0004	—0.0009	**+1.6589**	2
d	63.5410	+ 8	64.8500	+17		+ 1.6532	+1.6702						2
e	63.5145	+ 9	64.8665	+18		+ 1.6317	+1.6799						3 ellipt.
f	63.5590	+ 9	64.8250	+19		+ 1.6746	+1.6806						2—3
IV *a*	53.2660	+10	75.1250	+12		— 8.6214	—8.5946						2—3
b	53.2705	+ 9	75.1165	+11		— 8.6150	—8.5968						2
c	53.2635	+ 8	75.1240	+10		— 8.6222	—8.5898	—8.5929	—8.5341	+0.0020	—0.0009	**—8.5330**	2
d	53.2755	+ 7	75.1140	+10		— 8.6112	—8.5942						2
e	53.2505	+ 7	75.1435	+10		— 8.6385	—8.5903						3 ellipt.
f	53.2875	+ 7	75.0990	+11		— 8.5978	—8.5918						2

Scheinbare Ædiff.: *M*—Centrum $= +\ 5'.2703$ $f^\circ_\alpha = 0.99317$ $-i^\circ_\alpha = +0.00061$

N— » $= -41.4090$

Q— » $= +14.3250$ f_α **= 0.99288** $-i_\alpha$ **= +0.00058** $\measuredangle\ i_\alpha = -\ 2'.0$

R— » $= -38.7106$ *Refr.* $= -\ 3$

V— » $= -\ 0.3202$ $Tx_♃ = 0$

W— » $= +\ 0.8888$ f'_α **= 0.99316** J_α **= +0.00055**

$\alpha_♃ = 10^h\ 16^m.2$

1897. März 27.

...ihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.1952		**65.1966**							
63.1942	+10	65.1950	+16	0	0.0000		0.0000	0.0000	Bilder 3.
66.2176	+10	62.1702	+10	0	+ 3.0244		— 0.0013	+ 3.0231	
66.7280	+24	61.6622	+26	— 1	+ 3.5334		— 0.0811	+ 3.4523	
38.6125	+29	89.7745	— 4	+ 5	—24.5782		— 0.0094	—24.5876	
38.5965	+41	89.7795	+ 8	+13	—24.5878		— 0.0694	—24.6572	
43.7945	+20	81.5932	— 2	+ 2	—19.3974		0.0000	—19.3974	
94.1395	— 2	34.2545	+20	— 8	+30.9415		0.0000	+30.9415	
68.2940	+19	60.1165	+14		+ 5.0897				
67.9000	+19	60.4990	+10		+ 4.7016	+ 4.6982			Bilder 2—3. Nebel.
67.5050	+19	60.9010	+10		+ 4.3032				
66.5795	+11	61.8205	+ 9		+ 3.3803				
66.1950	+11	62.2025	+ 9		+ 2.9970	+ 3.0004			
65.8055	+11	62.5596	+ 9		+ 2.6238				
64.8910	+17	63.5100	+ 8		+ 1.6916				
64.5060	+17	63.8950	+ 8		+ 1.3066	+ 1.3057			
64.1150	+ 9	64.2790	+ 8		+ 0.9188				
62.0050	+10	66.3920	+10		— 1.1928				
61.6235	+10	66.7790	+ 8		— 1.5770	— 1.5781			
61.2330	+11	67.1640	+ 8		— 1.9646				
60.2640	+15	68.1295	+18		— 2.9322				
59.8760	+15	68.5360	+13		— 3.3292	— 3.3306			
59.4740	+15	68.9365	+13		— 3.7304				
58.5735	+ 6	69.8255	+16		— 4.6258				
58.1785	+ 6	70.2230	+16		— 5.0220	— 5.0174			
57.7980	+ 6	70.6070	+16		— 5.4043				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.6800	+14	59.7120	+15		+ 5.4846	+0.7864						
66.9875	+ 9	61.4115	+11		+ 3.7886	+0.7882						
65.2820	+17	63.1060	+10		+ 2.2890	+0.7833	+0.7839	+0.'7787	+0.'0014	—0.'0001	+0.'0002	**+0.'7802**
62.3965	+10	65.9930	+11		— 0.7976	+0.7805						
60.6455	+11	67.7445	+19		— 2.5492	+0.7814						
58.9595	+11	69.4285	+14		— 4.2340	+0.7834						
69.1690	+15	59.2200	+11		+ 5.9754	+1.2772						
67.4680	+10	60.9220	+11		+ 4.2737	+1.2733						
65.7750	+12	62.6140	+10		+ 2.5813	+1.2756	+1.2743	+1.2658	+0.0023	—0.0003	+0.0002	**+1.2680**
62.8900	+11	65.5010	+11		— 0.3048	+1.2733						
61.1360	+12	67.2555	+ 9		— 2.0589	+1.2717						
59.4505	+12	68.9370	+14		— 3.7426	+1.2748						
67.0725	+ 8	61.3110	+10		+ 3.8814	—0.8168						
65.3745	+16	63.0155	+ 9		+ 2.1806	—0.8198						
63.6765	+ 8	64.7105	+16		+ 0.4833	—0.8224	—0.8208	—0.8154	—0.0013	0.0000	+0.0002	**—0.8165**
60.7950	+10	67.5950	+18		— 2.3997	—0.8216						
59.0365	+10	69.3465	+13		— 4.1544	—0.8238						
57.3540	+ 9	71.0310	+12		— 5.8380	—0.8206						
71.4780	+16	56.9155	+13		+ 8.2821	+3.5839						
69.7740	+20	58.6140	+14		+ 6.5810	+3.5806						
68.0810	+22	60.3065	+18		+ 4.8882	+3.5825	+3.5825	+3.5587	+0.0065	—0.0023	+0.0002	**+3.5631**
65.1995	+20	63.1910	+13		+ 2.0053	+3.5834						
63.4450	+13	64.9445	+20		+ 0.2506	+3.5812						
61.7590	+13	66.6270	+22		— 1.4338	+3.5836						

Scheinbare Decldiff:				
M— Centrum = + 3.'0033	$f^\circ_\delta = 0.99322$	$i^\circ_\delta = -0.00066$		
N— » = + 3.4542				
Q— » = —24.4339	f_δ = **0.99273**	i_δ = **—0.00072**	∢ i_δ = —2.'5	
R— » = —24.4656				
V— » = —19.2652	f'_δ = **0.99336**	J_δ = **—0.00076**		
W— » = +30.7331				

$\delta_♃ = +12° \ 10.'0$

77. 1897. März 31.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	63.4321		64.9507							
S	63.4312	+ 9	64.9490	+17	0	0.0000				2—3
M	68.4055	+19	59.9682	+14	0	+ 4.9782				1—2
N	24.2675	+26	104.1138	+ 6	+18	—39.1610				2—3
Q	77.0215	+21	51.3562	+20	— 3	+13.5917		10^h 39^m 47^s		2
R	26.7112	+34	101.6608	+14	+20	—36.7125		(März 27).		2
V	63.1312	+18	65.2425	+23	0	— 0.2966				2
W	64.2622	+20	64.1120	+23	0	+ 0.8342				2—3
♃ a_w	63.0805	+10	65.3065	+16		— 0.3540				
a_c	63.4805	+10	64.9005	+16		+ 0.0490	+ 0.0480	13 38 48		1—2
a_o	63.8830	+ 9	64.5030	+16		+ 0.4490				
♃ b_w	63.0855	+10	65.3060	+16		— 0.3512				
b_c	63.4825	+10	64.9040	+16		+ 0.0482	+ 0.0488	39 57		2
b_o	63.8820	+ 9	64.5010	+16		+ 0.4494				
♃ c_w	63.0710	+10	65.3215	+16		— 0.3662				
c_c	63.4695	+10	64.9220	+16		+ 0.0328	+ 0.0352	40 56		2—3
c_o	63.8715	+ 9	64.5115	+16		+ 0.4390			13^h 41^m 29^s	
♃ d_w	63.0745	+ 9	65.3225	+17		— 0.3651				
d_c	63.4745	+ 9	64.9215	+17		+ 0.0354	+ 0.0366	42 6		2—3
d_o	63.8730	+ 8	64.5115	+17		+ 0.4396				
♃ e_w	63.0350	+ 9	65.3560	+17		— 0.4016				
e_c	63.4385	+ 9	64.9500	+17		+ 0.0032	+ 0.0045	43 5		2—3
e_o	63.8460	+ 8	64.5400	+17		+ 0.4118				
♃ f_w	63.0710	+10	65.3160	+18		— 0.3636				
f_c	63.4735	+10	64.9170	+18		+ 0.0372	+ 0.0370	44 2		2—3
f_o	63.8705	+ 9	64.5135	+18		+ 0.4374				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	65.0400	+17	63.3445	+ 9		+ 1.6074	+1.5594						3
b	65.0445	+17	63.3410	+ 9		+ 1.6114	+1.5626						3—4
c	65.0360	+16	63.3530	+ 9		+ 1.6012	+1.5660						3—4
d	65.0390	+16	63.3515	+10		+ 1.6034	+1.5668	+1.5660	+1′.5555	—0′.0003	—0′.0011	**+1′.5541**	3—4
e	65.0060	+16	63.3780	+10		+ 1.5736	+1.5691						4
f	65.0430	+17	63.3445	+11		+ 1.6088	+1.5718						4 unterexponier
II a	62.8950	+10	65.4905	+10		— 0.5384	—0.5864						2—3
b	62.9035	+10	65.4885	+10		— 0.5332	—0.5820						3
c	62.8905	+10	65.4970	+10		— 0.5440	—0.5792	—0.5768	—0.5729	+0.0001	—0.0011	**—0.5739**	3—4
d	62.8980	+ 9	65.4915	+11		— 0.5376	—0.5742						3—4
e	62.8650	+ 9	65.5185	+11		— 0.5676	—0.5721						4
f	62.9085	+10	65.4870	+12		— 0.5301	—0.5671						3—4 unterexpo
III a	59.7540	+16	68.6295	+14		— 3.6784	—3.7264						3
b	59.7540	+15	68.6305	+13		— 3.6788	—3.7276						2—3
c	59.7435	+15	68.6485	+13		— 3.6931	—3.7283	—3.7312	—3.7061	+0.0008	—0.0011	**—3.7064**	3
d	59.7390	+14	68.6490	+14		— 3.6957	—3.7323						3
e	59.7040	+14	68.6850	+14		— 3.7312	—3.7357						3—4 deformier
f	59.7340	+14	68.6520	+14		— 3.6997	—3.7367						3
IV a	65.3695	+17	63.0175	+ 9		+ 1.9357	+1.8877						3 unterexponie
b	65.3735	+17	63.0180	+ 9		+ 1.9374	+1.8886						2—3 »
c	65.3550	+16	63.0255	+ 9		+ 1.9244	+1.8892						4 »
d	65.3625	+16	63.0225	+10		+ 1.9296	+1.8930	+1.8916	+1.8789	—0.0004	—0.0011	**+1.8774**	4 »
e	65.3360	+16	63.0510	+10		+ 1.9021	+1.8976						3 »
f	65.3635	+17	63.0220	+11		+ 1.9304	+1.8934						4 »

Scheinbare Ædiff: M—Centrum $= +\ 5'.2703$ $\quad f^\circ_\alpha = 0.99313$ $\quad -i^\circ_\alpha = +0.00021$

N— » $= -41.4090$

Q— » $= +14.3250$ $\quad f_\alpha = \mathbf{0.99281}$ $\quad -i_\alpha = \mathbf{+0.00015}$ $\quad \measuredangle\, i_\alpha = -\ 0'.5$

R— » $= -38.7106$ $\quad Refr. = +\ 31$

V— » $= -\ 0.3202$ $\quad Tx_♃ = 0$

W— » $= +\ 0.8888$ $\quad f'_\alpha = \mathbf{0.99327}$ $\quad J_\alpha = \mathbf{+0.00046}$

$\alpha_♃ = 10^h\ 14^m.9$

1897. März 31.

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Decl.

Scalenablesung.				s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}tg\delta\sin 1'$	$y-\frac{x^2}{2}tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$						
mm **63.6409**	mm/10000	mm **64.7408**	mm/10000	mm/10000	mm	mm	mm	mm	
63.6400	+ 9	64.7392	+16	0	0.0000		0.0000	0.0000	Bilder 2. Praesepe
66.6640	+ 8	61.7110	+10	0	+ 3.0264		— 0.0013	+ 3.0253	und Jupiter sind an
67.2008	+25	61.1795	+27	— 1	+ 3.5604		— 0.0811	+ 3.4793	verschied. Tagen
39.0525	+29	89.3245	— 2	+ 5	—24.5840		— 0.0094	—24.5934	aufgenom. worden.
39.0715	+41	89.2985	+ 9	+13	—24.5606		— 0.0694	—24.6300	In der Zwischenzeit
44.2430	+20	84.1278	— 7	+ 2	—19.3909		0.0000	—19.1909	war die Cassette ab-
94.5630	— 2	33.7965	+20	— 8	+30.9413		0.0000	+30.9413	genom., doch blieb
68.7995	+14	59.5960	+14		+ 5.1417				d. Platte unberührt.
68.4090	+19	59.9820	+14		+ 4.7637	+ 4.7615			Bilder 3. Windig.
68.0240	+19	60.3660	+14		+ 4.3792				
67.1345	+ 9	61.2590	+10		+ 3.4876				
66.7520	+ 9	61.6400	+ 9		+ 3.1060	+ 3.1061			
66.3700	+11	62.0210	+ 9		+ 2.7246				
65.4695	+17	62.9270	+ 9		+ 1.8216				
65.0910	+17	63.3045	+ 9		+ 1.4436	+ 1.4419			
64.7020	+17	63.6815	+ 8		+ 1.0606				
62.5020	+10	65.8890	+10		— 1.1436				
62.1165	+10	66.2645	+10		— 1.5240	— 1.5240			
61.7390	+10	66.6480	+ 8		— 1.9044				
60.7910	+11	67.5955	+18		— 2.8526				
60.4165	+15	67.9740	+18		— 3.2290	— 3.2321			
60.0280	+15	68.3570	+18		— 3.6147				
59.2270	+11	69.1670	+13		— 4.4202				
58.8420	+11	69.5450	+16		— 4.8018	— 4.8012			
58.4645	+11	69.9270	+16		— 5.1816				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.7145	+18	60.6700	+11		+ 4.0726	—0.6889						
66.0530	+10	62.3320	+10		+ 2.4104	—0.6957						
64.3925	+ 8	63.9935	+ 9		+ 0.7494	—0.6925	—0.6951	—0.6907	+0.0004	—0.0001	+0.0002	**—0.6902**
61.4250	+10	66.9630	+ 9		— 2.2190	—0.6950						
59.7145	+14	68.6730	+14		— 3.9293	—0.6972						
58.1420	+ 5	70.2450	+17		— 5.5022	—0.7010						
68.5910	+14	59.7910	+14		+ 4.9500	+0.1885						
66.9300	+ 9	61.4555	+10		+ 3.2872	+0.1811						
65.2655	+17	63.1190	+ 9		+ 1.6236	+0.1817	+0.1805	+0.1794	—0.0001	0.0000	+0.0002	**+0.1795**
62.3000	+10	66.0870	+10		— 1.3436	+0.1804						
60.5920	+11	67.7965	+18		— 3.0526	+0.1795						
59.0140	+11	69.3725	+13		— 4.6294	+0.1718						
70.0740	+17	58.3070	+ 6		+ 6.4340	+1.6725						
68.4160	+19	59.9650	+15		+ 4.7756	+1.6695						
66.7575	+ 9	61.6285	+10		+ 3.1144	+1.6725	+1.6723	+1.6620	—0.0009	—0.0004	+0.0002	**+1.6609**
63.7900	+ 9	64.5940	+17		+ 0.1476	+1.6716						
62.0845	+10	66.2990	+11		— 1.5574	+1.6747						
60.5135	+11	67.8695	+19		— 3.1284	+1.6728						
67.4685	+ 8	60.9195	+11		+ 3.8243	—0.9372						
65.8085	+10	62.5750	+10		+ 2.1667	—0.9394						
64.1500	+ 8	64.2400	+ 9		+ 0.5049	—0.9370	—0.9400	—0.9342	+0.0004	—0.0001	+0.0002	**—0.9337**
61.1795	+10	67.2070	+ 9		— 2.4638	—0.9398						
59.4720	+10	69.9190	+14		— 4.1738	—0.9417						
57.8980	+ 5	70.4895	+17		— 5.7464	—0.9452						

Scheinbare Decldiff. M—Centrum $= +3'0033$ $\quad f^0_\delta = 0.99337$ $\quad i^0_\delta = -0.00004$

N— » $= +3.4542$

Q— » $= -24.4340$ $\quad f_\delta = \mathbf{0.99283}$ $\quad i_\delta = \mathbf{-0.00018}$ $\quad \sphericalangle\, i_\delta = -0'6$

R— » $= -24.4658$

V— » $= -19.2652$ $\quad f'_\delta = \mathbf{0.99383}$ $\quad J_\delta = \mathbf{+0.00024}$

W— » $= +30.7332$

$\delta_♃ = +12°\ 16'9$

78. 1897. April 2.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
Ctr.	mm 64.3140	mm/10000	mm 64.0707	mm/10000	mm/10000	mm	mm			
S	64.3132	+ 8	64.0698	+ 9	0	0.0000				1—2
M	69.2942	+14	59.0870	+10	0	+ 4.9822				2
N	25.1452	+26	103.2362	+ 5	+18	—39.1643				2
Q	77.9065	+21	50.4755	+15	— 3	+13.5938		$10^h\ 12^m\ 58^s$		1—2
R	27.5878	+34	100.7918	+13	+20	—36.7206				2
V	64.0145	+17	64.3685	+15	0	— 0.2986				1—2
W	65.1532	+28	63.2212	+24	0	+ 0.8446				1
♃ a_w	63.9275	+ 9	64.4645	+ 8		— 0.3900				
a_c	64.3165	+ 9	64.0790	+ 8		— 0.0028	— 0.0033	10 35 7		1—2
a_o	64.7015	+17	63.6930	+ 8		+ 0.3830				
♃ b_w	63.9165	+ 9	64.4730	+ 8		— 0.3994				
b_c	64.3195	+ 9	64.0790	+ 8		— 0.0014	— 0.0060	36 6		2
b_o	64.7015	+17	63.6935	+ 8		+ 0.3828				
♃ c_w	63.9145	+ 9	64.4840	+ 8		— 0.4064				
c_c	64.3030	+ 9	64.0965	+ 8		— 0.0184	— 0.0199	37 5		2
c_o	64.6835	+17	63.7110	+ 8		+ 0.3650			$10^h\ 37^m\ 35^s$	
♃ d_w	63.9120	+ 8	64.4840	+ 9		— 0.4077				
d_c	64.3035	+ 8	64.0905	+ 9		— 0.0152	— 0.0180	38 7		1—2
d_o	64.6855	+16	63.7050	+ 9		+ 0.3690				
♃ e_w	63.9090	+ 8	64.4880	+ 9		— 0.4112				
e_c	64.2870	+ 8	64.1060	+ 9		— 0.0312	— 0.0298	39 2		2
e_o	64.6705	+16	63.7220	+ 9		+ 0.3530				
♃ f_w	63.9260	+ 9	64.4600	+10		— 0.3887				
f_c	64.3290	+ 9	64.0660	+10		+ 0.0098	+ 0.0009	40 3		2—3
f_o	64.6980	+17	63.6920	+10		+ 0.3817				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	66.1760	+11	62.2075	+ 9		+ 1.8627	+1.8660						2
b	66.1685	+11	62.2120	+ 9		+ 1.8567	+1.8627						1—2
c	66.1650	+10	62.2230	+ 9		+ 1.8494	+1.8693	+1.8680	+1'.8548	0'.0000	—0'.0012	**+1'.8536**	2
d	66.1655	+10	62.2180	+10		+ 1.8521	+1.8701						2
e	66.1555	+11	62.2295	+11		+ 1.8414	+1.8712						1
f	66.1840	+11	62.2010	+12		+ 1.8698	+1.8689						1—2
II	Geht durch die Jupiterscheibe.												
III a	61.3575	+12	67.0240	+ 9		— 2.9548	—2.9515						2
b	61.3540	+11	67.0290	+ 8		— 2.9590	—2.9530						2
c	61.3495	+11	67.0340	+ 8		— 2.9638	—2.9439	—2.9464	—2.9255	—0.0001	—0.0012	**—2.9268**	1—2
d	61.3515	+10	67.0305	+ 9		— 2.9611	—2.9431						2
e	61.3415	+10	67.0145	+ 9		— 2.9731	—2.9433						1—2
f	61.3710	+11	67.0135	+10		— 2.9428	—2.9437						2
IV a	71.2080	+13	57.1760	+ 9		+ 6.8946	+6.8979						1—2
b	71.2035	+12	57.1790	+ 9		+ 6.8908	+6.8968						2
c	71.1955	+12	57.1880	+10		+ 6.8822	+6.9021	+6.9010	+6.8521	+0.0002	—0.0012	**+6.8511**	1
d	71.1990	+13	57.1850	+11		+ 6.8854	+6.9034						1
e	71.1885	+13	57.1945	+12		+ 6.8754	+6.9052						1—2
f	71.2165	+14	57.1710	+12		+ 6.9012	+6.9003						1—2

Scheinbare Ædiff: M— Centrum = + 5'.2703 $f^\circ_\alpha = 0.99295$ $-i^\circ_\alpha = -0.00004$

N— » = —41.4093

Q— » = +14.3250 f_α = **0.99264** $-i_\alpha$ = **—0.00008** $\measuredangle\ i_\alpha = +\ 0'.3$

R— » = —38.7107 $Refr.$ = + 2

V— » = — 0.3202 $Tx_♃$ = 0

W— » = + 0.8887 f'_α = **0.99292** J_α = **—0.00006**

$\alpha_♃ = 10^h\ 14^m.3$

ihe.

1897. April 2.

Decl.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{J_n + J_c + J_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.2827		65.1028							
63.2818	+9	65.1012	+16	0	0.0000		0.0000	0.0000	Bilder 3.
66.3038	+11	62.0812	+11	0	+3.0214		−0.0013	+3.0201	
66.8450	+25	61.5390	+25	−1	+3.5630		−0.0811	+3.4819	
38.6870	+30	89.6945	−3	+5	−24.5916		−0.0094	−24.6010	
38.7140	+40	89.6658	+8	+13	−24.5630		−0.0694	−24.6324	
43.8838	+19	84.5008	−7	+2	−19.3970		0.0000	−19.3970	
94.2305	−3	34.1538	+21	−8	+30.9464		0.0000	+30.9464	
68.3980	+18	59.9960	+14		+5.1062				
68.0330	+18	60.3690	+14		+4.7422	+4.7437			
67.6575	+18	60.7330	+10		+4.3827				
66.7100	+8	61.6870	+9		+3.4215				
66.3430	+10	62.0605	+9		+3.0514	+3.0533			
65.9750	+10	62.4210	+9		+2.6871				
64.9930	+16	63.4000	+8		+1.7070				
64.6375	+16	63.7680	+8		+1.3452	+1.3428			
64.2660	+8	64.1335	+8		+0.9763				
62.0895	+9	66.3030	+10		−1.1968				
61.7145	+9	66.6865	+8		−1.5759	−1.5729			
61.3385	+10	67.0510	+8		−1.9461				
60.4060	+14	67.9992	+18		−2.8868				
60.0380	+14	68.3585	+18		−3.2504	−3.2503			
59.6695	+14	68.7270	+13		−3.6136				
58.6425	+10	69.7545	+16		−4.6412				
58.2780	+5	70.1365	+16		−5.0148	−5.0112			
57.9110	+5	70.4850	+16		−5.3775				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_J$	Mittel.	$f'_\delta(y_t - y_J)$	$J_\delta(x_t - x_J)$	$-(x_t^2 - x_J^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.2155	+8	61.1715	+23		+3.9313	−0.8124						
65.5265	+18	62.8555	+22		+2.2454	−0.8079						
63.8215	+8	64.5680	+29		+0.5358	−0.8070	−0.8094	−0.′8039	+0.′0001	−0.′0001	+0.′0002	**−0.′8037**
60.8990	+10	67.4890	+21		−2.3855	−0.8126						
59.2250	+10	69.1600	+26		−4.0582	−0.8079						
57.4645	+9	70.9230	+25		−5.8200	−0.8088						
Geht durch		die Jupiterscheibe.										
69.1970	+14	59.1870	+10		+5.9152	+1.1715						
67.5090	+19	60.8740	+10		+4.2280	+1.1747						
65.8000	+11	62.5845	+9		+2.5179	+1.1751	+1.1724	+1.1645	−0.0001	−0.0003	+0.0002	**+1.1643**
62.8800	+10	65.5050	+10		−0.4024	+1.1705						
61.2040	+11	67.1815	+8		−2.0786	+1.1717						
59.4425	+11	68.9430	+13		−3.8403	+1.1709						
65.0365	+17	63.3500	+12		+1.7536	−2.9901						
63.3490	+10	65.0370	+19		+0.0656	−2.9877						
61.6385	+10	66.7480	+11		−1.6448	−2.9876	−2.9884	−2.9683	+0.0002	−0.0015	+0.0002	**−2.9694**
58.7205	+11	69.6660	+19		−4.5631	−2.9902						
57.0495	+10	71.3400	+15		−6.2354	−2.9851						
55.2850	0	73.1035	+16		−8.0010	−2.9898						

Scheinbare Decldiff: M—Centrum $= +3.'0033$ $\quad f^\circ_\delta = 0.99315 \quad i^\circ_\delta = +0.00010$

N— » $= +3.4541$

Q— » $= -24.4340$ $\quad f_\delta = \mathbf{0.99264} \quad i_\delta = \mathbf{0.00000} \quad \measuredangle\, i_\delta = 0.'0$

R— » $= -24.4659$

V— » $= -19.2652$ $\quad f'_\delta = \mathbf{0.99326} \quad J_\delta = \mathbf{+0.00003}$

W— » $= +30.7333$

$\delta_J = +12°\ 19.'6$

79. **1897. April 6.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**61.5220**		**66.8643**							
S	61.5211	+ 9	66.8635	+ 8	0	0.0000				1—2
M	66.4988	+11	61.8845	+ 9	0	+ 4.9784				1—2
N	22.3588	+10	106.0250	+ 6	+18	—39.1600				2
Q	75.1232	+22	53.2620	+17	— 3	+13.6017		**10ʰ 18ᵐ 10ˢ**		2
R	24.8058	+37	103.5715	+16	+20	—36.7086				2
V	61.2290	+19	67.1530	+15	0	— 0.2906				1—2
W	62.3465	+21	66.0335	+25	0	+ 0.8274				1—2
♃ a_w	61.0925	+11	67.3095	+ 8		— 0.4372				
a_c	61.4970	+11	66.8995	+ 8		— 0.0300	— 0.0284	10 24 40		1—2
a_o	61.9090	+10	66.4870	+ 8		+ 0.3822				
♃ b_w	61.1050	+11	67.2900	+ 8		— 0.4212				
b_c	61.5085	+10	66.8865	+ 8		— 0.0178	— 0.0193	25 41		1
b_o	61.9090	+10	66.4895	+ 8		+ 0.3810				
♃ c_w	61.0965	+11	67.2985	+ 8		— 0.4297				
c_c	61.5020	+10	66.8950	+ 8		— 0.0252	— 0.0274	26 28		1—2
c_o	61.9030	+10	66.5000	+ 8		+ 0.3728			**10ʰ 26ᵐ 59ˢ**	
♃ d_w	61.0935	+10	67.3060	+ 9		— 0.4350				
d_c	61.4960	+10	66.8945	+ 9		— 0.0280	— 0.0300	27 28		1
d_o	61.8995	+ 9	66.4960	+ 9		+ 0.3729				
♃ e_w	61.1065	+10	67.2980	+ 9		— 0.4246				
e_c	61.5085	+ 9	66.8865	+ 9		— 0.0178	— 0.0173	28 19		1—2
e_o	61.9175	+ 9	66.4790	+ 9		+ 0.3904				
♃ f_w	61.0920	+11	67.3040	+10		— 0.4348				
f_c	61.4915	+11	66.8950	+10		— 0.0306	— 0.0326	29 17		1—2
f_o	61.8950	+10	66.5020	+10		+ 0.3676				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder
							mm	mm					
I a	62.0825	+10	66.3045	+10		+ 0.5601	+0.5885						2—3
b	62.0845	+10	66.2995	+10		+ 0.5636	+0.5829						1
c	62.0715	+10	66.3135	+10		+ 0.5502	+0.5776	+0.5754	+0.′5714	—0.′0001	—0.′0014	**+0.′5699**	2
d	62.0650	+ 9	66.3215	+11		+ 0.5428	+0.5728						2
e	62.0730	+ 9	66.3150	+11		+ 0.5500	+0.5673						2
f	62.0530	+10	66.3340	+12		+ 0.5306	+0.5632						2
II a	59.3630	+12	69.0175	+14		— 2.1562	—2.1278						2
b	59.3695	+11	69.0120	+13		— 2.1502	—2.1309						1—2
c	59.3580	+11	69.0245	+13		— 2.1622	—2.1348	—2.1371	—2.1222	+0.0004	—0.0014	**—2.1232**	2
d	59.3505	+10	69.0330	+14		— 2.1703	—2.1403						1—2
e	59.3625	+10	69.0230	+14		— 2.1593	—2.1420						1—2
f	59.3420	+11	69.0430	+14		— 2.1795	—2.1469						2
III a	62.8850	+10	65.5000	+10		+ 1.3636	+1.3920						1—2
b	62.8885	+10	65.4925	+10		+ 1.3692	+1.3885						1
c	62.8785	+10	65.5050	+10		+ 1.3579	+1.3853	+1.3834	+1.3739	—0.0002	—0.0014	**+1.3723**	2
d	62.8700	+ 9	65.5110	+11		+ 1.3505	+1.3805						1—2
e	62.8830	+ 9	65.5005	+11		+ 1.3623	+1.3796						1—2
f	62.8620	+10	65.5200	+12		+ 1.3420	+1.3746						
IV a	67.0190	+ 9	61.3660	+10		+ 5.4976	+5.5260						1—2
b	67.0240	+ 8	61.3630	+10		+ 5.5016	+5.5209						1
c	67.0150	+ 8	61.3735	+11		+ 5.4918	+5.5192	+5.5176	+5.4792	—0.0010	—0.0014	**+5.4768**	2
d	67.0090	+ 9	61.3805	+11		+ 5.4853	+5.5153						1—2
e	67.0200	+ 9	61.3665	+12		+ 5.4948	+5.5121						2
f	67.0025	+10	61.3860	+13		+ 5.4792	+5.5118						2

Scheinbare Ædiff: M—Centrum = + 5.′2704 f^o_α = 0.99308 $-i^o_\alpha$ = +0.00046
N— » = —41.4094
Q— » = +14.3251 f_α = **0.99277** $-i_\alpha$ = **+0.00041** ∡ i_α = —1.′5
R— » = —38.7107 Refr. = + 1
V— » = — 0.3201 $Tx_♃$ = 0
W— » = + 0.8886 f'_α = **0.99305** $J\alpha$ = **+0.00042**

$\alpha_♃ = 10^h\ 13.^m3$

1897. April 6.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.6814		**64.7081**							
63.6805	+ 9	64.7065	+16	0	0.0000		0.0000	0.0000	Bilder 3—4.
66.7028	+ 8	61.6790	+10	0	+ 3.0252		— 0.0013	+ 3.0239	
67.2335	+24	61.1505	+27	— 1	+ 3.5546		— 0.0811	+ 3.4735	
39.0880	+28	89.2962	— 2	+ 5	—24.5888		— 0.0094	—24.8982	
39.0970	+41	89.2782	+11	+13	—24.5744		— 0.0694	—24.6438	
44.2830	+20	84.1005	— 7	+ 2	—19.3938		0.0000	—19.3938	
94.6250	— 1	33.7595	+20	— 8	+30.9442		0.0000	+30.9442	
68.8200	+14	59.5765	+14		+ 5.1351				
68.4245	+19	59.9655	+14		+ 4.7431	+ 4.7414			Bilder 3.
68.0330	+19	60.3680	+14		+ 4.3461				
67.2340	+ 9	61.1650	+10		+ 3.5478				
66.8475	+ 9	61.5500	+ 9		+ 3.1621	+ 3.1632			
66.4660	+ 9	61.9335	+ 9		+ 2.7796				
65.5805	+11	62.8160	+ 9		+ 1.8957				
65.1960	+17	63.2015	+ 9		+ 1.5110	+ 1.5116			
64.8135	+17	63.5850	+ 9		+ 1.1280				
62.5435	+10	65.8550	+10		— 1.1424				
62.1500	+10	66.2440	+10		— 1.5336	— 1.5308			
61.7700	+10	66.6295	+ 8		— 1.9163				
60.8460	+11	67.5490	+18		— 2.8385				
60.4640	+15	67.9350	+18		— 3.2223	— 3.2234			
60.0750	+15	68.3200	+18		— 3.6093				
59.1575	+11	69.2400	+13		— 4.5230				
58.7725	+11	69.6250	+16		— 4.9132	— 4.9079			
58.3980	+ 6	69.9990	+16		— 5.2876				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.2130	+19	60.1740	+14		+ 4.5331	—0.2083						
66.6410	+ 9	61.7450	+ 9		+ 2.9614	—0.2018						
64.9920	+17	63.3950	+ 9		+ 1.3122	—0.1994	—0.2016	—0'.2003	—0'.0002	0'.0000	+0'.0002	**—0'.2003**
61.9485	+10	66.4370	+10		— 1.7310	—0.2002						
60.2560	+15	68.1290	+18		— 3.4233	—0.1999						
58.5730	+11	69.8150	+16		— 5.1079	—0.2000						
69.3945	+15	58.9920	+11		+ 5.7148	+0.9734						
67.8180	+20	60.5680	+11		+ 4.1388	+0.9756						
66.1700	+12	62.2170	+10		+ 2.4900	+0.9784	+0.9780	+0.9715	+0.0006	—0.0001	+0.0002	**+0.9722**
63.1290	+11	65.2570	+17		— 0.5510	+0.9798						
61.4370	+12	66.9495	+ 9		— 2.2428	+0.9806						
59.7525	+16	68.6350	+14		— 3.9278	+0.9801						
67.7260	+19	60.4560	+14		+ 4.2486	—0.4928						
66.3550	+11	62.0320	+ 9		+ 2.6750	—0.4882						
64.7000	+17	63.6840	+ 8		+ 1.0218	—0.4898	—0.4890	—0.4858	—0.0004	—0.0001	+0.0002	**— 0.4861**
61.6600	+10	66.7240	+ 8		— 2.0186	—0.4878						
59.9660	+15	68.4150	+18		— 3.7113	—0.4879						
58.2840	+ 6	70.1000	+16		— 5.3952	—0.4873						
66.2150	+10	62.1730	+10		+ 2.5344	—2.2070						
64.6415	+16	63.7480	+ 9		+ 0.9604	—2.2028						
62.9920	+ 9	65.3945	+17		— 0.6883	—2.1999	—2.2029	—2.1882	—0.0015	—0.0010	+0.0002	**—2.1905**
59.9430	+14	68.4395	+19		— 3.7352	—2.2044						
58.2560	+ 5	70.1325	+17		— 5.4255	—2.2021						
56.5730	+ 9	71.8180	+12		— 7.1093	—2.2014						

Scheinbare Decldiff: M—Centrum = + 3'.0034 $f^\circ_\delta = 0.99326$ $i^\circ_\delta = -0.00018$
N— » = + 3.4541
Q— » = —24.4340 f_δ = **0.99274** i_δ = **—0.00029** $\measuredangle\ i_\delta = -1'.0$
R— » = —24.4659
V— » = —19.2652 f'_δ = **0.99336** J_δ = **—0.00027**
W— » = +30.7334

$\delta_{♃} = +12^\circ\ 24'.7$

80. **1897. April 7.**

AR

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	62.7454		65.6362							
S	62.7445	+9	65.6345	+17	0	0.0000				2
M	67.7208	+19	60.6505	+10	0	+4.9810				1—2
N	23.5800	+26	104.7988	+7	+18	−39.1612				2
Q	76.3420	+20	52.0412	+11	−3	+13.5954		$10^h\ 52^m\ 20^s$		2—3
R	26.0230	+37	102.3480	+14	+20	−36.7154				1—2 etwas el
V	62.4435	+18	65.9270	+17	0	−0.2963				1—2
W	63.5795	+20	64.8015	+31	0	+0.8338				2—3
♃ a_w	62.2825	+10	66.1080	+10		−0.4674				
a_c	62.6950	+10	65.6950	+10		−0.0546	−0.0575	10 39 2		2—3
a_o	63.1005	+10	65.2920	+16		+0.3494				
♃ b_w	62.3000	+10	66.0905	+10		−0.4498				
b_c	62.7135	+10	65.6820	+10		−0.0388	−0.0398	39 59		2—3
b_o	63.1210	+10	65.2730	+16		+0.3691				
♃ c_w	62.2765	+10	66.1125	+10		−0.4726				
c_c	62.6830	+10	65.6990	+10		−0.0626	−0.0609	40 49		2—3
c_o	63.1030	+10	65.2880	+16		+0.3526			$10^h\ 41^m\ 15^s$	
♃ d_w	62.2710	+9	66.1200	+11		−0.4792				
d_c	62.6870	+9	65.7010	+11		−0.0617	−0.0672	41 48		2—3
d_o	63.0920	+9	65.3035	+17		+0.3392				
♃ e_w	62.3060	+9	66.0915	+11		−0.4474				
e_c	62.7030	+9	65.6775	+11		−0.0420	−0.0407	42 28		2—3
e_o	63.1185	+9	65.2740	+17		+0.3672				
♃ f_w	62.3055	+10	66.0900	+12		−0.4470				
f_c	62.7050	+10	65.6850	+12		−0.0447	−0.0434	43 23		2—3
f_o	63.1140	+10	65.2810	+18		+0.3615				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder
							mm	mm					
I	Bedeckt.												
II a	60.9210	+11	67.4580	+8		−1.8230	−1.7655						2
b	60.9460	+11	67.4365	+8		−1.7997	−1.7599						2—3
c	60.9255	+11	67.4590	+8		−1.8212	−1.7603	−1.7588	−1′.7465	+0′.0001	−0′.0014	**−1′.7478**	2—3
d	60.9220	+10	67.4620	+9		−1.8246	−1.7574						2—3
e	60.9520	+10	67.4320	+9		−1.7946	−1.7539						2—3
f	60.9470	+11	67.4360	+10		−1.7990	−1.7556						2
III a	59.9410	+16	68.4395	+19		−2.8040	−2.7465						2
b	59.9565	+15	68.4240	+18		−2.7885	−2.7487						2—3
c	59.9355	+15	68.4460	+18		−2.8100	−2.7491	−2.7504	−2.7311	+0.0002	−0.0014	**−2.7323**	2
d	59.9265	+14	68.4560	+19		−2.8196	−2.7524						2
e	59.9550	+14	68.4280	+19		−2.7914	−2.7507						1—2
f	59.9465	+15	68.4340	+20		−2.7986	−2.7552						1—2
IV a	65.3350	+17	63.0460	+9		+2.5903	+2.6478						2
b	65.3555	+17	63.0275	+9		+2.6098	+2.6496						2
c	65.3355	+16	63.0480	+9		+2.5895	+2.6504	+2.6462	+2.6276	−0.0002	−0.0014	**+2.6260**	2
d	65.3240	+16	63.0600	+10		+2.5777	+2.6449						2
e	65.3490	+17	63.0345	+11		+2.6030	+2.6437						1—2
f	65.3435	+17	63.0400	+12		+2.5974	+2.6408						2

Scheinbare AR diff: M— Centrum $= +\ 5'.2704$ $\qquad f^0_\alpha = 0.99303$ $\qquad -i^0_\alpha = +0.00022$

N— » $= -41.4094$

Q— » $= +14.3251$ $\qquad f_\alpha = \mathbf{0.99270}$ $\qquad -i_\alpha = \mathbf{+0.00015}$ $\qquad \measuredangle\, i_\alpha = -\ 0'.5$

R— » $= -38.7107$ $\qquad$ *Refr.* $= +\ 2$

V— » $= -\ 0.3201$ $\qquad Tx_♃ = 0$

W— » $= +\ 0.8886$ $\qquad f'_\alpha = \mathbf{0.99298}$ $\qquad J_\alpha = \mathbf{+0.00017}$

$\alpha_♃ = 10^h\ 13^m.1$

1897. April 7.

ihe.

Decl.

Scalenablesung.				s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$						
mm **63.1715**	mm/10000	mm **65.2144**	mm/10000	mm/10000	mm	mm	mm	mm	
63.1705	+10	65.2128	+10	0	0.0000		0.0000	0.0000	Bilder 3—4.
66.1928	+10	62.1845	+10	0	+ 3.0256		— 0.0013	+ 3.0243	
66.7325	+24	61.6505	+26	— 1	+ 3.5622		— 0.0811	+ 3.4811	
38.5788	+29	89.8062	— 3	+ 5	—24.5902		— 0.0094	—24.5996	
38.5980	+41	89.7752	+ 8	+13	—24.5642		— 0.0694	—24.6336	
43.7750	+20	84.6038	— 2	+ 2	—19.3916		0.0000	—19.3916	
94.1250	— 2	34.2618	+20	— 8	+30.9512		0.0000	+30.9512	
68.3220	+19	60.0720	+14		+ 5.1467				
67.9330	+19	60.4610	+14		+ 4.7577	+ 4.7554			Bilder 3.
67.5400	+19	60.8600	+10		+ 4.3619				
66.6490	+ 9	61.7430	+ 9		+ 3.4744				
66.2540	+11	62.1420	+ 9		+ 3.0776	+ 3.0804			
65.8670	+11	62.5315	+ 9		+ 2.6893				
65.0120	+17	63.8860	+ 8		+ 1.8349				
64.6160	+17	64.2770	+ 8		+ 1.4414	+ 1.4432			
64.2290	+17	64.6660	+ 8		+ 1.0534				
62.0290	+10	66.3640	+10		— 1.1460				
61.6350	+10	66.7570	+ 8		— 1.5394	— 1.5369			
61.2550	+11	67.1485	+ 8		— 1.9252				
60.3865	+15	68.0150	+18		— 2.7930				
59.9860	+15	68.3960	+18		— 3.1837	— 3.1827			
59.6030	+15	68.7890	+13		— 3.5714				
58.6430	+11	69.7640	+16		— 4.5393				
58.2400	+ 6	70.1450	+16		— 4.9316	— 4.9265			
57.8690	+ 6	70.5280	+16		— 5.3086				

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Bedeckt.												
68.6370	+14	59.7470	+14		+ 5.4664	+0.7110						
66.9575	+ 9	61.4280	+10		+ 3.7862	+0.7058						
65.3180	+17	63.0650	+ 9		+ 2.1484	+0.7052						
62.3405	+10	66.0460	+10		— 0.8313	+0.7056	+0.7065	+0.7017	+0.0002	—0.0001	+0.0003	**+0.7021**
60.6960	+11	67.6920	+18		— 2.4769	+0.7058						
58.9505	+11	69.4350	+13		— 4.2209	+0.7056						
69.1850	+14	59.2015	+10		+ 6.0134	+1.2580						
67.5095	+19	60.8780	+10		+ 4.3376	+1.2572						
65.8720	+11	62.5130	+ 9		+ 2.7010	+1.2578						
62.8940	+10	65.4940	+10		— 0.2786	+1.2583	+1.2601	+1.2516	+0.0003	—0.0003	+0.0003	**+1.2519**
61.2510	+11	67.1330	+ 8		— 1.9194	+1.2633						
59.5120	+15	68.8760	+13		— 3.6604	+1.2661						
66.9535	+ 8	61.4345	+11		+ 3.7808	—0.9746						
65.2765	+16	63.1080	+10		+ 2.1060	—0.9744						
63.6430	+ 8	64.7465	+17		+ 0.4692	—0.9740						
60.6660	+10	67.7280	+19		— 2.5100	—0.9731	—0.9727	—0.9661	—0.0003	—0.0002	+0.0003	**—0.9663**
59.0185	+10	69.3700	+14		— 4.1545	—0.9718						
57.2765	+ 9	71.1090	+13		— 5.8950	—0.9685						

Scheinbare Decldiff: M—Centrum $= + 3'.0034$ $f^\circ_\delta = 0.99316$ $i^\circ_\delta = +0.00002$
N— » $= + 3.4541$
Q— » $= -24.4340$ f_δ $= \mathbf{0.99261}$ $i_\delta = \mathbf{-0.00014}$ $\measuredangle\, i_\delta = -0'.5$
R— » $= -24.4659$
V— » $= -19.2652$ $f'_\delta = \mathbf{0.99323}$ $J_\delta = \mathbf{-0.00011}$
W— » $= +30.7334$

$\delta_♃ = +12^\circ\ 25'.8$

81. 1897. April 9.

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
Ctr.	mm 63.9298	mm/10000	mm 64.4569	mm/10000	mm/10000	mm	mm			
S	63.9290	+ 8	64.4560	+ 9	0	0.0000				1—2
M	68.9038	+14	59.4675	+10	0	+ 4.9819				1—2
N	24.7628	+26	103.6205	+ 6	+18	—39.1625				1—2
Q	77.5235	+21	50.8552	+20	— 3	+13.5974		$10^h\ 21^m\ 43^s$		2
R	27.2020	+35	101.1695	+13	+20	—36.7171				1—2
V	63.6262	+18	64.7468	+23	0	— 0.2970				1—2
W	64.7612	+28	63.6130	+23	0	+ 0.8379				1—2
$♃\,a_w$	63.4925	+ 9	64.8935	+16		— 0.4373				
a_c	63.9010	+ 9	64.4890	+ 8		— 0.0304	— 0.0263	10 27 42		3—4
a_o	64.3235	+ 9	64.0730	+ 8		+ 0.3888				
$♃\,b_w$	63.5135	+ 9	64.8780	+16		— 0.4190				
b_c	63.9225	+ 9	64.4625	+ 8		— 0.0064	— 0.0072	28 45		2—3
b_o	64.3390	+ 9	64.0585	+ 8		+ 0.4038				
$♃\,c_w$	63.5045	+ 9	64.8975	+16		— 0.4333				
c_c	63.8985	+ 9	64.4850	+ 8		— 0.0296	— 0.0259	29 41	$10^h\ 30^m\ 12^s$	3
c_o	64.3220	+ 9	64.0790	+ 8		+ 0.3851				
$♃\,d_w$	63.4755	+ 8	64.9185	+17		— 0.4584				
d_c	63.8800	+ 8	64.5135	+ 9		— 0.0532	— 0.0526	30 46		2—3
d_o	64.2880	+ 8	64.1075	+ 9		+ 0.3538				
$♃\,e_w$	63.5010	+ 8	64.8960	+17		— 0.4344				
e_c	63.8985	+ 8	64.4975	+ 9		— 0.0360	— 0.0326	31 40		2
e_o	64.3065	+ 8	64.0885	+ 9		+ 0.3725				
$♃\,f_w$	63.5020	+ 9	64.8905	+18		— 0.4312				
f_c	63.9000	+ 9	64.4900	+10		— 0.0315	— 0.0294	32 37		2
f_o	64.3095	+ 9	64.0875	+10		+ 0.3745				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	65.4255	+16	62.9550	+ 9	+ 1.4992	+1.5255						2—3
b	65.4515	+16	62.9340	+ 9	+ 1.5226	+1.5298						2—3 ellipt.
c	65.4310	+17	62.9495	+ 9	+ 1.5047	+1.5306	+1.5331	+1′.5223	—0′.0001	—0′.0015	**+1′.5207**	2—3
d	65.4050	+16	62.9740	+10	+ 1.4794	+1.5320						2
e	65.4330	+17	62.9480	+10	+ 1.5064	+1.5390						2
f	65.4410	+17	62.9440	+11	+ 1.5124	+1.5418						2—3
II a	64.5380	+17	63.8400	+ 8	+ 0.6130	+0.6393						2
b	64.5580	+17	63.8245	+ 8	+ 0.6308	+0.6380						2—3 ellipt.
c	64.5340	+16	63.8485	+ 8	+ 0.6067	+0.6326	+0.6309	+0.6264	0.0000	—0.0015	**+0.6249**	2—3
d	64.5040	+16	63.8820	+ 9	+ 0.5749	+0.6275						2—3
e	64.5200	+16	63.8615	+ 9	+ 0.5932	+0.6258						2
f	64.5215	+17	63.8635	+10	+ 0.5929	+0.6223						2—3
III a	60.4525	+16	67.9295	+19	— 3.4751	—3.4488						2
b	60.4755	+15	67.9090	+18	— 3.4534	—3.4462						2—3 ellipt.
c	60.4580	+15	67.9245	+18	— 3.4698	—3.4439	—3.4435	—3.4192	+0.0001	—0.0015	**—3.4206**	2
d	60.4335	+14	67.9510	+19	— 3.4954	—3.4428						2
e	60.4540	+14	67.9270	+19	— 3.4732	—3.4406						2
f	60.4590	+15	67.9220	+19	— 3.4682	—3.4388						2
IV a	60.2530	+16	68.1290	+19	— 3.6746	—3.6483						2
b	60.2725	+15	68.1140	+18	— 3.6574	—3.6502						2—3 ellipt.
c	60.2505	+15	68.1355	+18	— 3.6791	—3.6532	—3.6544	—3.6286	+0.0001	—0.0015	**—3.6300**	2—3
d	60.2185	+14	68.1670	+19	— 3.7110	—3.6584						2—3
e	60.2395	+14	68.1475	+19	— 3.6907	—3.6581						2
f	60.2420	+15	68.1435	+19	— 3.6874	—3.6580						2—3

Scheinbare Ædiff.: M—Centrum = + 5′.2704 $\quad f^\circ_\alpha = 0.99297 \quad -i^\circ_\alpha = +0.00012$

N— » = —41.4094

Q— » = +14.3252 $\quad f_\alpha = \mathbf{0.99266} \quad -i_\alpha = +\mathbf{0.00007} \quad ♃\ i_\alpha = -0′.2$

R— » = —38.7107 $\quad$ *Refr.* = + 1

V— » = — 0.3200 $\quad Tx_♃ = 0$

W— » = + 0.8885 $\quad f'_\alpha = \mathbf{0.99294} \quad J_\alpha = +\mathbf{0.00008}$

$\alpha_♃ = 10^h\ 12^m.7$

1897. April 9.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.2459		**65.1414**							
63.2450	+ 9	65.1398	+16	0	0.0000		0.0000	0.0000	Bilder 4. Windig.
66.2650	+11	62.1100	+11	0	+ 3.0252		— 0.0013	+ 3.0239	
66.8018	+25	61.5785	+26	— 1	+ 3.5592		— 0.0811	+ 3.4781	
38.6485	+29	89.7342	— 3	+ 5	—24.5930		— 0.0094	—24.6024	
38.6650	+40	89.7065	+ 8	+13	—24.5701		— 0.0694	—24.6395	
43.8410	+19	84.5345	— 2	+ 2	—19.3978		0.0000	—19.3978	
94.1942	— 3	34.1908	+20	— 8	+30.9475		0.0000	+30.9475	
68.4000	+18	59.9915	+14		+ 5.1522				
68.0000	+18	60.3890	+14		+ 4.7534	+ 4.7559			
67.6110	+18	60.7830	+10		+ 4.3622				
66.8025	+ 8	61.5945	+ 9		+ 3.5517				
66.4115	+10	61.9810	+ 9		+ 3.1630	+ 3.1660			
66.0320	+10	62.3610	+ 9		+ 2.7833				
65.0625	+16	63.3280	+ 9		+ 1.8154				
64.6760	+16	63.7170	+ 8		+ 1.4276	+ 1.4277			
64.2900	+ 8	64.1055	+ 8		+ 1.0400				
62.0860	+ 9	66.3170	+10		— 1.1678				
61.6970	+ 9	66.6995	+ 8		— 1.5534	— 1.5521			
61.3130	+10	67.0790	+ 8		— 1.9352				
60.4160	+14	67.9905	+18		— 2.8397				
60.0300	+14	68.3630	+18		— 3.2190	— 3.2216			
59.6440	+14	68.7515	+13		— 3.6060				
58.7690	+10	69.6280	+16		— 4.4820				
58.3805	+ 5	70.0170	+16		— 4.8710	— 4.8663			
58.0050	+ 5	70.3910	+16		— 5.2458				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.3280	+ 8	61.0580	+11		+ 4.0826	—0.6733						
65.7410	+10	62.6475	+10		+ 2.4945	—0.6715						
64.0010	+ 8	64.3860	+ 9		+ 0.7552	—0.6725	—0.6738	—0.'6692	—0.'0002	—0.'0001	+0.'0003	**—0.'6692**
61.0210	+10	67.3655	+ 9		— 2.2244	—0.6723						
59.3430	+10	69.0390	+14		— 3.9004	—0.6788						
57.7080	+ 5	70.6835	+13		— 5.5404	—0.6741						
67.7895	+18	60.5940	+10		+ 4.5459	—0.2100						
66.2030	+10	62.1805	+ 9		+ 2.9590	—0.2070						
64.4670	+ 8	63.9185	+ 8		+ 1.2220	—0.2057	—0.2045	—0.2031	—0.0001	0.0000	+0.0003	**—0.2029**
61.4920	+10	66.8950	+ 8		— 1.7536	—0.2015						
59.8200	+14	68.5670	+13		— 3.4257	—0.2041						
58.1810	+ 5	70.2060	+14		— 5.0652	—0.1989						
69.3930	+14	58.9890	+10		+ 6.1500	+1.3941						
67.8050	+19	60.5770	+10		+ 4.5622	+1.3962						
66.0650	+11	62.3150	+ 9		+ 2.8228	+1.3951	+1.3955	+1.3860	+0.0005	—0.0004	+0.0003	**+1.3864**
63.0925	+10	65.2940	+16		— 0.1533	+1.3988						
61.4155	+11	66.9685	+ 8		— 1.8286	+1.3930						
59.7750	+15	68.6115	+13		— 3.4704	+1.3959						
69.6510	+17	58.7340	+10		+ 6.4066	+1.6507						
68.0670	+19	60.3205	+14		+ 4.8212	+1.6552						
66.3260	+11	62.0600	+ 9		+ 3.0808	+1.6531	+1.6554	+1.6441	+0.0005	—0.0004	+0.0003	**+1.6445**
63.3520	+10	65.0340	+16		+ 0.1064	+1.6585						
61.6800	+10	66.7070	+ 8		— 1.5656	+1.6560						
60.0380	+15	68.3480	+18		— 3.2074	+1.6589						

Scheinbare Decldiff: M— Centrum = + 3.'0034 $\qquad f^\circ_\delta = 0.99311 \qquad i^\circ_\delta = -0.00004$

N— » = + 3.4540

Q— » = —24.4341 $\qquad f_\delta = \mathbf{0.99259} \qquad i_\delta = \mathbf{-0.00016} \qquad \measuredangle\, i_\delta = -0.'6$

R— » = —24.4650

V— » = —19.2652 $\qquad f'_\delta = \mathbf{0.99320} \qquad J_\delta = \mathbf{-0.00014}$

W— » = +30.7334

$\delta_♃ = +12^\circ\ 27.'9$

82. 1897. April 10.

Ʀ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.2671**		**65.1190**							
S	63.2662	+9	65.1173	+17	0	0.0000				2
M	68.2398	+19	60.1350	+14	0	+4.9786				2
N	24.0960	+26	104.2855	+6	+18	−39.1660				1—2 etwas el
Q	76.8705	+22	51.5135	+21	−3	+13.6042		**10^h 44^m 49^s**		1—2
R	26.5488	+35	101.8242	+14	+20	−36.7087				2
V	62.9722	+19	65.4000	+23	0	−0.2882				2
W	64.0895	+20	64.2900	+23	0	+0.8256				1—2
♃ a_w	62.5005	+10	65.8950	+10		−0.7713				
a_c	62.9070	+10	65.4840	+16		−0.3628	−0.3638	10 51 28		2
a_o	63.3200	+10	65.0860	+16		+0.0426				
♃ b_w	62.5080	+10	65.8865	+10		−0.7634				
b_c	62.9150	+10	65.4830	+16		−0.3584	−0.3579	52 27		2
b_o	63.3240	+10	65.0790	+16		+0.0482				
♃ c_w	62.5005	+10	65.8935	+10		−0.7706				
c_c	62.8990	+10	65.4955	+16		−0.3726	−0.3704	53 26		2
c_o	63.3060	+10	65.0935	+16		+0.0319			**10^h 53^m 50^s**	
♃ d_w	62.5150	+9	65.8795	+11		−0.7564				
d_c	62.9090	+9	65.4860	+17		−0.3630	−0.3619	54 23		2
d_o	63.3075	+9	65.0915	+17		+0.0336				
♃ e_w	62.5360	+9	65.8600	+11		−0.7362				
e_c	62.9345	+9	65.4600	+17		−0.3372	−0.3358	55 13		1—2
e_o	63.3395	+9	65.0585	+17		+0.0660				
♃ f_w	62.5430	+10	65.8540	+12		−0.7296				
f_c	62.9380	+10	65.4610	+18		−0.3360	−0.3363	56 4		2
f_o	63.3335	+10	65.0710	+18		+0.0568				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	61.0500	+11	67.3350	+17		−2.2168	−1.8530						2
b	61.0525	+11	67.3305	+8		−2.2134	−1.8555						2—3
c	61.0435	+11	67.3420	+8		−2.2232	−1.8528	−1.8566	−1'.8435	+0'.0004	−0'.0015	**−1'.8446**	2—3
d	61.0505	+10	67.3380	+9		−2.2172	−1.8555						2
e	61.0700	+10	67.3175	+9		−2.1978	−1.8620						2—3
f	61.0725	+11	67.3185	+10		−2.1970	−1.8607						2
II a	59.8605	+16	68.5235	+14		−3.4054	−3.0416						2
b	59.8655	+15	68.5235	+13		−3.4030	−3.0451						2
c	59.8545	+15	68.5315	+13		−3.4124	−3.0420	−3.0441	−3.0226	+0.0007	−0.0015	**−3.0234**	2
d	59.8630	+14	68.5240	+14		−3.4046	−3.0427						2
e	59.8845	+14	68.5040	+14		−3.3838	−3.0480						2—3
f	59.8860	+15	68.5010	+14		−3.3815	−3.0452						2
III	Verfinst	ert.											
IV a	56.6350	+11	71.7525	+12		−6.6328	−6.2690						2—3
b	56.6400	+10	71.7485	+12		−6.6284	−6.2705						2—3
c	56.6310	+10	71.7580	+11		−6.6376	−6.2672	−6.2728	−6.2285	+0.0014	−0.0015	**−6.2286**	2—3
d	56.6850	+9	71.7560	+11		−6.6346	−6.2727						2
e	56.6560	+9	71.7330	+12		−6.6127	−6.2769						2—3
f	56.6525	+9	71.7375	+12		−6.6167	−6.2804						2—3

Scheinbare Ʀdiff: M— Centrum $= + 5'.2704$ $f^\circ_\alpha = 0.99298$ $-i^\circ_\alpha = +0.00054$
N— » $= -41.4094$
Q— » $= +14.3252$ $f_\alpha =$ **0.99265** $-i_\alpha = +$**0.00047** $♃\ i_\alpha = -1'.6$
R— » $= -38.7107$ $Refr. = + 3$
V— » $= - 0.3200$ $Tx_♃ = 0$
W— » $= + 0.8885$ $f'_\alpha =$ **0.99294** $J_\alpha = +$**0.00050**

$\alpha_♃ = 10^h\ 12^m.5$

1897. April 10.

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Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.1630		**65.2241**							
63.1620	+10	65.2225	+16	0	0.0000		0.0000	0.0000	Bilder 3.
66.1848	+10	62.1960	+10	0	+ 3.0250		— 0.0013	+ 3.0237	
66.7110	+25	61.6722	+26	— 1	+ 3.5498		— 0.0811	+ 3.4677	
38.5715	+29	89.8168	— 3	+ 5	—24.5900		— 0.0094	—24.5994	
38.5758	+40	89.7972	+ 8	+13	—24.5772		— 0.0694	—24.6466	
43.7620	+20	84.6168	— 2	+ 2	—19.3956		0.0000	—19.3956	
94.1110	— 3	34.2762	+20	— 8	+30.9460		0.0000	+30.9460	
68.2790	+19	60.1170	+14		+ 5.1118				
67.8940	+19	60.4985	+14		+ 4.7286	+ 4.7257			Bilder 2—3.
67.5080	+19	60.8965	+10		+ 4.3368				
66.7030	+ 9	61.6990	+ 9		+ 3.5326				
66.3150	+11	62.0845	+ 9		+ 3.1459	+ 3.1457			
65.9270	+11	62.4710	+ 9		+ 2.7586				
65.1150	+17	63.2900	+ 9		+ 1.9434				
64.7360	+17	63.6615	+ 8		+ 1.5682	+ 1.5641			
64.3500	+ 9	64.0500	+ 8		+ 1.1806				
61.9695	+10	66.4290	+ 8		— 1.1991				
61.5870	+10	66.8020	+ 8		— 1.5768	— 1.5756			
61.2175	+11	67.1810	+ 8		— 1.9510				
60.3500	+15	68.0510	+18		— 2.8201				
59.9740	+15	68.4230	+18		— 3.1941	— 3.1953			
59.5960	+15	68.8015	+ 8		— 3.5718				
58.6840	+11	69.7200	+16		— 4.4877				
58.3080	+ 6	70.0910	+16		— 4.8614	— 4.8604			
57.9390	+ 6	70.4630	+16		— 5.2320				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
68.6820	+14	59.7050	+14		+ 5.5190	+0.7933						
67.1020	+ 9	61.2860	+10		+ 3.9385	+0.7928						
65.5220	+11	62.8690	+ 9		+ 2.3572	+0.7931	+0.7938	+0'.7885	+0'.0007	—0'.0002	+0'.0003	**+0'.7893**
62.3880	+10	66.0040	+10		— 0.7774	+0.7982						
60.7620	+11	67.6280	+18		— 2.4028	+0.7925						
59.0980	+11	69.2940	+13		— 4.0676	+0.7928						
69.2080	+14	59.1780	+14		+ 6.0456	+1.3199						
67.6270	+19	60.7660	+11		+ 4.4614	+1.3157						
66.0475	+11	62.3440	+10		+ 2.8824	+1.3183	+1.3187	+1.3098	+0.0011	—0.0004	+0.0003	**+1.3108**
62.9090	+10	65.4800	+11		— 0.2550	+1.3206						
61.2880	+11	67.1050	+ 9		— 1.8778	+1.3175						
59.6245	+15	68.7660	+14		— 3.5402	+1.3202						
Verfinst	ert.											
70.6005	+15	57.7855	+ 7		+ 7.4384	+2.7127						
69.0230	+16	59.3650	+12		+ 5.8598	+2.7141						
67.4440	+11	60.9460	+12		+ 4.2795	+2.7154	+2.7153	+2.6971	+0.0023	—0.0014	+0.0003	**+2.6983**
64.3090	+11	64 0840	+10		+ 1.1431	+2.7187						
62.6830	+12	65.7085	+12		— 0.4822	+2.7131						
61.0235	+13	67.3700	+10		— 2.1426	+2.7178						

Scheinbare Decldiff: M—Centrum = + 3'.0034 f°_δ = 0.99319 i°_δ = —0.00026
N— » = + 3.4540
Q— » = —24.4341 f_δ = **0.99265** i_δ = **—0.00041**   ∢ i_δ = —1'.4
R— » = —24.4660
V— » = —19.2652 f'_δ = **0.99327** J_δ = **—0.00036**
W— » = +30.7334

$\delta_♃$ = +12° 28'.8

83. 1897. April 13.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.9284**		**65.4517**							
S	62.9275	+ 9	65.4500	+17	0	0.0000				3 *)
M	67.9024	+19	60.4672	+14	0	+ 4.9795				2—3
N	23.7622	+26	104.6210	+ 7	+18	−39.1650				3
Q	76.5280	+22	51.8564	+21	− 3	+13.5972		$11^h\ 10^m\ 28^s$		2—3
R	26.2050	+37	102.1650	+14	+20	−36.7152				2—3 etw. el
V	62.6268	+19	65.7455	+17	0	− 0.2971				2—3 [radial.
W	63.7622	+20	64.6188	+31	0	+ 0.8328				2—3
♃ a_w	62.5055	+10	65.8975	+10		− 0.4344				
a_c	62.9230	+10	65.4790	+16		− 0.0166	− 0.0155	11 17 18		4
a_o	63.3385	+10	65.0520	+16		+ 0.4046				
♃ b_w	62.5225	+10	65.8800	+10		− 0.4171				
b_c	62.9370	+10	65.4670	+16		− 0.0036	− 0.0060	18 27		3—4
b_o	63.3370	+10	65.0540	+16		+ 0.4028				
♃ c_w	62.5185	+ 9	65.8800	+10		− 0.4192				
c_c	62.9205	+ 9	65.4815	+16		− 0.0192	− 0.0172	19 22		3—4
c_o	63.3190	+ 9	65.0680	+16		+ 0.3868			$11^h\ 19^m\ 51^s$	
♃ d_w	62.4875	+ 9	65.9070	+11		− 0.4482				
d_c	62.8960	+ 9	65.5015	+17		− 0.0415	− 0.0438	20 24		3—4
d_o	63.2895	+ 9	65.0955	+17		+ 0.3582				
♃ e_w	62.5000	+ 9	65.8940	+11		− 0.4354				
e_c	62.8995	+ 9	65.4915	+17		− 0.0348	− 0.0348	21 18		3—4
e_o	63.2980	+ 9	65.0890	+17		+ 0.3658				
♃ f_w	62.4820	+10	65.9060	+12		− 0.4504				
f_o	62.9020	+10	65.4965	+18		− 0.0360	− 0.0381	22 15		3—4
f_c	63.3045	+10	65.0830	+18		+ 0.3720				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
						mm	mm					
I a	63.8495	+ 9	64.5350	+16	+ 0.9186	+0.9341						2—3
b	63.8555	+ 9	64.5310	+16	+ 0.9236	+0.9296						3
c	63.8390	+ 8	64.5480	+16	+ 0.9068	+0.9240	+0.9210	+0.9145	−0.0001	−0.0016	**+0.9128**	2—3dicht nebe
d	63.8065	+ 8	64.5790	+17	+ 0.8750	+0.9188						2—3 [Ster
e	63.8135	+ 9	64.5755	+18	+ 0.8802	+0.9150						3
f	63.7975	+ 9	64.5875	+19	+ 0.8662	+0.9043						3
II a	61.1565	+11	67.2250	+ 8	− 1.7724	−1.7569						3
b	61.1605	+11	67.2220	+ 8	− 1.7690	−1.7630						
c	61.1505	+10	67.2350	+ 8	− 1.7805	−1.7633	−1.7684	−1.7560	+0.0002	−0.0016	**−1.7574**	2—3
d	61.1170	+10	67.2705	+ 9	− 1.8150	−1.7712						2—3
e	61.1220	+10	67.2620	+ 9	− 1.8083	−1.7735						2—3
f	61.1105	+11	67.2755	+10	− 1.8208	−1.7827						3
III a	64.7970	+17	63.5805	+ 8	+ 1.8704	+1.8859						2—3
b	64.8020	+17	63.5775	+ 8	+ 1.8744	+1.8804						2—3
c	64.7900	+16	63.5885	+ 8	+ 1.8628	+1.8800	+1.8751	+1.8619	−0.0001	−0.0016	**+1.8602**	2—3
d	64.7610	+16	63.6285	+ 9	+ 1.8284	+1.8722						2—3
e	64.7690	+17	63.6175	+10	+ 1.8378	+1.8726						2—3
f	64.7520	+17	63.6330	+11	+ 1.8214	+1.8595						2—3
IV a	55.0190	+ 2	73.3645	+14	− 7.9117	−7.8962						2—3
b	55.0310	+ 1	73.3570	+14	− 7.9020	−7.8960						2—3
c	55.0235	0	73.3615	+13	− 7.9080	−7.8908	−7.8952	−7.8395	+0.0006	−0.0016	**−7.8405**	2—3
d	54.9975	− 1	73.3885	+13	− 7.9346	−7.8908						2—3
e	55.0035	− 1	73.3820	+14	− 7.9284	−7.8936						2—3
f	54.9905	− 1	73.3960	+14	− 7.9418	−7.9037						3

Scheinbare Ædiff: M—Centrum $= + 5'.2704$ $f^\circ_\alpha = 0.99300$ $-i^\circ_\alpha = +0.00022$
N— » $= -41.4094$
Q— » $= +14.3252$ $f_\alpha = \mathbf{0.99265}$ $-i_\alpha = \mathbf{+0.00013}$ $\measuredangle\ i_\alpha = -0'.4$
R— » $= -38.7108$ $Refr. = + 6$
V— » $= - 0.3199$ $Tx_♃ = 0$
W— » $= + 0.8884$ $f'_\alpha = \mathbf{0.99295}$ $J_\alpha = \mathbf{+0.00019}$

$\alpha_♃ = 10^h\ 12^m.0$

*) Stern- und Jupitersbilder zeigen bei allen Aufnahmen dieses Abends eine graue Färbung.

1897. April 13.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 62.8928	mm/10000	mm 65.4916	mm/10000	mm/10000	mm	mm	mm	mm	
62.8918	+10	65.4900	+16	0	0.0000		0.0000	0.0000	Bilder 3. Mond nahe.
65.9130	+10	62.4605	+10	0	+ 3.0256		— 0.0013	+ 3.0243	
66.4555	+27	61.9265	+26	— 1	+ 3.5638		— 0.0811	+ 3.4827	
38.2982	+28	90.0885	— 3	+ 4	—24.5938		— 0.0094	—24.6032	
38.3215	+40	90.0495	+ 8	+13	—24.5617		— 0.0694	—24.6311	
43.4920	+22	84.8845	— 2	+ 2	—19.3954		0.0000	—19.3954	
93.8410	— 3	34.5472	+20	— 8	+30.9444		0.0000	+30.9444	
68.0090	+19	60.3830	+10		+ 5.1134				
67.6150	+19	60.7890	+10		+ 4.7128	+ 4.7151			
67.2190	+19	61.1805	+10		+ 4.3191				
66.3840	+11	62.0110	+ 9		+ 3.4860				
65.9750	+11	62.4130	+ 9		+ 3.0805	+ 3.0862			
65.5975	+11	62.8120	+ 9		+ 2.6922				
64.7280	+17	63.6665	+ 8		+ 1.8306				
64.3330	+ 9	64.0555	+ 8		+ 1.4382	+ 1.4412			
63.9555	+ 9	64.4450	+ 8		+ 1.0547				
61.6750	+10	66.7215	+ 8		— 1.2238				
61.2810	+11	67.1140	+ 8		— 1.6170	— 1.6106			
60.9080	+11	67.4890	+ 8		— 1.9910				
60.0120	+15	68.3850	+13		— 2.8870				
59.6215	+15	68.7710	+13		— 3.2752	— 3.2752			
59.2375	+11	69.1630	+13		— 3.6634				
58.2920	+ 6	70.1005	+16		— 4.6054				
57.9075	+ 6	70.4900	+16		— 4.9924	— 4.9928			
57.5165	+ 6	70.8760	+12		— 5.3806				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.2510	+ 8	61.1330	+10		+ 4.3583	—0.3568						
65.6195	+10	62.7690	+ 9		+ 2.7247	—0.3615						
63.9740	+ 8	64.4095	+ 8		+ 1.0816	—0.3596	—0.3563	— 0.′3539	0.′0000	0.′0000	+0.′0003	—0.′3536
60.9265	+10	67.4590	+ 8		— 1.9668	—0.3562						
59.2680	+10	69.1180	+13		— 3.6258	—0.3506						
57.5490	+ 5	70.8385	+12		— 5.3457	—0.3529						
68.4270	+19	59.9580	+14		+ 5.5342	+0.8191						
66.7985	+ 9	61.5910	+ 9		+ 3.9032	+0.8170						
65.1510	+17	63.2370	+ 9		+ 2.2568	+0.8156	+0.8185	+0.8130	0.0000	—0.0001	+0.0003	+0.8132
62.1040	+10	66.2850	+10		— 0.7911	+0.8195						
60.4395	+15	67.9470	+18		— 2.4545	+0.8207						
58.7190	+11	69.6650	+16		— 4.1738	+0.8190						
66.8990	+ 8	61.4885	+11		+ 4.0045	—0.7106						
65.2700	+16	63.1120	+10		+ 2.3787	—0.7075						
63.6260	+ 8	64.7620	+17		+ 0.7310	—0.7102	—0.7072	—0.7025	0.0000	—0.0001	+0.0003	—0.7023
60.5740	+10	67.8080	+19		— 2.3180	—0.7074						
58.9165	+10	69.4720	+14		— 3.9786	—0.7034						
57.1975	+ 9	71.1890	+13		— 5.6966	—0.7038						
70.8615	+15	57.5305	+ 8		+ 7.9652	+3.2501						
69.2240	+16	59.1630	+13		+ 6.3300	+3.2438						
67.5770	+21	60.8090	+13		+ 4.6838	+3.2426	+3.2442	+3.2225	+0.0001	—0.0020	+0.0003	+3.2209
64.5270	+19	63.8590	+11		+ 1.6338	+3.2444						
62.8605	+12	65.5240	+13		— 0.0324	+3.2428						
61.1430	+13	67.2440	+11		— 1.7510	+3.2418						

Scheinbare Decldiff: M—Centrum = + 3.′0034 $\qquad f^\circ_\delta = 0.99323 \qquad i^\circ_\delta = +0.00010$
N— » = + 3.4540
Q— » = —24.4341 $\qquad f_\delta$ = **0.99265** $\qquad i_\delta$ = **—0.00009** $\qquad \measuredangle\, i_\delta = -0.′3$
R— » = —24.4660
V— » = —19.2653 $\qquad f'_\delta$ = **0.99329** $\qquad J_\delta$ = **—0.00001**
W— » = +30.7336

$\delta_♃ = +12^\circ\ 31.′1$

84. 1897. April 15.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.7823**		**64.6040**							
S	63.7815	+ 8	64.6024	+16	0	0.0000				2
M	68.7555	+14	59.6198	+10	0	+ 4.9789				2
N	24.6115	+26	103.7732	+ 6	+17	−39.1673				2
Q	77.3818	+21	50.9980	+20	− 3	+13.6025		11^h 8^m 4^s		2
R	27.0635	+34	101.3082	+13	+21	−36.7084				2—3 ellipt.
V	63.4872	+18	64.8868	+23	0	− 0.2892				2
W	64.6008	+28	63.7790	+23	0	+ 0.8220				2
♃ a_w	63.3505	+10	65.0425	+16		− 0.4354				
a_c	63.7365	+ 9	64.6425	+16		− 0.0425	− 0.0385	11 15 24		4—5 *)
a_o	64.1515	+ 9	64.2485	+ 8		+ 0.3624				
♃ b_w	63.3590	+10	65.0210	+16		− 0.4204				
b_c	63.7605	+ 9	64.6275	+16		− 0.0230	− 0.0278	16 25		4—5
b_o	64.1515	+ 9	64.2535	+ 8		+ 0.3599				
♃ c_w	63.4030	+10	64.9795	+16		− 0.3777				
c_c	63.7980	+ 9	64.5900	+16		+ 0.0145	+ 0.0130	17 26		4—5
c_o	64.1880	+ 9	64.2055	+ 8		+ 0.4022			11^h 18^m 11^s	
♃ d_w	63.3185	+ 9	65.0720	+17		− 0.4663				
d_c	63.7135	+ 8	64.6780	+17		− 0.0718	− 0.0718	18 36		4—5
d_o	64.1110	+ 8	64.2875	+ 9		+ 0.3226				
♃ e_w	63.3690	+ 9	65.0370	+17		− 0.4236				
e_c	63.7415	+ 8	64.6455	+17		− 0.0416	− 0.0423	20 7		4—5
e_o	64.1235	+ 8	64.2685	+ 9		+ 0.3383				
♃ f_w	63.3910	+10	64.9990	+17		− 0.3935				
f_c	63.7680	+ 9	64.6205	+17		− 0.0158	− 0.0122	21 8		4—5
f_o	64.1580	+ 9	64.2340	+ 9		+ 0.3728				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	63.2250	+10	65.1555	+17		− 0.5548	−0.5163						2
b	63.2305	+10	65.1540	+16		− 0.5512	−0.5234						2
c	63.2660	+10	65.1185	+16		− 0.5157	−0.5287	−0.5333	−0.′5295	+0.′0001	−0.′0017	**−0.′5311**	2—3
d	63.1695	+ 9	65.2130	+17		− 0.6113	−0.5395						2
e	63.1920	+ 9	65.1865	+17		− 0.5868	−0.5445						2
f	63.2205	+10	65.1605	+17		− 0.5595	−0.5473						2
II a	66.2125	+11	62.1720	+ 9		+ 2.4312	+2.4697						
b	66.2255	+11	62.1570	+ 9		+ 2.4447	+2.4725						
c	66.2690	+10	62.1150	+ 9		+ 2.4879	+2.4749	+2.4728	+2.4554	−0.0004	−0.0017	**+2.4533**	2
d	66.1790	+10	62.2070	+10		+ 2.3968	+2.4686						
e	66.2140	+11	62.1700	+10		+ 2.4329	+2.4752						
f	66.2460	+11	62.1405	+11		+ 2.4636	+2.4758						
III a	59.0930	+12	69.2900	+14		− 4.6878	−4.6493						2
b	59.1065	+11	69.2790	+13		− 4.6755	−4.6477						2
c	59.1455	+11	69.2400	+13		− 4.6365	−4.6495	−4.6524	−4.6197	+0.0007	−0.0017	**−4.6207**	2
d	59.0535	+10	69.3315	+13		− 4.7283	−4.6565						2
e	59.0845	+10	69.3000	+14		− 4.6971	−4.6548						2
f	59.1145	+10	69.2730	+14		− 4.6686	−4.6564						2—3
IV a	60.0715	+16	68.3090	+19		− 3.7080	−3.6695						
b	60.0850	+15	68.2985	+18		− 3.6960	−3.6682						
c	60.1295	+15	68.2575	+18		− 3.6533	−3.6663	−3.6668	−3.6410	+0.0005	−0.0017	**−3.6422**	2
d	60.0425	+14	68.3430	+19		− 3.7396	−3.6678						
e	60.0745	+14	68.3100	+19		− 3.7072	−3.6649						
f	60.1050	+14	68.2785	+19		− 3.6762	−3.6640						

Scheinbare Ædiff: M—Centrum $= +\ 5.'2704$ $f^\circ_\alpha = 0.99299$ $-i^\circ_\alpha = +0.00039$
N— » $= -41.4094$
Q— » $= +14.3252$ $f_\alpha = \mathbf{0.99265}$ $-i_\alpha = \mathbf{+0.00030}$ $\sphericalangle\ i_\alpha = -\ 1.'0$
R— » $= -38.7108$ *Refr.* $= +\ 6$
V— » $= -\ 0.3199$ $Tx_♃ = 0$
W— » $= +\ 0.8884$ $f'_\alpha = \mathbf{0.99295}$ $J_\alpha = \mathbf{+0.00036}$

$\alpha_♃ = 10^h\ 11.^m7$

*) Alle Jupitersbilder sind unterexponiert oder durch einen Kalkniederschlag grau gefärbt.

1897. April 15.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.5868**	$\frac{mm}{10000}$	mm **64.7990**	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.5860	+ 8	64.7974	+16	0	0.0000		0.0000	0.0000	Bilder 3.
66.6078	+ 9	61.7688	+10	0	+ 3.0256		— 0.0013	+ 3.0243	
67.1308	+25	61.2485	+17	— 2	+ 3.5470		— 0.c811	+ 3.4659	
38.9938	+29	89.3875	— 2	+ 5	—24.5887		— 0.0094	—24.5981	
38.9948	+40	89.3762	+ 9	+13	—24.5808		— 0.0694	—24.6502	
44.1850	+19	84.1928	— 7	+ 2	—19.3963		0.0000	—19.3963	
94.5395	— 2	33.8498	+20	— 8	+30.9490		0.0000	+30.9490	
68.6890	+13	59.7195	+14		+ 5.0908				
68.3120	+18	60.0755	+14		+ 4.7246	+ 4.7216			
67.9350	+18	60.4490	+14		+ 4.3493				
67.9740	+ 8	61.4195	+ 9		+ 3.3833				
66.5990	+ 8	61.7940	+ 9		+ 3 0086	+ 3.0101			
66.2280	+10	62.1635	+ 9		+ 2.6384				
65.4080	+16	62.9940	+ 9		+ 1.8134				
65.0200	+16	63.3635	+ 9		+ 1.4347	+ 1.4382			
64.6550	+16	63.7350	+ 8		+ 1.0665				
62.3760	+ 9	66.0210	+10		— 1.2164				
62.0015	+ 9	66.3895	+10		— 1.5880	— 1.5885			
61.6295	+ 9	66.7640	+ 8		— 1.9611				
60.6650	+10	67.7330	+18		— 2.9283				
60.3025	+14	68.0940	+18		— 3.2898	— 3.2936			
59.9240	+14	68.4610	+18		— 3.6626				
59.0315	+10	69.3610	+13		— 4.5588				
58.6635	+10	69.7190	+16		— 4.9220	— 4.9217			
58.3010	+ 5	70.0805	+16		— 5.2842				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.5660	+14	59.8200	+14		+ 4.9791	+0.2575						
66.8590	+ 9	61.5300	+ 9		+ 3.2706	+0.2605						
65.2860	+17	63.0990	+ 9		+ 1.7000	+0.2618	+0.2641	+0.′2623	+0.′0002	0.′0000	+0.′0003	**+0.′2628**
62.2660	+10	66.1220	+10		— 1.3219	+0.2666						
60.5575	+11	67.8295	+18		— 3.0302	+0.2634						
58.9400	+11	69.4455	+13		— 4.6468	+0.2749						
67.2010	+ 8	61.1830	+11		+ 3.6150	—1.1066						
65.4880	+16	62.8940	+10		+ 1.9034	—1.1067						
63.9190	+ 8	64.4640	+ 9		+ 0.3336	—1.1046	—1.1065	—1.0990	—0.0011	—0.0002	+0.0003	**—1.1000**
60.8950	+10	67.4900	+ 9		— 2.6914	—1.1029						
59.1800	+10	69.2040	+14		— 4.4061	—1.1125						
57.5600	+ 5	70.8260	+13		— 6.0273	—1.1056						
70.3000	+18	58.0850	+ 6		+ 6.7142	+1.9926						
68.5950	+15	59.7900	+15		+ 5.0086	+1.9985						
67.0210	+10	61.3640	+11		+ 3.4346	+1.9964	+1.9966	+1.9830	+0.0020	—0.0007	+0.0003	**+1.9846**
63.9965	+10	64.3860	+ 9		+ 0.4114	+1.9999						
62.2820	+11	66.0990	+11		— 1.3024	+1.9912						
60.6650	+12	67.7180	+19		— 2.9208	+2.0009						
69.7145	+17	58.6730	+10		+ 6.1272	+1.4056						
68.0050	+19	60.3800	+14		+ 4.4188	+1.4087						
66.4310	+11	61.5530	+ 9		+ 2.8452	+1.4070	+1.4080	+1.3984	+0.0016	—0.0004	+0.0003	**+1.3999**
63.4080	+10	64.9760	+16		— 0.1782	+1.4103						
61.6980	+10	66.6910	+ 8		— 1.8903	+1.4033						
60.0790	+15	68.3080	+18		— 3.5086	+1.4131						

Scheinbare Decldiff. M—Centrum $= + 3'.0034$ $\quad f^\circ_\delta = 0.99312 \quad i^\circ_\delta = -0.00034$

N— » $= + 3.4539$

Q— » $= -24.4341$ $\quad f_\delta = \mathbf{0.99255} \quad i_\delta = \mathbf{-0.00052} \quad \angle\, i_\delta = -1'.8$

R— » $= -24.4661$

V— » $= -19.2653$ $\quad f'_\delta = \mathbf{0.99319} \quad J_\delta = \mathbf{-0.00044}$

W— » $= +30.7337$

$\delta_♃ = +12^\circ\ 32'.4$

85. 1897. April 23.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.6191**		**63.7587**							
S	64.6175	+16	63.7578	+9	0	0.0000				2
M	69.5930	+17	58.7778	+10	0	+4.9778				2
N	25.4510	+26	102.9185	+5	+17	−39.1612				2
Q	78.2290	+21	50.1435	+15	−3	+13.6126		**12^h 16^m 44^s**		1—2
R	27.9190	+34	100.4500	+14	+21	−36.6926				2 etwas ellipt.
V	64.3312	+17	64.0362	+15	0	−0.2826				1—2
W	65.4315	+28	62.9438	+24	0	+0.8138				2
♃ a_w	64.2080	+9	64.1805	+8		−0.4164				
a_c	64.6070	+17	63.7825	+8		−0.0175	−0.0180	12 26 9		2—3
a_o	65.0050	+17	63.3860	+8		+0.3798				
♃ b_w	64.1855	+9	64.2145	+8		−0.4446				
b_c	64.5885	+17	63.8095	+8		−0.0402	−0.0438	27 33		2—3
b_o	64.9815	+17	63.4150	+9		+0.3534				
♃ c_w	64.1855	+9	64.2060	+8		−0.4404				
c_c	64.5760	+17	63.8085	+8		−0.0460	−0.0435	28 32		2—3
c_o	64.9845	+17	63.4130	+9		+0.3560			**12^h 29^m 6^s**	
♃ d_w	64.2080	+8	64.1875	+9		−0.4200				
d_c	64.5950	+16	63.7890	+9		−0.0268	−0.0237	29 43		2
d_o	65.0000	+16	63.3890	+9		+0.3756				
♃ e_w	64.1840	+8	64.1995	+9		−0.4380				
e_c	64.5810	+16	63.8130	+9		−0.0458	−0.0452	30 51		2—3
e_o	64.9740	+16	63.4180	+10		+0.3481				
♃ f_w	64.1880	+9	64.2055	+10		−0.4390				
f_c	64.5720	+17	63.8240	+10		−0.0558	−0.0522	31 48		2—3
f_o	64.9685	+17	63.4325	+11		+0.3381				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	65.9855	+11	62.3960	+9		+1.3646	+1.3826						1—2
b	65.9560	+11	62.4220	+9		+1.3369	+1.3807						1—2
c	65.9595	+10	62.4230	+9		+1.3381	+1.3816						2
d	65.9720	+10	62.4145	+10		+1.3486	+1.3723	+1.3767	+1′.3671	−0′.0005	−0′.0020	**+1′.3646**	1—2
e	65.9500	+10	62.4335	+10		+1.3280	+1.3732						2
f	65.9390	+11	62.4435	+11		+1.3176	+1.3698						2
II a	65.5425	+11	62.8390	+9		+0.9216	+0.9396						2
b	65.5255	+11	62.8595	+9		+0.9029	+0.9467						1—2
c	65.5450	+10	62.8350	+9		+0.9248	[+0.9683]	+0.9525	+0.9459	−0.0004	−0.0020	**+0.9435**	2—3 deformiert
d	65.5505	+10	62.8345	+10		+0.9278	+0.9515						2
e	65.5405	+10	62.8450	+10		+0.9176	+0.9628						2
f	65.5340	+11	62.8545	+11		+0.9096	+0.9618						2
III a	60.6370	+12	67.7445	+19		−3.9843	−3.9663						1—2
b	60.6160	+11	67.7640	+18		−4.0046	−3.9608						2
c	60.6195	+11	67.7600	+18		−4.0008	−3.9573						2
d	60.6380	+10	67.7490	+19		−3.9862	−3.9625	−3.9598	−3.9324	+0.0014	−0.0020	**−3.9330**	1—2
e	60.6220	+10	67.7600	+19		−3.9996	−3.9544						2
f	60.6125	+10	67.7700	+19		−4.0094	−3.9572						1—2
IV a	68.9350	+14	59.4460	+10		+4.3145	+4.3325						1—2
b	68.9110	+13	59.4725	+10		+4.2892	+4.3330						1—2
c	68.9130	+13	59.4710	+11		+4.2909	+4.3344	+4.3308	+4.3007	−0.0014	−0.0020	**+4.2973**	2
d	68.9240	+13	59.4605	+11		+4.3016	+4.3253						2
e	68.9165	+14	59.4770	+12		+4.2896	+4.3348						2
f	68.8950	+14	59.4900	+13		+4.2724	+4.3246						2

Scheinbare Ædiff: M—Centrum $= +5'.2705$ $f^\circ_\alpha = 0.99314$ $-i^\circ_\alpha = +0.00088$

N— » $= -41.4095$

Q— » $= +14.3256$ f_α $=$ **0.99270** $-i_\alpha = $ **+0.00069** $\measuredangle\, i_\alpha = -2'.4$

R— » $= -38.7108$ $Refr. = +14$

V— » $= -0.3197$ $Tx_♃ = 0$

W— » $= +0.8882$ $f'_\alpha =$ **0.99305** $J_\alpha =$ **+0.00083**

$\alpha_♃ = 10^h\ 11^m.1$

1897. April 23.

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.4547		**64.9226**							
63.4538	+ 9	64.9210	+16	0	0.0000		0.0000	0.0000	Bilder 3—4.
66.4802	+11	61.8940	+11	0	+ 3.0270		— 0.0013	+ 3.0257	
67.0010	+25	61.3760	+26	— 2	+ 3.5462		— 0.0811	+ 3.4651	
38.8672	+30	89.5045	— 2	+ 5	—24.5826		— 0.0094	—24.5920	
38.8730	+38	89.4988	+ 9	+13	—24.5762		— 0.0694	—24.6456	
44.0580	+19	84.3145	— 7	+ 2	—19.3928		0.0000	—19.3928	
94.4008	— 3	33.9835	+21	— 8	+30.9406		0.0000	+30.9406	
68.5740	+18	59.8095	+14		+ 5.1164				
68.1940	+18	60.2005	+14		+ 4.7309	+ 4.7345			Bilder 3.
67.8160	+18	60.5720	+14		+ 4.3562				
66.9085	+ 8	61.4850	+ 9		+ 3.4456				
66.5375	+ 8	61.8670	+ 9		+ 3.0692	+ 3.0643			
66.1370	+10	62.2485	+ 9		+ 2.6782				
65.3035	+16	63.0920	+ 9		+ 1.8400				
64.9200	+16	63.4760	+ 9		+ 1.4563	+ 1.4577			
64.5390	+16	63.8540	+ 8		+ 1.0768				
62.2630	+ 9	66.1430	+10		— 1.2061				
61.8810	+ 9	66.5200	+ 8		— 1.5855	— 1.5852			
61.5040	+ 9	66.9000	+ 8		— 1.9640				
60.6105	+14	67.7855	+18		— 2.8538				
60.2340	+14	68.1650	+18		— 3.2318	— 3.2306			
59.8560	+14	68.5360	+18		— 3.6062				
59.0210	+10	69.3760	+13		— 4.4437				
58.6515	+10	69.7445	+16		— 4.8128	— 4.8154			
58.2715	+ 5	70.1180	+16		— 5.1898				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.6450	+18	60.7270	+11		+ 4.1933	—0.5412						
65.9880	+10	62.3940	+10		+ 2.5310	—0.5333						
64.3750	+ 8	64.0080	+ 9		+ 0.9174	—0.5403	—0.5366	—0′.5330	—0′.0007	—0′.0001	+0′.0004	**—0′.5334**
61.3375	+10	67.0460	+ 9		— 2.1202	—0.5350						
59.6890	+14	68.6910	+14		— 3.7670	—0.5364						
58.1090	+ 5	70.2730	+17		— 5.3486	—0.5332						
67.7595	+18	60.6240	+11		+ 4.3020	—0.4325						
66.0930	+10	62.2870	+10		+ 2.6370	—0.4273						
64.4740	+ 8	63.9090	+ 9		+ 1.0164	[—0.4413]						
61.4360	+10	66.9470	+ 9		— 2.0215	—0.4363	—0.4358	—0.4329	—0.0005	0.0000	+0.0004	**—0.4330**
59.7880	+14	68.5995	+14		— 3.6718	—0.4412						
58.2025	+ 5	70.1830	+17		— 5.2569	—0.4415						
69.8220	+17	58.5590	+10		+ 6.3658	+1.6313						
68.1550	+19	60.2240	+16		+ 4.6996	+1.6353						
66.5420	+ 9	61.8420	+ 9		+ 3.0840	+1.6263						
63.5020	+10	64.8795	+16		+ 0.0449	+1.6301	+1.6295	+1.6187	+0.0020	—0.0005	+0.0004	**+1.6206**
61.8530	+10	66.5310	+ 8		— 1.6050	+1.6256						
60.2710	+15	68.1130	+18		— 3.1872	+1.6282						
66.4915	+11	61.8920	+11		+ 3.0337	—1.7008						
64.8250	+17	63.5580	+10		+ 1.3678	—1.6965						
63.2165	+10	65.1655	+18		— 0.2410	—1.6987						
60.1780	+15	68.2055	+20		— 3.2800	—1.6948	—1.6967	—1.6854	—0.0022	—0.0006	+0.0004	**—1.6878**
58.5350	+11	69.8515	+18		— 4.9246	—1.6940						
56.9470	+10	71.4360	+14		— 6.5108	—1.6954						

Scheinbare Decldiff: M— Centrum = + 3′.0035 $f^\circ_\delta = 0.99336$ $i^\circ_\delta = -0.00038$
N— » = + 3.4538
Q— » = —24.4342 f_δ = **0.99262** i_δ = **—0.00072** $\measuredangle\ i_\delta = -2'.5$
R— » = —24.4662
V— » = —19.2653 f'_δ = **0.99336** J_δ = **—0.00052**
W— » = +30.7338

$\delta_♃ = +12°\ 34'.6$

C. OPPOSITION 1898.

PULKOWAER CLICHÉS.

86. 1898. März 16.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.5700**		**65.8075**							
J	62.5691	+9	65.8065	+10	0	0.0000				2
I	83.6690	—7	44.7078	+18	—2	+21.0979				1—2
F	32.7880	+22	95.5875	+2	+8	—29.7792		12^h 19^m 30^s		2
K	87.0198	+1	41.3555	+30	—5	+24.4490				2
L	89.0198	+1	39.3528	+30	—6	+26.4502				2
♃ a_w	61.7820	+10	66.6110	+11		— 0.7958				
a_c	62.2200	+10	66.1840	+11		— 0.3633	— 0.3604	12 1 48		2—3
a_o	62.6525	+10	65.7340	+11		+ 0.0780				
♃ b_w	61.7610	+10	66.6345	+10		— 0.8180				
b_c	62.1940	+10	66.2100	+10		— 0.3892	— 0.3850	3 20		2
b_o	62.6275	+10	65.7605	+10		+ 0.0522				
♃ c_w	61.7685	+10	66.6170	+10		— 0.8055				
c_c	62.2115	+10	66.1860	+10		— 0.3685	— 0.3673	4 50		2
c_o	62.6505	+10	65.7435	+10		+ 0.0722			12^h 5^m 44^s	
♃ d_w	61.7480	+9	66.6425	+11		— 0.8286				
d_c	62.1935	+9	66.2060	+11		— 0.3876	— 0.3893	6 50		2—3
d_o	62.6275	+9	65.7685	+11		+ 0.0482				
♃ e_w	61.7720	+9	66.6165	+11		— 0.8036				
e_c	62.2225	+9	66.1900	+11		— 0.3651	— 0.3618	8 10		2—3
e_o	62.6600	+9	65.7310	+11		+ 0.0832				
♃ f_w	61.7695	+10	66.6200	+12		— 0.8066				
f_c	62.2175	+10	66.1845	+12		— 0.3648	— 0.3643	9 28		2—3
f_o	62.6535	+10	65.7340	+12		+ 0.0784				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	60.7420	+12	67.6405	+19		— 1.8308	—1.4704						2
b	60.7235	+11	67.6625	+18		— 1.8511	—1.4661						2—3
c	60.7505	+11	67.6315	+18		— 1.8221	—1.4548	—1.4589	—1′.4490	+0′.0010	+0′.0001	**—1′.4479**	2
d	60.7220	+10	67.6605	+19		— 1.8510	—1.4617						2
e	60.7610	+10	67.6250	+19		— 1.8137	—1.4519						2—3
f	60.7615	+11	67.6240	+19		— 1.8129	—1.4486						2—3 etwas elli
II *a*	63.6655	+9	64.7190	+16		+ 1.0916	+1.4520						2
b	63.6315	+9	64.7475	+16		+ 1.0604	+1.4454						2—3
c	63.6525	+9	64.7280	+16		+ 1.0806	+1.4479	+1.4371	+1.4273	—0 0009	+0.0001	**+1.4265**	2—3
d	63.6070	+8	64.7710	+17		+ 1.0363	+1.4256						2—3
e	63.6360	+8	64.7420	+17		+ 1.0653	+1.4271						3
f	63 6340	+9	64.7500	+18		+ 1.0603	+1.4246						3 etwas ellipt.
III *a*	63.6930	+9	64.6840	+16		+ 1.1229	+1.4833						2—3
b	63.6650	+9	64.7165	+16		+ 1.0926	+1.4776						2—3
c	63.6800	+9	64.6975	+16		+ 1.1096	+1.4769	+1.4697	+1.4597	—0.0007	+0.0001	**+1.4591**	2—3
d	63.6430	+8	64.7360	+17		+ 1.0718	+1.4611						2
e	63.6715	+8	64.7105	+17		+ 1.0988	+1.4606						2—3
f	63.6650	+9	64.7125	+18		+ 1.0946	+1.4589						2—3
IV *a*	57.2410	+11	71.1405	+13		— 5.3306	—4.9702						2
b	57.2190	+11	71.1625	+13		— 5.3532	—4.9682						2—3
c	57.2400	+10	71.1415	+12		— 5.3321	—4.9648	—4.9658	—4.9319	+0.0034	+0.0001	**—4.9284**	2
d	57.2150	+9	71.1690	+12		— 5.3584	—4.9691						2—3
e	57.2490	+9	71.1315	+13		— 5.3227	—4.9609						2—3
f	57.2460	+9	71.1355	+13		— 5.3262	—4.9619						2—3 etwas elli

Scheinbare Ædiff: *I*— Centrum = +23′.4017 $f^\circ_\alpha = 0.99318$ $-i^\circ_\alpha = +0.00177$

F— » = —33.0465

K— » = +27.2018 f_α = **0.99290** $-i_\alpha$ = **+0.00177** ∡ $i_\alpha = -$ 6′.1

L— » = +29.2335 *Refr.* = — 5

$Tx_♃$ = 0

$\alpha_♃ = 12^h\ 26^m.6$ f'_α = **0.99318** J_α = **+0.00172**

Trabant II und III berühren sich und es zeigt sich die schon einmal bemerkte Erscheinung, dass der kleinere gleicham durch d[…] grösseren verschoben wird, wodurch er ein verzerrtes Aussehen erhält. Beide Trabanten sind durch eine weisse Lücke von einan[…] getrennt, welche einen Kreisabschnitt des grösseren bildet, während sie vom kleineren ein Segment abschneidet.

1898. März 16.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.8897		**64.5168**							
63.8888	+ 9	64.5160	+ 8	0	0.0000		0.0000	0.0000	Bilder 3—4.
64.2445	+17	64.1668	+14	0	+ 0.3526		— 0.0317	+ 0.3209	
73.2798	+25	55.1170	+15	— 3	+ 9.3952		— 0.0635	+ 9.3317	
79.2015	+17	49.2072	+21	— 3	+15.3102		— 0.0432	+15.2670	
48.0372	+31	80.3722	+17	+ 4	—15.8528		— 0.0491	—15.9019	
69.0715	+14	59.3558	+14		+ 5.1714				
68.6610	+14	59.7670	+14		+ 4.7606	+ 4.7591			Bilder 3.
68.2395	+19	60.1762	+14		+ 4.3454				
67.5245	+ 9	60.8958	+10		+ 3.6278				
67.1210	+ 9	61.3176	+10		+ 3.2152	+ 3.2159			
66.7050	+ 9	61.7224	+ 9		+ 2.8048				
65.9370	+11	62.4815	+ 9		+ 2.0414				
65.5260	+11	62.9038	+ 9		+ 1.6248	+ 1.6258			
65.1060	+17	63.3116	+ 9		+ 1.6112				
62.8200	+10	65.5997	+10		— 1.0763				
62.4185	+10	66.0210	+10		— 1.4877	— 1.4895			
61.9935	+10	66.4294	+10		— 1.9044				
61.2410	+11	67.1768	+ 8		— 2.6542				
60.8335	+11	67.5902	+18		— 3.0652	— 3.0654			
60.4200	+11	68.0000	+18		— 3.4768				
59.6465	+15	68.7720	+13		— 4.2491				
59.2280	+11	69.1914	+13		— 4.6682	— 4.6644			
58.8240	+11	69.6027	+13		— 5.0759				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.2590	+14	59.1523	+10		+ 5.3671	+0.6080						
67.7140	+19	60.6964	+10		+ 3.8228	+0.6069						
66.1150	+11	62.2936	+ 9		+ 2.2244	+0.5986	+0.5989	+0'.5954	+0'.0024	0'.0000	0'.0000	**+0'.5978**
63.0080	+10	65.4058	+16		— 0.8856	+0.6039						
61.4200	+11	66.9930	+ 8		— 2.4728	+0.5926						
59.8200	+15	68.5892	+13		— 4.0810	+0.5834						
68.1400	+18	60.2676	+10		+ 4.2502	—0.5089						
66.6085	+ 8	61.8071	+ 9		+ 2.7142	—0.5017						
65.0175	+16	63.3973	+ 9		+ 1.1240	—0.5018	—0.4989	—0.4960	—0.0024	0.0000	0.0000	**—0.4984**
61.9090	+ 9	66.5070	+10		— 1.9855	—0.4960						
60.3355	+14	68.0836	+18		— 3.5607	—0.4953						
58.7420	+10	69.6764	+16		— 5.1540	—0.4896						
68.2345	+18	60.1734	+14		+ 4.3443	—0.4148						
66.6955	+ 8	61.7154	+ 9		+ 2.8036	—0.4123						
65.1110	+16	63.3081	+ 9		+ 1.2154	—0.4104	—0.4097	—0.4073	—0.0025	0.0000	0.0000	**—0.4098**
62.0010	+ 9	66.4148	+10		— 1.8934	—0.4039						
60.4190	+14	67.9915	+18		— 3.4729	—0.4075						
58.8230	+10	69.5972	+16		— 5.0738	—0.4094						
70.6090	+15	57.8016	+ 7		+ 6.7176	+1.9585						
69.0660	+16	59.3467	+12		+ 5.1734	+1.9575						
67.4700	+11	60.9406	+12		+ 3.5782	+1.9524	+1.9534	+1.9420	+0.0083	+0.0001	0.0000	**+1.9504**
64.3580	+11	64.0546	+10		+ 0.4653	+1.9548						
62.7740	+12	65.6362	+12		— 1.1176	+1.9478						
61.1760	+13	67.2334	+10		— 2.7150	+1.9494						

Scheinbare Decldiff: I—Centrum $= + 0'.2848$
F— » $= + 9.3177$
K— » $= +15.1243$
L— » $= -15.8407$

$\delta_♃ = - 1° \; 8'.4$

$f°_\delta = 0.99336$ $\quad i°_\delta = -0.00162$

$f_\delta = \mathbf{0.99296}$ $\quad i_\delta = \mathbf{-0.00162}$ $\quad \sphericalangle\, i_\delta = -5'.6$

$f'_\delta = \mathbf{0.99416}$ $\quad J_\delta = \mathbf{-0.00167}$

87. 1898. März 25.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.6190**		**64.7601**							
I	63.6182	+8	64.7585	+16	0	0.0000				2
J	84.7252	−2	43.6550	+19	−2	+21.1044				2
O	16.4765	+28	111.8740	+6	+32	−47.1239		**13^h 28^m ^{s}**		1—2
K	88.0652	−1	40.2665	+31	−5	+24.4678				1—2
L	90.0920	−1	38.3342	+29	−6	+26.4474				1—2
$♃ a_w$	63.1880	+10	65.1870	+17		−0.4243				
a_c	63.6130	+9	64.7680	+17		−0.0074	−0.0049	13 14 51		2
a_o	64.0325	+9	64.3390	+17		+0.4169				
$♃ b_w$	63.1860	+10	65.1995	+16		−0.4365				
b_c	63.6120	+9	64.7765	+16		−0.0120	−0.0131	16 10		1—2
b_o	64.0280	+9	64.3500	+16		+0.4092				
$♃ c_w$	63.1900	+10	65.1990	+16		−0.4342				
c_c	63.6070	+9	64.7880	+16		−0.0203	−0.0174	17 9		1—2
c_o	64.0260	+9	64.3615	+16		+0.4024			**13^h 17^m 43^s**	
$♃ d_w$	63.1980	+9	65.1970	+17		−0.4294				
d_c	63.6180	+8	64.7820	+17		−0.0119	−0.0112	18 23		2
d_o	64.0320	+8	64.3570	+17		+0.4076				
$♃ e_w$	63.2165	+9	65.1910	+17		−0.4171				
e_c	63.6280	+8	64.7815	+17		−0.0066	−0.0012	19 22		2
e_o	64.0515	+8	64.3515	+17		+0.4201				
$♃ f_w$	63.1985	+10	65.2000	+18		−0.4306				
f_c	63.6320	+9	64.7820	+18		−0.0049	−0.0053	20 21		2
f_o	64.0525	+9	64.3535	+18		+0.4196				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Bedeckt.												
II a	62.9745	+11	65.3920	+17		−0.6384	−0.6335						1—2
b	62.9765	+10	65.3945	+16		−0.6388	−0.6257						2
c	62.9875	+10	65.3900	+16		−0.6310	−0.6136	−0.6203	−0'.6160	+0'.0001	0'.0000	**−0'.6159**	2
d	62.9895	+9	65.3975	+17		−0.6338	−0.6226						2
e	63.0080	+9	65.3810	+17		−0.6164	−0.6152						2
f	63.0105	+10	65.3835	+18		−0.6164	−0.6111						2
III a	58.6750	+13	69.6830	+17		−4.9336	−4.9287						
b	58.6680	+12	69.6935	+17		−4.9424	−4.9293						
c	58.6735	+11	69.6925	+16		−4.9392	−4.9218						
d	58.6745	+10	69.7010	+16		−4.9430	−4.9318	−4.9289	−4.8950	+0.0028	0.0000	**−4.8922**	2
e	58.6880	+10	69.6935	+17		−4.9326	−4.9314						
f	58.6875	+10	69.6990	+17		−4.9356	−4.9303						
IV a	66.1735	+11	62.1960	+9		+2.5594	+2.5643						
b	66.1650	+11	62.2155	+9		+2.5454	+2.5585						
c	66.1695	+11	62.2140	+9		+2.5484	+2.5658						
d	66.1680	+10	62.2215	+10		+2.5438	+2.5550	+2.5578	+2.5402	−0.0009	0.0000	**+2.5393**	2
e	66.1775	+10	62.2175	+10		+2.5506	+2.5518						
f	66.1755	+11	62.2240	+11		+2.5462	+2.5515						

Scheinbare Ædiff: I—Centrum $= +23'.4021$ $\quad f^\circ_\alpha = 0.99311$ $\quad -i^\circ_\alpha = +0.00107$
O— » $= -52.3146$
K— » $= +27.2023$ $\quad f_\alpha = \mathbf{0.99282}$ $\quad -i_\alpha = \mathbf{+0.00106}$ $\quad \measuredangle\, i_\alpha = -\ 3'.6$
L— » $= +29.2340$ $\quad$ Refr. $= +\ 13$
$Tx_♃ =\ 0$
$\alpha_♃ = 12^h\ 22^m.4$ $\quad f'_\alpha = \mathbf{0.99312}$ $\quad J_\alpha = \mathbf{+0.00119}$

1898. März 25.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	(♃n+♃c+♃s)/3	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.8723**	mm/10000	mm **63.5116**	mm/10000	mm/10000	mm	mm	mm	mm	
63.8715	+ 8	64.5108	+ 8	0	0.0000		0.0000	0.0000	Bilder 2—3.
64.2425	+18	64.1388	+15	0	+ 0.3716		— 0.0317	+ 0.3399	
73.7510	+29	54.6270	+16	— 7	+ 9.8816		— 0.1595	+ 9.7221	
79.1958	+18	49.1798	+22	— 4	+15.3270		— 0.0432	+15.2838	
48.0350	+32	80.3452	+18	+ 4	—15.8344		— 0.0491	—15.8835	
69.0290	+13	59.3640	+14		+ 5.1521				
68.6320	+13	59.7700	+14		+ 4.7506	+ 4.7513			
68.2320	+18	60.1695	+14		+ 4.3511				
67.4400	+ 8	60.9540	+10		+ 3.5626				
67.0445	+ 8	61.3580	+10		+ 3.1628	+ 3.1646			
66.6485	+ 8	61.7510	+ 9		+ 2.7684				
65.8160	+10	62.5830	+ 9		+ 1.9362				
65.4190	+16	62.9820	+ 9		+ 1.5385	+ 1.5411			
65.0250	+16	63.3680	+ 9		+ 1.1485				
62.7320	+ 9	65.6650	+10		— 1.1469				
62.3430	+ 9	66.0585	+10		— 1.5382	— 1.5363			
61.9570	+ 9	66.4440	+10		— 1.9239				
61.1325	+10	67.2625	+ 8		— 2.7452				
60.7380	+10	67.6695	+18		— 3.1365	— 3.1406			
60.3400	+10	68.0590	+18		— 3.5402				
59.5040	+10	68.9010	+13		— 4.3790				
59.1030	+10	69.3010	+13		— 4.7795	— 4.7782			
58.7025	+10	69.6940	+13		— 5.1762				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
Bedeckt.												
68.7245	+14	59.6605	+14		+ 4.8516	+0.1003						
67.1350	+ 9	61.2520	+10		+ 3.2611	+0.0965						
65.5095	+17	62.8765	+ 9		+ 1.6366	+0.0955	+0.0937	+0.'0932	+0.'0015	0.'0000	0.'0000	**+0.'0947**
62.4315	+10	65.9565	+10		— 1.4428	+0.0935						
60.8185	+11	67.5660	+18		— 3.0544	+0.0862						
59.1855	+11	69.2005	+13		— 4.6880	+0.0902						
70.9995	+14	57.3810	+10		+ 7.1291	+2.3778						
69.4135	+15	58.8710	+11		+ 5.5411	+2.3765						
67.7895	+20	60.5930	+11		+ 3.9184	+2.3773	+2.3770	+2.3631	+0.0118	0.0000	0.0000	**+2.3749**
64.7150	+18	63.6680	+ 9		+ 0.8436	+2.3799						
63.1040	+11	65.2775	+17		— 0.7674	+2.3732						
61.4705	+12	66.9120	+ 9		— 2.4010	+2.3772						
67.8400	+18	60.5440	+11		+ 3.9680	—0.7833						
66.2560	+10	62.1325	+10		+ 2.3814	—0.7832						
64.6350	+16	63.7520	+ 9		+ 0.7610	—0.7801	—0.7815	—0.7768	—0.0061	0.0000	0.0000	**—0.7829**
61.5595	+ 9	66.8295	+ 9		— 2.3154	—0.7791						
59.9490	+14	68.4380	+19		— 3.9251	—0.7845						
58.3150	+ 5	70.0670	+17		— 5.5570	—0.7788						

Scheinbare Decldiff: *I*—Centrum = + 0.'2848 $f^\circ_\delta = 0.99336$ $i^\circ_\delta = -0.00246$

O— » = + 9.7699

K— » = +15.1245 f_δ = **0.99294** i_δ = **—0.00252** $\measuredangle\, i_\delta = -8.'7$

L— » = —15.8406 f'_δ = **0.99415** J_δ = **—0.00239**

$\delta_{♃} = -0^\circ\ 40.'6$

88. 1898. März 26.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	63.6670		64.7116							
J	63.6662	+ 8	64.7100	+16	0	0.0000				1—2
I	84.7735	— 2	43.6082	+19	— 2	+21.1037				1—2
O	16.5298	+29	101.8498	+ 6	+32	—47.1334		$11^h\ 56^m\ 51^s$		2 ellipt.
K	88.1122	— 1	40.2650	+31	— 5	+24.4438				2
L	90.1362	— 1	38.2458	+29	— 6	+26.4654				1
$♃\,a_w$	63.2445	+10	65.1535	+17		— 0.4326				
a_c	63.6740	+ 9	64.7305	+17		— 0.0064	— 0.0064	11 44 41		2—3
a_o	64.0990	+ 9	64.3040	+ 9		+ 0.4198				
$♃\,b_w$	63.2590	+10	65.1360	+16		— 0.4165				
b_c	63.6840	+ 9	64.7095	+16		+ 0.0092	+ 0.0101	45 55		2
b_o	64.1165	+ 9	64.2860	+ 8		+ 0.4376				
$♃\,c_w$	63.2595	+10	65.1360	+16		— 0.4162				
c_c	63.6860	+ 9	64.7090	+16		+ 0.0104	+ 0.0055	47 22		2—3
c_o	64.1005	+ 9	64.3005	+ 8		+ 0.4224			$11^h\ 47^m\ 58^s$	
$♃\,d_w$	63.2610	+ 9	65.1340	+17		— 0.4146				
d_c	63.6810	+ 8	64.7190	+17		+ 0.0028	+ 0.0058	48 42		2
d_o	64.1080	+ 8	64.2940	+ 9		+ 0.4292				
$♃\,e_w$	63.2805	+ 9	65.1125	+17		— 0.3941				
e_c	63.7055	+ 8	64.7065	+17		+ 0.0214	+ 0.0229	49 58		1—2
e_o	64.1185	+ 8	64.2800	+ 9		+ 0.4415				
$♃\,f_w$	63.2770	+10	65.1190	+18		— 0.3991				
f_c	63.7040	+ 9	64.7010	+18		+ 0.0234	+ 0.0207	51 11		2
f_o	64.1240	+ 9	64.2930	+10		+ 0.4378				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I	Geht durch die Jupiterscheibe.												
II a	66.7760	+ 9	61.6090	+ 9		+ 3.1058	+3.1122						2—3
b	66.7900	+ 9	61.5945	+ 9		+ 3.1200	+3.1099						2
c	66.7880	+ 8	61.5965	+ 9		+ 3.1180	+3.1125	+3.1138	+3'.0926	—0'.0035	0'.0000	+3'.0891	1—2
d	66.7895	+ 8	61.5925	+10		+ 3.1207	+3.1149						2
e	66.8055	+ 9	61.5770	+10		+ 3.1365	+3.1136						1—2
f	66.8095	+ 9	61.5735	+11		+ 3.1402	+3.1195						2
III a	59.5450	+16	68.8370	+14		— 4.1236	—4.1172						2
b	59.5580	+15	68.8210	+14		— 4.1092	—4.1193						2
c	59.5565	+15	68.8225	+13		— 4.1106	—4.1161						2
d	59.5635	+14	68.8175	+13		— 4.1046	—4.1104	—4.1133	—4.0852	+0.0041	0.0000	—4.0811	1—2
e	59.5790	+14	68.8015	+14		— 4.0890	—4.1119						1—2
f	59.5835	+14	68.7960	+14		— 4.0840	—4.1047						1—2
IV a	63.1210	+11	65.2620	+17		— 0.5485	—0.5421						2—3
b	63.1315	+10	65.2560	+16		— 0.5402	—0.5503						2
c	63.1250	+10	65.2640	+16		— 0.5475	—0.5530						2
d	63.1250	+ 9	65.2595	+17		— 0.5454	—0.5512	—0.5514	—0.5476	+0.0016	0.0000	—0.5460	2
e	63.1370	+ 9	65.2480	+17		— 0.5336	—0.5565						2
f	63.1355	+ 9	65.2480	+17		— 0.5344	—0.5551						1—2

Scheinbare Ædiff: I—Centrum $= +23'.4021$ $\quad f^\circ_\alpha = 0.99317 \quad -i^\circ_\alpha = +0.00242$
O— » $= -52.3146$
K— » $= +27.2024$ $\quad f_\alpha = \mathbf{0.99289} \quad -i_\alpha = \mathbf{+0.00242} \quad ∡\ i_\alpha = -8'.3$
L— » $= +29.2341$ $\quad$ Refr. $= -\ 8$
$Tx_♃ = 0$
$\alpha_♃ = 12^h\ 21^m.9 \quad f'_\alpha = \mathbf{0.99318} \quad J_\alpha = \mathbf{+0.00234}$

1898. März 26.

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Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta \sin 1'$	$y-\frac{x^2}{2}\,tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 63.9368	$\frac{mm}{10000}$	mm 64.4450	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
63.9360	+ 8	64.4442	+ 8	0	0.0000		0.0000	0.0000	Bilder 2.
64.3075	+18	64.0740	+15	0	+ 0.3710		— 0.0317	+ 0.3393	
73.8195	+29	54.5565	+16	+ 4	+ 9.8856		— 0.1595	+ 9.7261	
79.2602	+18	49.1140	+22	— 4	+15.3266		— 0.0432	+15.2834	
48.0970	+32	80.2800	+18	— 7	—15.8363		— 0.0491	—15.8854	
69.1210	+13	59.2770	+10		+ 5.1762				
68.7190	+13	59.6830	+14		+ 4.7720	+ 4.7705			
68.3090	+18	60.0910	+14		+ 4.3633				
67.5160	+ 8	60.8760	+10		+ 3.5740				
67.1160	+ 8	61.2840	+10		+ 3.1700	+ 3.1744			
66.7145	+ 8	61.6840	+ 9		+ 2.7793				
65.9420	+10	62.4550	+ 9		+ 1.9976				
65.5375	+10	62.8575	+ 9		+ 1.5942	+ 1.5982			
65.1460	+16	63.2495	+ 9		+ 1.2027				
62.8050	+ 9	65.5925	+10		— 1.1397				
62.4055	+ 9	66.0005	+10		— 1.5434	— 1.5405			
62.0070	+ 9	66.3920	+10		— 1.9384				
61.2400	+10	67.1600	+ 8		— 2.7058				
60.8460	+10	67.5500	+18		— 3.0983	— 3.0986			
60.4530	+10	67.9440	+18		— 3.4918				
59.6755	+14	68.7190	+13		— 4.2676				
59.2755	+10	69.1190	+13		— 4.6678	— 4.6641			
58.8890	+10	69.5105	+13		— 5.0568				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht du	rch	die Jupiter	sche	ibe.								
67.2115	+ 8	61.1750	+11		+ 3.2722	—1.4983						
65.6135	+10	62.7720	+10		+ 1.6748	—1.4996						
64.0345	+ 8	64.3510	+ 9		+ 0.0958	—1.5024	—1.4998	—1'.4909	—0'.0077	0'.0000	0'.0000	**—1'.4986**
60.8960	+10	67.4865	+ 9		— 3.0411	—1.5006						
59.3395	+10	69.0460	+14		— 4.5994	—1.5008						
57.7770	+ 5	70.6070	+13		— 6.1613	—1.4972						
70.4775	+18	57.9070	+ 6		+ 6.5400	+1.7695						
68.8770	+15	59.5055	+11		+ 4.9400	+1.7656						
67.2970	+10	61.0890	+11		+ 3.3580	+1.7598	+1.7651	+1.7546	+0.0102	0.0000	0.0000	**+1.7648**
64.1625	+10	64.2190	+ 9		+ 0.2259	+1.7664						
62.6030	+11	65.7800	+11		— 1.3344	+1.7642						
61.0375	+12	67.3445	+ 9		— 2.8992	+1.7649						
69.3900	+14	58.9940	+10		+ 5.4523	+0.6818						
67.7910	+19	60.5935	+10		+ 3.8533	+0.6789						
66.2210	+11	62.1675	+ 9		+ 2.2810	+0.6828	+0.6860	+0.6820	+0.0014	0.0000	0.0000	**+0.6834**
63.0865	+10	65.2960	+16		— 0.8510	+0.6895						
61.5310	+11	66.8595	+ 8		— 2.4100	+0.6886						
59.9695	+15	68.4170	+18		— 3.9698	+0.6943						

Scheinbare Decldiff: I— Centrum $= +\ 0'.2848$ $\quad f^\circ_\delta = 0.99332 \quad i^\circ_\delta = -0.00241$

O— » $= +\ 9.7699$

K— » $= +15.1245$ $\quad f_\delta = \mathbf{0.99292} \quad i_\delta = \mathbf{-0.00239} \quad \measuredangle\, i_\delta = -8'.2$

L— » $= -15.8406$ $\quad f'_\delta = \mathbf{0.99410} \quad J_\delta = \mathbf{-0.00247}$

$\delta_♃ = -0^\circ\ 37'.7$

89. **1898. März 27.**

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.5228**		**63.8529**							
I	64.5220	+ 8	63.8520	+ 9	0	0.0000				2
J	85.6302	— 3	42.7488	+21	— 2	+21.1044				2
O	17.3802	+28	110.9922	+ 6	+32	—47.1366		**12ʰ 41ᵐ 3ˢ**		2 etwas ellipt.
K	88.9740	— 2	39.3960	+30	— 5	+24.4520				2
L	90.9842	0	37.3945	+28	— 6	+26.4579				2
♃ a_w	64.1130	+ 9	64.2825	+ 8		— 0.4196				
a_c	64.5520	+17	63.8340	+ 8		+ 0.0245	+ 0.0243	12 31 53		2—3
a_o	64.9960	+17	63.3910	+ 8		+ 0.4680				
♃ b_w	64.1655	+17	64.2360	+ 8		— 0.3698				
b_c	64.5965	+17	63.8020	+ 8		+ 0.0628	+ 0.0588	33 3		2—3
b_o	65.0150	+17	63.3790	+ 8		+ 0.4835				
♃ c_w	64.1585	+ 9	64.2435	+ 8		— 0.3774				
c_c	64.5840	+17	63.8170	+ 8		+ 0.0490	+ 0.0478	34 6		2
c_o	65.0030	+17	63.3905	+ 8		+ 0.4718			**12ʰ 34ᵐ 38ˢ**	
♃ d_w	64.1700	+ 8	64.2245	+ 9		— 0.3622				
d_c	64.5935	+16	63.8035	+ 9		+ 0.0604	+ 0.0585	35 10		2
d_o	65.0095	+16	63.3860	+ 9		+ 0.4772				
♃ e_w	64.1690	+ 8	64.2250	+ 9		— 0.3630				
e_c	64.5930	+16	63.8050	+ 9		+ 0.0594	+ 0.0595	36 12		2
e_o	65.0140	+16	63.3805	+ 9		+ 0.4822				
♃ f_w	64.1815	+ 9	64.2130	+10		— 0.3508				
f_c	64.6165	+17	63.7930	+10		+ 0.0772	+ 0.0747	37 23		
f_o	65.0310	+17	63.3665	+10		+ 0.4976				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	65.5575	+11	62.8255	+ 9		+ 1.0312	+1.0069						3
b	65.5990	+11	62.7900	+ 9		+ 1.0696	+1.0108						2—3
c	65.5895	+11	62.7950	+ 9		+ 1.0624	+1.0146	+1.0174	+1.'0103	—0.'0011	0.'0000	**+1.'0092**	2
d	65.6050	+10	62.7785	+10		+ 1.0783	+1.0198						2
e	65.6110	+10	62.7750	+10		+ 1.0830	+1.0235						2
f	65.6290	+11	62.7515	+11		+ 1.1038	+1.0291						2—3 etwas el
II a	64.0935	+ 9	64.2860	+ 9		— 0.4312	—0.4555						2—3
b	64.1235	+ 9	64.2595	+ 8		— 0.4029	—0.4617						2—3
c	64.1090	+ 9	64.2745	+ 8		— 0.4176	—0.4754	—0.4689	—0.4656	+0.0008	0.0000	**—0.4648**	2
d	64.1140	+ 8	64.2660	+ 9		— 0.4110	—0.4695						2
e	64.1075	+ 8	64.2710	+ 9		— 0.4168	—0.4763						2
f	64.1235	+ 9	64.2540	+10		— 0.4002	—0.4749						2 etwas ellipt
III	Bedeckt.												
IV a	60.6800	+12	67.7030	+19		— 3.8468	—3.8711						3
b	60.7100	+11	67.6715	+18		— 3.8160	—3.8748						3
c	60.6975	+11	67.6850	+18		— 3.8290	—3.8768	—3.8770	—3.8501	+0.0042	0.0000	**—3.8459**	2—3
d	60.7070	+10	67.6720	+18		— 3.8178	—3.8763						2
e	60.7030	+10	67.6770	+19		— 3.8223	—3.8818						2
f	60.7210	+10	67.6635	+19		— 3.8066	—3.8813						2 etwas ellipt

Scheinbare Ædiff: I— Centrum $= +23.'4021$ $\quad f^\circ_\alpha = 0.99304 \quad -i^\circ_\alpha = +0.00192$

O— » $= -52.3146$

K— » $= +27.2024$ $\quad f_\alpha = \mathbf{0.99276} \quad -i_\alpha = \mathbf{+0.00192} \quad ♃\ i_\alpha = -6.'6$

L— » $= +29.2341$ $\quad Refr. = +3$

$Tx_♃ = 0$

$\alpha_♃ = 12^h\ 21^m.4 \quad f'_\alpha = \mathbf{0.99304} \quad J_\alpha = \mathbf{+0.00195}$

1898. März 27.

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Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
63.5508		**64.8261**							
63.5500	+ 8	64.8245	+16	0	0.0000		0.0000	0.0000	Bilder 3.
63.9105	+18	64.4670	+15	0	+ 0.3596		— 0.0317	+ 0.3279	
73.4590	+30	54.9145	+16	— 7	+ 9.9099		— 0.1595	+ 9.7504	
78.8662	+18	49.5060	+23	— 4	+15.3171		— 0.0432	+15.2739	
47.7018	+32	80.6745	+25	+ 4	—15.8480		— 0.0491	—15.8971	
68.7840	+13	59.6100	+14		+ 5.2246				
68.3615	+18	60.0255	+14		+ 4.8058	+ 4.8056			
67.9440	+18	60.4470	+14		+ 4.3864				
67.1505	+ 8	61.2460	+ 9		+ 3.5898				
66.7345	+ 8	61.6650	+ 9		+ 3.1724	+ 3.1760			
66.3245	+ 8	62.0680	+ 9		+ 2.7658				
65.5750	+16	62.8205	+ 9		+ 2.0152				
65.1760	+16	63.2270	+ 9		+ 1.6125	+ 1.6126			
64.7700	+16	63.6260	+ 9		+ 1.2100				
62.4230	+ 9	65.9780	+10		— 1.1399				
62.0230	+ 9	66.3760	+10		— 1.5389	— 1.5379			
61.6280	+ 9	66.7735	+ 8		— 1.9350				
60.8560	+10	67.5410	+18		— 2.7052				
60.4620	+14	67.9410	+18		— 3.1020	— 3.1041			
60.0560	+14	68.3410	+18		— 3.5050				
59.2910	+10	69.1040	+16		— 4.2692				
58.8905	+10	69.5160	+16		— 4.6754	— 4.6714			
58.4910	+10	69.9050	+16		— 5.0696				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.7920	+18	60.5940	+11		+ 4.2370	—0.5686						
66.1655	+10	62.2190	+10		+ 2.6109	—0.5651						
64.5980	+16	63.7870	+ 9		+ 1.0435	—0.5691	—0.5687	—0.′5653	—0.′0020	0.′0000	0.′0000	**—0.′5673**
61.4480	+10	66.9345	+ 9		— 2.1060	—0.5681						
59.8770	+14	68.5055	+19		— 3.6768	—0.5727						
58.3150	+ 5	70.0695	+17		— 5.2402	—0.5688						
68.7740	+13	59.6070	+14		+ 5.2211	+0.4155						
67.1545	+ 8	61.2300	+10		+ 3.5998	+0.4238						
65.5895	+10	62.7945	+ 9		+ 2.0352	+0.4226	+0.4252	+0.4227	+0.0009	0.0000	0.0000	**+0.4236**
62.4430	+ 9	65.9380	+10		— 1.1099	+0.4280						
60.8770	+10	67.5045	+ 8		— 2.6760	+0.4281						
59.3160	+10	69.0675	+13		— 4.2382	+0.4332						
Bedeckt.												
70.5570	+13	57.8325	+ 5		+ 7.0003	+2.1947						
68.9360	+14	59.4525	+10		+ 5.3796	+2.2036						
67.3660	+ 9	61.0190	+10		+ 3.8111	+2.1985	+2.2027	+2.1895	+0.0072	0.0000	0.0000	**+2.1967**
64.2220	+ 9	64.1615	+ 8		+ 0.6680	+2.2059						
62.6550	+10	65.7270	+10		— 0.8984	+2.2057						
61.0900	+11	67.2930	+ 8		— 2.4637	+2.2077						

Scheinbare Decldiff: *I*—Centrum = + 0.′2848 $f^\circ_\delta = 0.99329$ $i^\circ_\delta = -0.00188$

O— » = + 9.7699

K— » = +15.1245 f_δ = **0.99288** i_δ = **—0.00190** $\measuredangle\, i_\delta = -6.'5$

L— » = —15.8406

f'_δ = **0.99404** J_δ = **—0.00187**

$\delta_♃ = -0^\circ\ 34.'6$

90. **1898. April 11.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.2594**		**65.1129**							
J	63.2585	+ 9	65.1112	+17	0	0.0000				2
I	84.3768	− 7	44.0048	+19	− 2	+21.1112				1—2
O	16.1138	+28	112.2602	+ 6	+32	−47.1432		**11^h 34^m ^{s}**		1—2 ellipt.
K	87.7195	− 1	40.6522	+30	− 5	+24.4584				1—2
L	89.7320	− 1	38.6468	+30	− 6	+26.4672				2
♃ a_w	63.2190	+10	65.1670	+16		− 0.0476				
a_c	63.6475	+ 9	64.7465	+16		+ 0.3769	+ 0.3758	11 19 9		2
a_o	64.0720	+ 9	64.3295	+ 8		+ 0.7980				
♃ b_w	63.2260	+10	65.1645	+16		− 0.0428				
b_c	63.6565	+ 9	64.7375	+16		+ 0.3859	+ 0.3840	20 26		1—2
b_o	64.0840	+ 9	64.3200	+ 8		+ 0.8088				
♃ c_w	63.2310	+10	65.1645	+16		− 0.0403				
c_c	63.6470	+ 9	64.7465	+16		+ 0.3766	+ 0.3818	21 28		2
c_o	64.0790	+ 9	64.3145	+ 8		+ 0.8090			**11^h 22^m 13^s**	
♃ d_w	63.2225	+ 9	65.1695	+17		− 0.0472				
d_c	63.6495	+ 8	64.7445	+17		+ 0.3788	+ 0.3795	22 50		2 Höcker am
d_o	64.0800	+ 8	64.3195	+ 9		+ 0.8070				
♃ e_w	63.2185	+ 9	65.1780	+17		− 0.0534				
e_c	63.6410	+ 8	64.7640	+17		+ 0.3648	+ 0.3656	24 8		2
e_o	64.0550	+ 8	64.3375	+ 9		+ 0.7854				
♃ f_w	63.2125	+10	65.1825	+18		− 0.0586				
f_o	63.6480	+ 9	64.7585	+18		+ 0.3710	+ 0.3700	25 19		2
f_c	64.0690	+ 9	64.3270	+10		+ 0.7977				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I	Geht du	rch	die Jupiter	sche	ibe.								
II a	60.5475	+12	67.8325	+19		− 2.7161	−3.0919						1—2
b	60.5505	+11	67.8290	+18		− 2.7128	−3.0968						1—2
c	60.5495	+11	67.8320	+18		− 2.7148	−3.0966	−3.0980	−3'0759	+0'0029	−0'0003	**−3'0733**	2
d	60.5435	+10	67.8380	+19		− 2.7210	−3.1005						1—2
e	60.5300	+10	67.8505	+19		− 2.7340	−3.0996						1—2
f	60.5305	+10	67.8480	+19		− 2.7324	−3.1024						2
III a	66.0545	+11	62.3240	+ 9		+ 2.7921	+2.4163						1
b	66.0615	+10	62.3185	+ 9		+ 2.7983	+2.4143						1—2
c	66.0655	+10	62.3140	+ 9		+ 2.8026	+2.4208						1—2
d	66.0635	+10	62.3175	+10		+ 2.7998	+2.4203	+2.4203	+2.4031	−0.0026	−0.0003	**+2.4002**	2
e	66.0555	+11	62.3285	+11		+ 2.7902	+2.4246						1—2
f	66.0605	+11	62.3230	+12		+ 2.7954	+2.4254						1—2
IV a	65.2730	+17	63.1060	+ 9		+ 2.0106	+1.6348						2
b	65.2780	+17	63.1050	+ 9		+ 2.0136	+1.6296						2
c	65.2745	+16	63.1075	+ 9		+ 2.0106	+1.6288						2
d	65.2635	+16	63.1150	+10		+ 2.0013	+1.6218	+1.6252	+1.6136	−0.0007	−0.0003	**+1.6126**	2
e	65.2510	+16	63.1320	+10		+ 1.9866	+1.6210						2
f	65.2490	+17	63.1325	+11		+ 1.9853	+1.6153						1—2

Scheinbare Ædiff: I—Centrum = +23'4028 $f^\circ_\alpha = 0.99287$ $-i^\circ_\alpha = +0.00201$
O— » = −52.3147
K— » = +27.2032 f_α = **0.99258** $-i_\alpha$ = **+0.00202** ∢ $i_\alpha = -$ 6'9
L— » = +29.2350 *Refr.* = − 11
$Tx_♃$ = 0
$\alpha_♃ = 12^h$ $14^m.6$ f'_α = **0.99288** J_α = **+0.00191**

1898. April 11.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\,\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\,\sin 1'$	Bemerkungen zur Aufnahme.
mm **63.4018**	mm/10000	mm **64.9766**	mm/10000	mm/10000	mm	mm	mm	mm	
63.4008	+10	64.9750	+16	0	0.0000		0.0000	0.0000	Bilder 2.
63.7632	+17	64.6138	+23	0	+ 0.3618		− 0.0317	+ 0.3301	
73.3040	+30	65.0755	+16	− 7	+ 9.9016		− 0.1595	+ 9.7421	
78.7230	+17	49.6500	+13	− 4	+15.3237		− 0.0432	+15.2805	
47.5515	+32	80.8248	+24	+ 4	−15.8484		− 0.0491	−15.8975	
68.5750	+18	59.8230	+14		+ 5.1636				
68.1690	+18	60.2260	+14		+ 4.7591	+ 4.7588			Bilder 2—3. Der Schatten eines Trabanten ist am NW-Rande der Jupiterscheibe sichtbar.
67.7610	+18	60.6290	+10		+ 4.3538				
66.9900	+ 8	61.4130	+ 9		+ 3.5758				
66.5845	+ 8	61.8170	+ 9		+ 3.1701	+ 3.1727			
66.1805	+10	62.2120	+ 9		+ 2.7722				
65.4070	+16	62.9895	+ 9		+ 1.9965				
65.0070	+16	63.3900	+ 9		+ 1.5962	+ 1.5963			
64.6080	+16	63.7910	+ 8		+ 1.1963				
62.2645	+ 9	66.1310	+10		− 1.1459				
61.8600	+ 9	66.5405	+ 8		− 1.5528	− 1.5505			
61.4615	+ 9	66.9420	+ 8		− 1.9528				
60.6730	+10	67.7270	+18		− 2.7400				
60.2680	+14	68.1255	+18		− 3.1416	− 3.1408			
59.8740	+14	68.5300	+18		− 3.5408				
59.1480	+10	69.2490	+13		− 4.2632				
58.7350	+10	69.6550	+16		− 4.6729	− 4.6708			
58.3390	+10	70.0660	+16		− 5.0764				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t-y_♃$	Mittel.	$f'_\delta\,(y_t-y_♃)$	$J_\delta\,(x_t-x_♃)$	$-(x_t^2-x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
Geht du	rch	die Jupiter	sche	ibe.								
69.6580	+17	58.7230	+10		+ 6.2552	+1.4964						
68.0820	+19	60.3050	+14		+ 4.6762	+1.5035						
66.5050	+11	61.8830	+ 9		+ 3.0985	+1.5022	+1.5023	+1'.4930	+0'.0066	0'.0000	0'.0000	**+1'.4996**
63.3550	+10	65.0320	+16		− 0.0514	+1.4991						
61.7700	+10	66.6155	+ 8		− 1.6352	+1.5056						
60.2410	+11	68.1430	+18		− 3.1640	+1.5068						
66.7740	+ 8	61.6065	+10		+ 3.3710	−1.3878						
65.1955	+16	63.1830	+10		+ 1.7940	−1.3787						
63.6170	+ 8	64.7640	+17		+ 0.2134	−1.3829	−1.3850	−1.3764	−0.0052	0.0000	0.0000	**−1.3816**
60.4650	+14	67.9120	+19		− 2.9364	−1.3859						
58.8760	+10	69.5060	+14		− 4.5278	−1.3870						
57.3440	+ 9	71.0360	+13		− 6.0588	−1.3880						
67.7975	+18	60.5870	+11		+ 4.3930	−0.3658						
66.2200	+10	62.1625	+10		+ 2.8162	−0.3565						
64.6410	+16	63.7420	+ 9		+ 1.2368	−0.3595	−0.3580	−0.3558	−0.0034	0.0000	0.0000	**−0.3592**
61.4965	+10	66.8890	+ 9		− 1.9088	−0.3583						
59.9065	+14	68.4745	+19		− 3.4968	−0.3560						
58.3820	+ 5	70.0015	+17		− 5.0230	−0.3522						

Scheinbare Decldiff: I—Centrum $= +\ 0'.2847$ $\quad f^\circ_\delta = 0.99307 \quad i^\circ_\delta = -0.00205$

O— » $= +\ 9.7702$

K— » $= +15.1248$ $\quad f_\delta = \mathbf{0.99266} \quad i_\delta = \mathbf{-0.00201} \quad \measuredangle\, i_\delta = -\ 6'.9$

L— » $= -15.8412$

$f'_\delta = \mathbf{0.99381} \quad J_\delta = \mathbf{-0.00212}$

$\delta_♃ = +0^\circ\ 8'.9$

91. 1898. April 14.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.1088**		**64.2656**							
J	64.1080	+ 8	64.2648	+ 8	0	0.0000				2
I	85.2208	— 2	43.1585	+21	— 2	+21.1082				2
O	16.9640	+28	111.4095	+ 6	+32	—47.1400		12^h 15^m 19^s		1—2 ellipt.
K	88.5630	— 2	39.8075	+31	— 5	+24.4540				1—2
L	90.5810	0	37.7995	+29	— 6	+26.4671				2
♃ a_w	63.6635	+ 9	64.7305	+17		— 0.4505				
a_c	64.0805	+ 9	64.3210	+ 9		— 0.0418	— 0.0351	12 1 49		2—3
a_o	64.5070	+ 9	63.8900	+ 9		+ 0.3869				
♃ b_w	63.6690	+ 9	64.7200	+16		— 0.4474				
b_c	64.0970	+ 9	64.2925	+ 8		— 0.0193	— 0.0202	2 58		3
b_o	64.5260	+ 9	63.8705	+ 8		+ 0.4062				
♃ c_w	63.6650	+ 9	64.7190	+16		— 0.4490				
c_c	64.0925	+ 9	64.3065	+ 8		— 0.0286	— 0.0252	4 0		2—3
c_o	64.5220	+ 9	63.8750	+ 8		+ 0.4020			12^h 4^m 52^s	
♃ d_w	63.6525	+ 8	64.7405	+17		— 0.4660				
d_c	64.0780	+ 8	64.3125	+ 9		— 0.0389	— 0.0394	5 23		2—3
d_o	64.5045	+ 8	63.8880	+ 9		+ 0.3866				
♃ e_w	63.6805	+ 8	64.7170	+17		— 0.4403				
e_c	64.1000	+ 8	64.3000	+ 9		— 0.0216	— 0.0172	6 50		3
e_o	64.5285	+ 8	63.8645	+ 9		+ 0.4104				
♃ f_w	63.6850	+ 9	64.7130	+17		— 0.4360				
f_c	64.1065	+ 9	64.2895	+ 9		— 0.0131	— 0.0116	8 9		3—4
f_o	64.5350	+ 9	63.8630	+ 9		+ 0.4144				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder
							mm	mm					
I a	66.0120	+11	62.3695	+ 9		+ 1.8998	+1.9349						2—3
b	66.0340	+11	62.3475	+ 9		+ 1.9218	+1.9420						2—3
c	66.0295	+10	62.3540	+ 9		+ 1.9162	+1.9414	+1.9422	+1′.9286	—0′.0020	—0′.0004	**+1′.9262**	2—3
d	66.0185	+10	62.3650	+10		+ 1.9052	+1.9446						2
e	66.0430	+10	62.3420	+10		+ 1.9289	+1.9461						2—3
f	66.0445	+11	62.3365	+11		+ 1.9324	+1.9440						2—3
II a	62.5875	+11	65.7915	+11		— 1.5236	—1.4885						1—2
b	62.6055	+10	65.7760	+10		— 1.5068	—1.4866						2
c	62.5935	+10	65.7860	+10		— 1.5178	—1.4926	—1.4947	—1.4842	+0.0019	—0.0004	**—1.4827**	2
d	62.5790	+ 9	65.8015	+11		— 1.5330	—1.4936						2
e	62.5935	+ 9	65.7850	+11		— 1.5174	—1.5002						1—2
f	62.5925	+ 9	65.7860	+11		— 1.5184	—1.5068						2
III	Geht durch die Jupiterscheibe; als Vorsprung am NW-rande erkennbar.												
IV a	56.9010	+11	71.4785	+14		— 7.2105	—7.1754						
b	56.9205	+10	71.4600	+13		— 7.1915	—7.1713						
c	56.9145	+10	71.4685	+13		— 7.1988	—7.1736	—7.1747	—7.1243	+0.0076	—0.0004	**—7.1171**	2
d	56.9000	+10	71.4805	+12		— 7.2120	—7.1726						
e	56.9200	+ 9	71.4615	+12		— 7.1925	—7.1753						
f	56.9210	+ 9	71.4610	+13		— 7.1918	—7.1802						

Scheinbare Ædiff: I—Centrum $= +23'.4029$ $f^\circ_\alpha = 0.99298$ $-i^\circ_\alpha = +0.00214$

O— » $= -52.3148$

K— » $= +27.2033$ $f_\alpha = \mathbf{0.99270}$ $-i_\alpha = \mathbf{+0.00214}$ $\measuredangle\, i_\alpha = -7'.4$

L— » $= -29.2352$ Refr. $= -2$

$Tx_♃ = 0$

$\alpha_♃ = 12^h\ 13^m.3$ $f'_\alpha = \mathbf{0.99298}$ $J_\alpha = \mathbf{+0.00212}$

1898. April 14.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 63.7518	mm/10000	mm 64.6236	mm/10000	mm/10000	mm	mm	mm	mm	
63.7510	+ 8	64.6220	+16	0	0.0000		0.0000	0.0000	Bilder 2.
64.1192	+18	64.2612	+15	0	+ 0.3650		− 0.0317	+ 0.3333	
73.6525	+29	54.7278	+16	− 7	+ 9.8982		− 0.1595	+ 9.7387	
79.0735	+18	49.2965	+22	− 4	+15.3238		− 0.0432	+15.2806	
47.9080	+32	80.4715	+18	+ 4	−15.8448		− 0.0491	−15.8939	
68.9510	+13	59.4380	+14		+ 5.1924				Um $11^h 59^m$ tritt ein Trabant am SW-Rande aus; auf der Scheibe ist sein Schatten sichtbar.
68.5420	+13	59.8515	+14		+ 4.7811	+ 4.7830			
68.1390	+18	60.2600	+14		+ 4.3756				
67.3770	+ 8	61.0170	+10		+ 3.6158				
66.9670	+ 8	61.4330	+10		+ 3.2028	+ 3.2047			
66.5570	+ 8	61.8380	+ 9		+ 2.7954				
65.7960	+10	62.6050	+ 9		+ 2.0314				
65.3870	+16	63.0140	+ 9		+ 1.6228	+ 1.6221			
64.9715	+16	63.4195	+ 9		+ 1.2122				
62.6520	+ 9	65.7400	+10		− 1.1082				
62.2550	+ 9	66.1450	+10		− 1.5092	− 1.5102			
61.8515	+ 9	66.5495	+10		− 1.9132				
61.0895	+10	67.3135	+18		− 2.6765				
60.6870	+10	67.7130	+18		− 3.0775	− 3.0783			
60.2800	+14	68.1130	+18		− 3.4808				
59.5025	+10	68.8915	+13		− 4.2588				
59.1010	+10	69.3025	+13		− 4.6655	− 4.6647			
58.6910	+10	69.7020	+16		− 5.0699				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.6125	+18	60.7705	+11		+ 3.8572	−0.9258						
66.0365	+10	62.3465	+10		+ 2.2809	−0.9238						
64.4510	+ 8	63.9320	+ 9		+ 0.6954	−0.9267	−0.9254	−0'.9197	−0'.0042	0'.0000	+0'.0001	**−0'.9238**
61.3205	+10	67.0640	+ 9		− 2.4358	−0.9256						
59.7490	+14	68.6330	+14		− 4.0061	−0.9278						
58.1690	+ 5	70.2145	+17		− 5.5874	−0.9227						
69.4170	+14	58.9650	+10		+ 5.6622	+0.8792						
67.8440	+19	60.5380	+10		+ 4.0894	+0.8847						
66.2595	+11	62.1240	+ 9		+ 2.5038	+0.8817	+0.8856	+0.8802	+0.0033	0.0000	+0.0001	**+0.8836**
63.1305	+10	65.2520	+16		− 0.6252	+0.8850						
61.5660	+10	66.8180	+ 8		− 2.1900	+0.8883						
59.9840	+15	68.3950	+18		− 3.7698	+0.8949						
Geht du	rch	die Jupiter	sche	ibe;	als Vorspr	ung am NW-	rande erken	nbar.				
72.1440	+14	56.2435	0		+ 8.3868	+3.6038						
70.5685	+15	57.8170	+ 6		+ 6.8121	+3.6074						
68.9830	+16	59.4035	+11		+ 5.2259	+3.6038	+3.6059	+3.5838	+0.0156	0.0000	+0.0001	**+3.5995**
65.8510	+13	62.5300	+10		+ 2.0966	+3.6068						
64.2855	+11	64.1025	+ 9		+ 0.5275	+3.6058						
62.6980	+12	65.6840	+11		− 1.0570	+3.6077						

Scheinbare Decldiff: I—Centrum $= +\ 0'.2847$ $\qquad f^\circ_\delta = 0.99318 \qquad i^\circ_\delta = -0.00216$

O— » $= +\ 9.7703$

K— » $= +15.1248$ $\qquad f_\delta = \mathbf{0.99278} \qquad i_\delta = \mathbf{-0.00216} \qquad \measuredangle\, i_\delta = -7'.4$

L— » $= -15.8413$ $\qquad f'_\delta = \mathbf{0.99387} \qquad J_\delta = \mathbf{-0.00218}$

$\delta_♃ = +0^\circ\ 16'.9$

92. 1898. April 23.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**64.4906**		**63.8841**							
J	64.4898	+ 8	63.8832	+ 9	0	0.0000				2
I	85.6050	— 3	42.7785	+22	— 2	+21.1086				1—2
O	17.3402	+28	111.0358	+ 6	+32	—47.1468		**13^h 57^m 44^s**		2—3 ellipt.
K	88.9478	— 2	37.4232	+28	— 5	+24.4570				1—2
L	90.9595	0	39.4172	+30	— 6	+26.4658				2
♃ a_w	64.1035	+ 9	64.2940	+ 8		— 0.3984				
a_c	64.5125	+17	63.8825	+ 8		+ 0.0122	+ 0.0146	13 46 39		2
a_o	64.9300	+17	63.4645	+ 8		+ 0.4300				
♃ b_w	64.0955	+ 9	64.3030	+ 8		— 0.4070				
b_c	64.5095	+17	63.9020	+ 8		+ 0.0010	+ 0.0036	48 9		2
b_o	64.9160	+17	63.4770	+ 8		+ 0.4167				
♃ c_w	64.1050	+ 9	64.2875	+ 8		— 0.3944				
c_c	64.5180	+17	63.8800	+ 8		+ 0.0162	+ 0.0177	49 9		2
c_o	64.9275	+17	63.4595	+ 8		+ 0.4312			**13^h 49^m 52^s**	
♃ d_w	64.0885	+ 8	64.3070	+ 9		— 0.4126				
d_c	64.5025	+16	63.9010	+ 9		— 0.0022	— 0.0010	50 19		2
d_o	64.9105	+16	63.4810	+ 9		+ 0.4118				
♃ e_w	64.1115	+ 8	64.2840	+ 9		— 0.3896				
e_c	64.5220	+16	63.8725	+ 9		+ 0.0218	+ 0.0217	51 49		2
e_o	64.9355	+16	63.4640	+ 9		+ 0.4328				
♃ f_w	64.1110	+ 9	64.2850	+10		— 0.3903				
f_c	64.5300	+17	63.8790	+10		+ 0.0226	+ 0.0242	53 9		2
f_o	64.9405	+17	63.4540	+10		+ 0.4404				

Object.	P.-Kr. 0°	$t+k$	P.-Kr.180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	66.1350	+11	62.2450	+ 9		+ 1.6418	+1.6272						2
b	66.1220	+11	62.2600	+ 9		+ 1.6278	+1.6242						2—3
c	66.1300	+10	62.2490	+ 9		+ 1.6373	+1.6196	+1.6180	+1!6065	—0!0016	—0!0008	**+1!6041**	2
d	66.1100	+11	62.2725	+10		+ 1.6156	+1.6166						2
e	66.1285	+11	62.2555	+10		+ 1.6333	+1.6116						2—3
f	66.1285	+11	62.2560	+11		+ 1.6330	+1.6088						2—3
II a	66.6815	+ 9	61.7000	+ 9		+ 2.1875	+2.1729						2
b	66.6755	+ 9	61.7060	+ 9		+ 2.1815	+2.1779						1—2
c	66.6900	+ 8	61.6900	+ 9		+ 2.1967	+2.1790	+2.1820	+2.1665	+0.0026	—0.0008	**+2.1683**	2
d	66.6800	+ 8	61.7065	+10		+ 2.1834	+2.1844						2
e	66.7040	+ 9	61.6780	+11		+ 2.2096	+2.1879						2—3
f	66.7085	+ 9	61.6730	+12		+ 2.2144	+2.1902						2
III a	59.6615	+16	68.7180	+14		— 4.8314	—4.8460						1—2
b	59.6520	+15	68.7280	+13		— 4.8412	—4.8448						1—2
c	59.6665	+15	68.7120	+13		— 4.8259	—4.8436	— 4.8444	—4.8100	+0.0050	—0.0008	**—4.8058**	2
d	59.6475	+14	68.7310	+13		— 4.8450	—4.8440						2
e	59.6710	+14	68.7110	+14		— 4.8232	—4.8449						2
f	59.6745	+14	68.7055	+14		— 4.8188	—4.8430						2
IV a	72.5410	+13	55.8400	— 1		+ 8.0480	+8.0334						1—2
b	72.5330	+13	55.8500	0		+ 8.0389	+8.0353						1—2
c	72.5480	+13	55.8360	0		+ 8.0534	+8.0357	+8.0359	+7.9788	—0.0087	—0.0008	**+7.9693**	2
d	72.5310	+14	55.8530	+ 1		+ 8.0364	+8.0374						1—2
e	72.5535	+14	55.8310	+ 2		+ 8.0586	+8.0369						2
f	72.5570	+15	55.8300	+ 2		+ 8.0609	+8.0367						2—3

Scheinbare Ædiff: I— Centrum = +23!4033 $\quad f^\circ_\alpha = 0.99286 \quad -i^\circ_\alpha = +0.00200$

O— » = —52.3149

K— » = +27.2036 $\quad f_\alpha =$ **0.99256** $\quad -i_\alpha =$ **+0.00198** $\quad ∢\, i_\alpha = -6!8$

L— » = +29.2357 $\quad$ *Refr.* = + .24

$Tx_♃$ = 0

$\alpha_♃ = 12^h\ 9.8 \quad f'_\alpha =$ **0.99290** $\quad J\alpha =$ **+0.00222**

1898. April 23.

...ihe. Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.3311**	mm/10000	mm **65.0481**	mm/10000	mm/10000	mm	mm	mm	mm	
63.3302	+ 9	65.0465	+16	0	0.0000		0.0000	0.0000	Bilder 2.
63.6888	+18	64.6892	+23	0	+ 0.3580		— 0.0317	+ 0.3263	
73.2480	+30	55.1348	+16	— 7	+ 9.9151		— 0.1595	+ 9.7556	
78.6490	+18	49.7242	+15	— 4	+15.3206		— 0.0432	+15.2774	
47.4735	+21	80.9050	+25	+ 4	—15.8570		— 0.0491	—15.9061	
68.4815	+18	59.9180	+14		+ 5.1404				
68.0910	+18	60.3060	+14		+ 4.7512	+ 4.7493			
67.6910	+18	60.6965	+10		+ 4.3562				
66.9200	+ 8	61.4800	+ 9		+ 3.5784				
66.5310	+ 8	61.8850	+ 9		+ 3.1814	+ 3.1858			
66.1335	+10	62.2555	+ 9		+ 2.7976				
65.3415	+16	63.0610	+ 9		+ 1.9941				
64.9515	+16	63.4550	+ 9		+ 1.6071	+ 1.6065			
64.5555	+16	63.8370	+ 8		+ 1.2182				
62.2035	+ 9	66.1950	+10		— 1.1373				
61.8040	+ 9	66.6010	+ 8		— 1.5400	— 1.5346			
61.4105	+ 9	66.9805	+ 8		— 1.9264				
60.6165	+14	67.7810	+18		— 2 7240				
60.2255	+14	68.1740	+18		— 3.1160	— 3.1163			
59.8270	+14	68.5615	+18		— 3.5090				
59.0685	+10	69.3265	+13		— 4.2706				
58.6680	+10	69.7225	+16		— 4.6690	— 4.6674			
58.2740	+10	70.1155	+16		— 5.0626				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
67.3730	+ 8	61.0095	+11		+ 4.0401	—0.7092						
65.8165	+10	62.5680	+10		+ 2.4828	—0.7030						
64.2405	+ 8	64.1430	+ 9		+ 0.9072	—0.6993						
61.0980	+10	67.2830	+ 9		— 2.2340	—0.6994	—0.7011	—0'.6967	—0'.0027	0'.0000	+0'.0002	**—0'.6992**
59.5155	+10	68.8660	+14		— 3.8170	—0.7007						
57.9715	+ 5	70.4120	+17		— 5.3624	—0.6950						
66.9120	+ 8	61.4730	+11		+ 3.5778	—1.1715						
65.3500	+16	63.0320	+10		+ 2.0178	—1.1680						
63.7715	+ 8	64.6130	+17		+ 0.4373	—1.1692	—1.1709	—1.1636	—0.0036	0.0000	+0.0002	**—1.1670**
60.6295	+10	67.7565	+19		— 2.7054	—1.1708						
59.0425	+10	69.3400	+14		— 4.2904	—1.1741						
57.4940	+ 9	70.8885	+13		— 5.8390	—1.1716						
70.3440	+17	58.0400	+ 6		+ 7.0110	+2.2617						
68.7810	+14	59.5990	+15		+ 5.4494	+2.2636						
67.2080	+ 9	61.1785	+11		+ 3.8732	+2.2667	+2.2645	+2.2504	+0.0081	0.0000	+0.0002	**+2.2587**
64.0615	+ 9	64.3180	+ 9		+ 0.7302	+2.2648						
62.4790	+10	65.9040	+11		— 0.8541	+2.2622						
60.9345	+11	67.4505	+ 9		— 2.3994	+2.2680						
64.1750	+10	64.2090	+11		+ 0.8414	—3.9079						
62.6150	+11	65.7720	+13		— 0.7201	—3.9059						
61.0340	+12	67.3510	+11		— 2.3000	—3.9065						
57.8910	+ 7	70.4900	+19		— 5.4416	—3.9070	—3.9075	—3.8830	—0.0135	—0.0001	+0.0002	**—3.8964**
56.3065	+ 1	72.0765	+14		— 7.0272	—3.9109						
54.7610	+ 1	73.6255	+15		— 8.5744	—3.9070						

Scheinbare Decldiff: I— Centrum = + 0'.2846
O— » = + 9.7705
K— » = +15.1248
L— » = —15.8415

$\delta_♃ = +0° \; 38'.1$

$f^\circ_\delta = 0.99292$ $\quad i^\circ_\delta = -0.00184$

$f_\delta = \mathbf{0.99249}$ $\quad i_\delta = \mathbf{-0.00193}$ $\quad ∢ \, i_\delta = -6'.6$

$f'_\delta = \mathbf{0.99373}$ $\quad J_\delta = \mathbf{-0.00169}$

93. 1898. April 24.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.7046**		**63.6673**							
J	64.7030	+16	63.6665	+ 8	0	0.0000				2—3
I	85.8258	— 3	42.5572	+21	— 2	+21.1142				2—3
O	17.5515	+28	110.8178	+ 6	+32	—47.1475		**13^h 7^m 30^s**		2—3
K	89.1625	— 2	39.2045	+30	— 5	+24.4582				2
L	91.1828	0	37.1920	+28	— 6	+26.4748				2—3
♃ a_w	64.2480	+10	64.1400	+ 9		— 0.4646				
a_c	64.6985	+18	63.7030	+ 9		— 0.0204	— 0.0185	12 55 19		4
a_o	65.1435	+18	63.2480	+10		+ 0.4295				
♃ b_w	64.2405	+ 9	64.1435	+ 8		— 0.4701				
b_c	64.6855	+17	63.7140	+ 8		— 0.0324	— 0.0294	56 29		4
b_o	65.1250	+17	63.2600	+ 9		+ 0.4142				
♃ c_w	64.2510	+ 9	64.1300	+ 8		— 0.4581				
c_c	64.6990	+17	63.6990	+ 8		— 0.0182	— 0.0164	57 23		4
c_o	65.1400	+17	63.2490	+ 9		+ 0.4272			**12^h 57^m 58^s**	
♃ d_w	64.2890	+ 8	64.1030	+ 9		— 0.4257				
d_c	64.7310	+16	63.6690	+ 9		+ 0.0127	+ 0.0100	58 25		3—4
d_o	65.1525	+16	63.2300	+10		+ 0.4429				
♃ e_w	64.2910	+ 8	64.1010	+ 9		— 0.4237				
e_c	64.7275	+16	63.6695	+ 9		+ 0.0107	+ 0.0148	59 31		4
e_o	65.1710	+16	63.2195	+10		+ 0.4574				
♃ f_w	64.2550	+ 9	64.1440	+10		— 0.4632				
f_c	64.7055	+17	63.7010	+10		— 0.0160	— 0.0165	13 0 39		4
f_o	65.1400	+17	63.2440	+11		+ 0.4296				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I a	63.4275	+11	64.9530	+16		— 1.2816	—1.2631						3—4 stark un
b	63.4360	+10	64.9500	+17		— 1.2760	—1.2466						3—4 »
c	63.4485	+10	64.9390	+17		— 1.2642	—1.2478	—1.2457	—1'.2368	+0'.0012	—0'.0007	**—1'.2363**	3—4 »
d	63.4765	+ 9	64.9095	+17		— 1.2356	—1.2456						3—4 »
e	63.4870	+ 9	64.8960	+17		— 1.2236	—1.2384						4 »
f	63.4605	+ 9	64.9210	+17		— 1.2493	—1.2328						4 »
II a	66.4970	+11	61.8905	+ 9		+ 1.7852	+1.8037						4 unterexpon
b	66.4880	+11	61.8920	+ 9		+ 1.7794	+1.8088						3—4 »
c	66.5055	+11	61.8785	+ 9		+ 1.7950	+1.8114	+1.8036	+1.7906	—0.0017	—0.0007	**+1.7882**	3—4 »
d	66.5205	+10	61.8640	+10		+ 1.8096	+1.7996						3 »
e	66.5260	+10	61.8590	+10		+ 1.8148	+1.8000						3 »
f	66.4910	+11	61.8900	+11		+ 1.7818	+1.7983						3—4 »
III a	61.9750	+11	66.4000	+11		— 2.7312	—2.7127						3
b	61.9765	+10	66.3960	+10		— 2.7284	—2.6990						3
c	61.9895	+10	66.3820	+10		— 2.7149	—2.6985	—2.6988	—2.6794	+0.0025	—0.0007	**—2.6776**	3—4
d	62.0190	+ 9	66.3570	+11		— 2.6878	—2.6978						3—4
e	62.0280	+ 9	66.3475	+11		— 2.6785	—2.6933						3
f	61.9980	+ 9	66.3770	+11		— 2.7082	—2.6917						4
IV a	73.2425	+14	55.1445	— 1		+ 8.5311	+8.5496						3 stark unter
b	73.2380	+13	55.1565	— 1		+ 8.5228	+8.5522						4 » »
c	73.2550	+13	55.1370	0		+ 8.5410	+8.5574	+8.5546	+8.4930	—0.0094	—0.0007	**+8.4829**	3 » »
d	73.2740	+14	55.1140	+ 1		+ 8.5620	+8.5520						3 » »
e	73.2830	+14	55.1040	+ 2		+ 8.5714	+8.5566						3—4» »
f	73.2560	+16	55.1335	+ 2		+ 8.5433	+8.5598						4 » »

Scheinbare Ædiff:

I—Centrum $= +23'.4033$ $\qquad f^\circ_\alpha = 0.99280 \qquad -i^\circ_\alpha = +0.00225$

O— » $= -52.3149$

K— » $= +27.2037$ $\qquad f_\alpha = \mathbf{0.99251} \qquad -i_\alpha = \mathbf{+0.00224} \qquad \measuredangle\, i_\alpha = -7'.7$

L— » $= +29.2358$ $\qquad$ *Refr.* $= +\ 10$

$Tx_♃ = 0$

$\alpha_♃ = 12^h\ 9^m.5 \qquad f'_\alpha = \mathbf{0.99280} \qquad J_\alpha = \mathbf{+0.00234}$

ihe.

1898. April 24.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 64.2166	mm/10000	mm 64.1568	mm/10000	mm/10000	mm	mm	mm	mm	
64.2158	+ 8	64.1560	+ 8	0	0.0000		0.0000	0.0000	Bilder 4—5.
64.5838	+27	63.7942	+16	0	+ 0.3655		— 0.0317	+ 0.3338	
74.1200	+29	54.2598	+20	— 7	+ 9.9000		— 0.1595	+ 9.7405	
79.5452	+20	48.8252	+23	— 4	+15.3296		— 0.0432	+15.2864	
48.3715	+32	80.0068	+19	+ 4	—15.8465		— 0.0491	—15.8956	
69.5200	+13	58.8775	+10		+ 5.2915				
69.0910	+13	59.3150	+10		+ 4.8582	+ 4.8593			Bilder 3—4.
68.6515	+13	59.7350	+14		+ 4.4283				
67.8560	+18	60.5330	+10		+ 3.6320				
67.4470	+ 8	60.9670	+10		+ 3.2100	+ 3.2066			
67.0035	+ 8	61.3880	+10		+ 2.7778				
66.2860	+10	62.1160	+ 9		+ 2.0552				
65.8765	+10	62.5490	+ 9		+ 1.6339	+ 1.6311			Die Bilder verschlechtern sich schnell.
65.4260	+10	62.9580	+ 9		+ 1.2042				
63.1160	+ 9	65.2855	+16		— 1.1150				
62.7045	+ 9	65.7085	+10		— 1.5320	— 1.5330			
62.2710	+ 9	66.1150	+10		— 1.9520				
61.5685	+10	66.8330	+ 8		— 2.6520				
61.1530	+10	67.2520	+ 8		— 3.0793	— 3.0784			
60.7195	+10	67.6670	+18		— 3.5040				
60.0500	+14	68.3550	+13		— 4.1824				
59.6240	+14	68.7760	+13		— 4.6058	— 4.6103			
59.1800	+10	69.2050	+13		— 5.0426				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta (y_t - y_♃)$	$J_\delta (x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.5895	+17	58.7945	+10		+ 5.3680	+0.5087						
67.9355	+19	60.4500	+14		+ 3.7131	+0.5065						
66.3540	+11	62.0340	+ 9		+ 2.1302	+0.4991	+0.5031	+0'.4999	+0'.0026	0'.0000	+0'.0002	+0'.5027
63.1935	+10	65.1880	+16		— 1.0274	+0.5056						
61.6460	+10	66.7400	+ 8		— 2.5768	+0.5016						
60.1080	+15	68.2740	+18		— 4.1130	+0.4973						
68.3650	+18	60.0210	+15		+ 4.1422	—0.7171						
66.7080	+ 8	61.6785	+10		+ 2.4848	—0.7218						
65.1315	+16	63.2500	+10		+ 0.9112	—0.7199	—0.7166	—0.7120	—0.0038	0.0000	+0.0002	—0.7156
61.9735	+ 9	66.4080	+11		— 2.2472	—0.7142						
60.4320	+14	67.9535	+19		— 3.7909	—0.7125						
58.9000	+10	69.4880	+14		— 5.3241	—0.7138						
70.1415	+17	58.2400	+ 5		+ 5.9214	+1.0621						
68.4855	+19	59.9000	+14		+ 4.2631	+1.0565						
66.9015	+ 9	61.4795	+10		+ 2.6810	+1.0499	+1.0561	+1.0494	+0.0057	0.0000	+0.0002	+1.0553
63.7465	+ 9	64.6360	+16		— 0.4750	+1.0580						
62.1970	+10	66.1870	+10		— 2.0249	+1.0535						
60.6680	+11	67.7145	+18		— 3.5535	+1.0568						
65.0660	+19	63.3250	+12		+ 0.8410	—4.0183						
63.4165	+12	64.9745	+19		— 0.8092	—4.0158						
61.8310	+12	66.5570	+11		— 2.3928	—4.0239	—4.0175	—3.9920	—0.0179	—0.0001	+0.0002	—4.0098
58.6765	+13	69.7105	+19		— 5.5472	—4.0142						
57.1280	+12	71.2585	+15		— 7.0953	— 4.0169						
55.5980	+ 2	72.7890	+16		— 8.6261	—4.0158						

Scheinbare Decldiff: I—Centrum = + 0'.2846; O— » = + 9.7705; K— » = +15.1248; L— » = —15.8415

$\delta_♃ = + 0° 40'.1$

$f°_\delta = 0.99296$ $i°_\delta = -0.00216$

$f_\delta = 0.99255$ $i_\delta = -0.00220$ $\measuredangle\, i_\delta = - 7'.6$

$f'_\delta = 0.99365$ $J_\delta = -0.00210$

94. 1898. April 25.

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.3949**		**65.9760**							
J	62.3940	+ 9	65.9750	+10	0	0.0000				2
I	83.5098	+ 2	44.8640	+18	— 2	+21.1124				1—2
O	15.2378	+30	113.1310	+ 5	+32	—47.1516		12^h 52^m ^{s}		2 etwas ellip
K	86.8535	+ 1	41.5162	+28	— 5	+24.4574				1—2
L	88.8740	0	39.5010	+30	— 6	+26.4750				1—2
♃ a_w	61.9510	+11	66.4425	+11		— 0.4552				
a_c	62.3630	+11	66.0255	+11		— 0.0407	— 0.0390	12 41 52		2
a_o	62.7825	+11	65.6060	+11		+ 0.3788				
♃ b_w	61.9565	+10	66.4380	+10		— 0.4502				
b_c	62.3780	+10	66.0170	+10		— 0.0290	— 0.0320	43 10		2
b_o	62.7895	+10	65.6040	+10		+ 0.3833				
♃ c_w	61.9350	+10	66.4550	+10		— 0.4694				
c_c	62.3595	+10	66.0330	+10		— 0.0462	— 0.0451	44 14		2
c_o	62.7875	+10	65.6080	+10		+ 0.3803			12^h 44^m 49^s *)	
♃ d_w	61.9560	+ 9	66.4430	+11		— 0.4530				
d_c	62.3715	+ 9	66.0225	+11		— 0.0350	— 0.0365	45 20		2
d_o	62.7845	+ 9	65.6085	+11		+ 0.3784				
♃ e_w	61.9525	+ 9	66.4440	+11		— 0.4553				
e_c	62.3725	+ 9	66.0220	+11		— 0.0343	— 0.0343	46 30		2
e_o	62.7925	+ 9	65.6000	+11		+ 0.3867				
♃ f_w	61.9375	+10	66.4540	+12		— 0.4678				
f_c	62.3765	+10	66.0225	+12		— 0.0326	— 0.0359	47 50		2
f_o	62.7960	+10	65.5915	+12		+ 0.3927				

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder
							mm	mm					
I a	63.0295	+10	65.3455	+16		+ 0.6322	+0.6712						2
b	63.0300	+10	65.3490	+16		+ 0.6308	+0.6628						2
c	63.0185	+10	65.3610	+16		+ 0.6190	+0.6641	+0.6579	+0.′6531	—0.′0005	—0.′0008	**+0.′6518**	2
d	63.0200	+ 9	65.3600	+17		+ 0.6202	+0.6567						2
e	63.0155	+ 9	65.3620	+17		+ 0.6169	+0.6512						2
f	63.0060	+10	65.3745	+18		+ 0.6059	+0.6418						2—3
II a	59.5970	+16	68.7845	+14		— 2.8031	—2.7641						1—2
b	59.6025	+15	68.7750	+13		— 2.7956	—2.7636						1—2
c	59.5875	+15	68.7900	+13		— 2.8106	—2.7655	—2.7674	—2.7474	+0 0033	—0.0008	**—2.7499**	2
d	59.5960	+14	68.7870	+13		— 2.8049	—2.7684						2
e	59.5960	+14	68.7850	+14		— 2.8010	—2.7697						2
f	59.5920	+14	68.7905	+14		— 2.8087	—2.7728						3
III a	63.7005	+ 9	64.6745	+16		+ 1.3032	+1.3422						1—2
b	63.7110	+ 9	64.6630	+16		+ 1.3142	+1.3462						1—2
c	63.7030	+ 9	64.6720	+16		+ 1.3057	+1.3508	+1.3514	+1.3417	—0.0021	—0.0008	**+1.3388**	2
d	63.7155	+ 8	64.6630	+17		+ 1.3164	+1.3529						2
e	63.7195	+ 8	64.6570	+17		+ 1.3214	+1.3557						2
f	63.7220	+ 9	64.6530	+18		+ 1.3246	+1.3605						2
IV a	70.2530	+17	58.1265	+ 5		+ 7.8544	+7.8934						2
b	70.2560	+16	58.1235	+ 5		+ 7.8574	+7.8894						1—2
c	70.2460	+16	58.1360	+ 6		+ 7.8460	+7.8911	+7.8895	+7.8326	—0.0084	—0.0008	**+7.8234**	2
d	70.2540	+17	58.1290	+ 7		+ 7.8536	+7.8901						2
e	70.2540	+17	58.1295	+ 7		+ 7.8533	+7.8876						2—3
f	70.2500	+18	58.1330	+ 8		+ 7.8496	+7.8855						2—3

Scheinbare Ædiff: I—Centrum $= +23.'4034$ $\quad f^\circ_\alpha = 0.99277 \quad -i^\circ_\alpha = +0.00228$

O— » $= -52.3149$

K— » $= +27.2037 \quad f_\alpha = \mathbf{0.99249} \quad -i_\alpha = \mathbf{+0.00228} \quad \measuredangle\, i_\alpha = -\ 7.'8$

L— » $= +29.2358 \quad Refr. = +\ 7$

$Tx_♃ = 0$

$\alpha_♃ = 12^h\ 9.^m2 \quad f'_\alpha = \mathbf{0.99278} \quad J_\alpha = \mathbf{+0.00235}$

*) Der Chronometer war nicht mit der Normaluhr verglichen worden; die angenommene Correction könnte bis $\pm 5^s$ unsicher

1898. April 25.

ihe.

Decl.

Scalenablesung.				s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
P.-Kr. 90°	t+k	P.-Kr. 270°	t+k						
mm **63.9959**	mm/10000	mm **64.3800**	mm/10000	mm/10000	mm	mm	mm	mm	
63.9950	+ 9	64.3792	+ 8	0	0.0000		0.0000	0.0000	Bilder 3.
64.3675	+17	64.0095	+14	0	+ 0.3712		— 0.0317	+ 0.3395	
73.8930	+30	54.4832	+20	— 7	+ 9.8968		— 0.1595	+ 9.7373	
79.3250	+17	49.0418	+21	— 4	+15.3330		— 0.0432	+15.2898	
48.1518	+31	80.2252	+18	+ 4	—15.8436		— 0.0491	—15.8927	
69.1720	+14	59.2260	+10		+ 5.1652				
68.7760	+14	59.6215	+14		+ 4.7693	+ 4.7701			
68.3845	+14	60.0170	+14		+ 4.3758				
67.5965	+ 9	60.7955	+10		+ 3.5925				
67.1970	+ 9	61.2020	+10		+ 3.1895	+ 3.1941			
66.8070	+ 9	61.5905	+10		+ 2.8002				
66.0260	+11	62.3680	+ 9		+ 2.0212				
65.6280	+11	62.7690	+ 9		+ 1.6216	+ 1.6203			
65.2220	+17	63.1710	+ 9		+ 1.2180				
62.9000	+10	65.4960	+10		— 1.1060				
62.5030	+10	65.9090	+10		— 1.5108	— 1.5104			
62.0890	+10	66.3020	+10		— 1.9144				
61.3240	+11	67.0665	+ 8		— 2.6790				
60.9270	+11	67.4800	+ 8		— 3.0843	— 3.0835			
60.5190	+11	67.8770	+18		— 3.4873				
59.7510	+15	68.6420	+13		— 4.2534				
59.3450	+11	69.0460	+13		— 4.6586	— 4.6597			
58.9400	+11	69.4580	+13		— 5.0670				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.5480	+14	59.8370	+14		+ 4.5476	—0.2225						
66.9775	+ 9	61.4050	+10		+ 2.9782	—0.2159						
65.4060	+17	62.9750	+ 9		+ 1.4080	—0.2123	—0.2151	—0.2137	—0.0015	0.0000	+0.0002	**—0.2150**
62.2725	+10	66.1075	+10		— 1.7254	—0.2150						
60.7020	+11	67.6800	+18		— 3.2973	—0.2138						
59.1280	+11	69.2540	+13		— 4.8710	—0.2113						
70.1615	+18	58.2175	+ 6		+ 6.1646	+1.3945						
68.5950	+15	59.7830	+15		+ 4.5980	+1.4039						
67.0205	+10	61.3570	+11		+ 3.0238	+1.4035	+1.4000	+1.3911	+0.0064	0.0000	+0.0002	**+1.3977**
63.8860	+10	64.4950	+ 9		— 0.1124	+1.3980						
62.3140	+11	66.0670	+11		— 1.6844	+1.3991						
60.7405	+12	67.6410	+19		— 3.2586	+1.4011						
67.8760	+18	60.5010	+14		+ 3.8798	—0.8903						
66.3050	+10	62.0730	+ 9		+ 2.3081	—0.8860						
64.7300	+16	63.6500	+ 8		+ 0.7324	—0.8879	—0.8919	—0.8862	—0.0031	0.0000	+0.0002	**—0.8891**
61.5910	+ 9	66.7855	+ 8		— 2.4052	—0.8948						
60.0165	+14	68.3590	+18		— 3.9794	—0.8959						
58.4395	+ 5	69.9350	+16		— 5.5562	—0.8965						
65.2070	+17	63.1730	+11		+ 1.2094	—3.5607						
63.6370	+ 9	64.7475	+18		— 0.3636	—3.5577						
62.0665	+10	66.3140	+12		— 1.9318	—3.5521	—3.5588	—3.5362	—0.0181	—0.0001	+0.0002	**—3.5542**
58.9300	+11	69.4550	+15		— 5.0706	—3.5602						
57.3575	+10	71.0320	+14		— 6.6454	—3.5619						
55.7810	0	72.6040	+15		— 8.2202	—3.5605						

Scheinbare Decldiff: *I*—Centrum = + 0'.2846 $f^\circ_\delta = 0.99294$ $i^\circ_\delta = -0.00234$
O— » = + 9.7706
K— » = +15.1248 f_δ = **0.99253** i_δ = **—0.00237** $\sphericalangle\, i_\delta = -8'.1$
L— » = —15.8416
f'_δ = **0.99362** J_δ = **—0.00230**

$\delta_♃ = + 0° \; 42'.1$

95. 1898. April 28.

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Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	(♃w+♃c+♃o)/3	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.2436**		**64.1253**							
J	64.2428	+ 8	64.1245	+ 8	0	0.0000				1—2
I	85.3582	— 2	43.0182	+21	— 2	+21.1095				2—3
O	17.0922	+29	111.2874	+ 6	+32	—47.1524		**12ʰ 27ᵐ 14ˢ**		2 etwas ellipt.
K	88.6970	— 2	39.6695	+32	— 5	+24.4524				2
L	90.7240	0	37.6522	+29	— 6	+26.4747				2
♃ a_w	63.7740	+10	64.6105	+17		— 0.4774				
a_c	64.1855	+10	64.1965	+ 9		— 0.0646	— 0.0676	12 15 54		2—3
a_o	64.5905	+10	63.7940	+ 9		+ 0.3392				
♃ b_w	63.8010	+ 9	64.5838	+ 8		— 0.4501				
b_c	64.2210	+ 9	64.1655	+ 8		— 0.0314	— 0.0363	17 3		1—2
b_o	64.6230	+ 9	63.7595	+ 8		+ 0.3726				
♃ c_w	63.7705	+ 9	64.6130	+ 8		— 0.4801				
c_c	64.1830	+ 9	64.2145	+ 8		— 0.0748	— 0.0755	18 6		2
c_o	64.5805	+ 9	63.8050	+ 8		+ 0.3286			**12ʰ 18ᵐ 38ˢ**	
♃ d_w	63.7445	+ 8	64.6355	+ 9		— 0.5047				
d_c	64.1665	+ 8	64.2335	+ 9		— 0.0927	— 0.0945	19 6		2
d_o	64.5670	+ 8	63.8205	+ 9		+ 0.3140				
♃ e_w	63.7510	+ 8	64.6300	+ 9		— 0.4987				
e_c	64.1600	+ 8	64.2300	+ 9		— 0.0942	— 0.0917	20 13		1—2
e_o	64.5700	+ 8	63.8160	+ 9		+ 0.3178				
♃ f_w	63.7580	+ 8	64.6270	+ 9		— 0.4937				
f_c	64.1635	+ 8	64.2185	+ 9		— 0.0867	— 0.0859	21 24		2
f_o	64.5780	+ 8	63.8145	+ 9		+ 0.3226				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder.
							mm	mm					
I *a*	65.5580	+11	62.8195	+ 9		+ 1.3102	+1.3778						1—2
b	65.5895	+11	62.7915	+ 9		+ 1.3400	+1.3763						3
c	65.5585	+11	62.8250	+ 9		+ 1.3077	+1.3832	+1.3857	+1'.3758	—0'.0018	—0'.0009	**+1'.3731**	2—3
d	65.5480	+10	62.8360	+10		+ 1.2968	+1.3913						2—3
e	65.5490	+10	62.8255	+10		+ 1.3026	+1.3943						2
f	65.5540	+11	62.8250	+11		+ 1.3054	+1.3913						2—3
II *a*	63.8590	+10	64.5245	+ 9		— 0.3918	—0.3242						2
b	63.8800	+ 9	64.5000	+ 8		— 0.3691	—0.3328						2
c	63.8405	+ 9	64.5425	+ 8		— 0.4101	—0.3346	—0.3343	—0.3319	+0.0008	—0.0009	**—0.3320**	2—3
d	63.8245	+ 8	64.5590	+ 9		— 0.4264	—0.3319						3
e	63.8235	+ 8	64.5565	+ 9		— 0.4257	—0.3340						2
f	63.8135	+ 8	64.5630	+ 9		— 0.4340	—0.3481						1—2
III *a*	65.3600	+18	63.0155	+10		+ 1.1135	+1.1811						2
b	65.3830	+17	62.9905	+ 9		+ 1.1375	+1.1738						3
c	65.3425	+17	63.0335	+ 9		+ 1.0958	+1.1713	+1.1717	+1.1633	—0.0007	—0.0009	**+1.1617**	2—3
d	65.3230	+16	63.0530	+10		+ 1.0762	+1.1707						2—3
e	65.3265	+16	63.0490	+10		+ 1.0799	+1.1716						2
f	65.3220	+17	63.0520	+11		+ 1.0762	+1.1621						2
IV *a*	64.5505	+18	63.8290	+ 9		+ 0.3020	+0.3696						1—2 *)
b	64.5690	+17	63.8100	+ 8		+ 0.3208	+0.3571						2—3
c	64.5295	+17	63.8555	+ 8		+ 0.2783	+0.3538	+0.3570	+0.3544	—0.0005	—0.0009	**+0.3530**	3
d	64.5140	+16	63.8700	+ 9		+ 0.2632	+0.3577						3
e	64.5185	+16	63.8700	+ 9		+ 0.2654	+0.3571						2—3
f	64.5120	+16	63.8730	+ 9		+ 0.2607	+0.3466						2

Scheinbare Ædiff: *I*—Centrum = +23'.4025 $f^\circ_\alpha = 0.99282$ $-i^\circ_\alpha = +0.00241$

O— » = —52.3150

K— » = +27.2038 f_α = **0.99254** $-i_\alpha$ = **+0.00241** ∢ i_α = — 8'.3

L— » = +29.2359 *Refr.* = + 2

Tx♃ = 0

$\alpha_♃ = 12^h\ 8^m.2$ f'_α = **0.99282** J_α = **+0.00243**

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*) Hart am Rande des Jupiter; Einstellung daher schwierig.

1898. April 28.

ihe.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n+♃_c+♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y-\frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 64.4708	$\frac{mm}{10000}$	mm 63.9038	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm	mm	mm	
64.4700	+8	63.9030	+8	0	0.0000		0.0000	0.0000	Bilder 3—4.
64.8400	+26	63.5362	+15	0	+ 0.3690		— 0.0317	+ 0.3373	
74.3578	+29	54.0200	+20	— 7	+ 9.8852		— 0.1595	+ 9.7257	
79.7968	+20	48.5705	+23	— 4	+15.3291		— 0.0432	+15.2859	
48.6310	+26	79.7475	+19	+ 4	—15.8410		— 0.0491	—15.8901	
69.6525	+16	58.7420	+10		+ 5.1720				
69.2610	+13	59.1305	+10		+ 4.7819	+ 4.7834			Bilder 3.
68.8755	+13	59.5160	+10		+ 4.3964				
68.0680	+18	60.3200	+10		+ 3.5909				
67.6770	+18	60.7160	+10		+ 3.1974	+ 3.1979			
67.2820	+18	61.1050	+10		+ 2.8054				
66.5045	+10	61.8850	+ 9		+ 2.0263				
66.1195	+10	62.2840	+ 9		+ 1.6343	+ 1.6340			
65.7240	+10	62.6745	+ 9		+ 1.2413				
63.3715	+ 9	65.0175	+16		— 1.1068				
62.9790	+ 9	65.4200	+16		— 1.5044	— 1.5005			
62.5930	+ 9	65.8065	+10		— 1.8903				
61.7910	+ 9	66.6030	+ 8		— 2.6894				
61.4045	+10	66.9965	+ 8		— 3.0794	— 3.0797			
61.0105	+10	67.3840	+ 8		— 3.4702				
60.2290	+14	68.1615	+18		— 4.2500				
59.8325	+14	68.5660	+13		— 4.6502	— 4.6445			
59.4460	+14	68.9460	+13		— 5.0334				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.5390	+13	59.8425	+15		+ 4.0646	—0.7188						
66.9545	+ 8	61.4310	+11		+ 2.4781	—0.7198						
65.3805	+16	63.0040	+10		+ 0.9050	—0.7290	—0.7232	—0.'7187	—0.'0033	0.'0000	+0.'0002	—0.'7218
62.2530	+ 9	66.1335	+11		— 2.2238	—0.7233						
60.6740	+10	67.7100	+19		— 3.8070	—0.7273						
59.1090	+10	69.2730	+14		— 5.3657	—0.7212						
69.5930	+16	58.7900	+10		+ 5.1183	+0.3349						
68.0160	+18	,60.3660	+14		+ 3.5417	+0.3438						
66.4540	+10	61.9380	+ 9		+ 1.9746	+0.3406	+0.3427	+0.3406	+0.0008	0.0000	+0.0002	+0.3416
63.3150	+ 9	65.0720	+16		— 1.1624	+0.3381						
61.7420	+ 9	66.6410	+ 8		— 2.7330	+0.3467						
60.1825	+14	68.1995	+18		— 4.2922	+0.3523						
68.9510	+13	59.4290	+11		+ 4.4776	—0.3058						
67.3695	+ 8	61.0150	+11		+ 2.8936	—0.3043						
65.8030	+10	62.5770	+10		+ 1.3295	—0.3045	—0.3018	—0.2999	—0.0028	0.0000	+0.0002	—0.3025
62.6710	+ 9	65.7100	+11		— 1.8031	—0.3026						
61.0990	+10	67.2855	+ 9		— 3.3767	—0.2970						
59.5325	+14	68.8475	+14		— 4.9410	—0.2965						
69.4760	+13	58.9100	+10		+ 4.9996	+0.2162						
67.8900	+ 8	60.4990	+14		+ 3.4117	+0.2138						
66.3140	+10	62.0680	+ 9		+ 1.8396	+0.2056	+0.2144	+0.2131	+0.0008	0.0000	+0.0002	+0.2141
63.1910	+ 9	65.1990	+16		— 1.2878	+0.2127						
61.6185	+ 9	66.7720	+ 8		— 2.8602	+0.2195						
60.0510	+14	68.3350	+18		— 4.4257	+0.2188						

Scheinbare Decldiff: *I*—Centrum = + 0.'2845 $f^\circ_\delta = 0.99313$ $i^\circ_\delta = -0.00240$

O— » = + 9.7707

K— » = +15.1248 $f_\delta = \mathbf{0.99273}$ $i_\delta = \mathbf{-0.00240}$ $\measuredangle\, i_\delta = -8.'3$

L— » = —15.8417

$f'_\delta = \mathbf{0.99379}$ $J_\delta = \mathbf{-0.00238}$

$\delta_{♃} = +0^\circ\ 47.'8$

96. 1898. April 29.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder.
	mm	$\frac{mm}{10000}$	mm	$\frac{mm}{10000}$	$\frac{mm}{10000}$	mm	mm			
Ctr.	**62.6527**		**65.7199**							
J	62.6518	+ 9	65.7188	+11	0	0.0000				2
I	83.7642	− 7	44.6155	+18	− 2	+21.1065				2
O	15.4948	+29	112.7722	+ 5	+32	−47.1507		13^h 42^m 46^s		2
K	87.1038	+ 1	41.2665	+30	− 5	+24.4503				2
L	89.1255	0	39.2460	+30	− 6	+26.4712				2
♃ a_w	62.1680	+10	66.2250	+10		− 0.4949				
a_c	62.6075	+10	65.7750	+10		− 0.0502	− 0.0513	13 32 16		3—4
a_o	63.0510	+10	65.3350	+16		+ 0.3913				
♃ b_w	62.1950	+10	66.2015	+10		− 0.4696				
b_c	62.6305	+10	65.7595	+10		− 0.0309	− 0.0324	33 36		3—4
b_o	63.0650	+10	65.3250	+16		+ 0.4033				
♃ c_w	62.1840	+10	66.2130	+10		− 0.4809				
c_c	62.6260	+10	65.7620	+10		− 0.0344	− 0.0320	34 56		3—4
c_o	63.0685	+10	65.3165	+16		+ 0.4193			13^h 35^m 28^s	
♃ d_w	62.1860	+ 9	66.2050	+11		− 0.4760				
d_c	62.6395	+ 9	65.7480	+11		− 0.0208	− 0.0271	36 6		O-rand ganz
d_o	63.0700	+ 9	65.3055	+17		+ 0.4154				waschen; W
♃ e_w	62.2315	+ 9	66.1630	+11		− 0.4322				2—3.
e_c	62.6590	+ 9	65.7410	+11		− 0.0075	− 0.0088	37 16		3
e_o	63.0775	+ 9	65.3170	+17		+ 0.4134				
♃ f_w	62.2220	+10	66.1650	+12		− 0.4380				
f_c	62.6475	+10	65.7450	+12		− 0.0152	− 0.0117	38 36		3
f_o	63.0780	+10	65.3085	+18		+ 0.4180				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	60.7365	+12	67.6500	+19		− 1.9235	−1.8722						3
b	60.7585	+11	67.6240	+18		− 1.8995	−1.8671						3
c	60.7445	+11	67.6415	+18		− 1.9152	−1.8832						3—4
d	60.7435	+10	67.6445	+19		− 1.9174	−1.8903	−1.8758	−1.′8625	+0.′0023	−0.′0010	**−1.′8612**	3
e	60.7775	+10	67.6045	+19		− 1.8804	−1.8716						2—3
f	60.7780	+10	67.6090	+19		− 1.8824	−1.8707						3
II a	59.7915	+16	68.5910	+14		− 2.8660	−2.8147						3—4
b	59.8130	+15	68.5620	+13		− 2.8408	−2.8084						2
c	59.8010	+15	68.5825	+13		− 2.8570	−2.8250	−2.8149	−2.7949	+0.0032	−0.0010	−2.7927	4
d	59.8020	+14	68.5830	+14		− 2.8569	−2.8298						4
e	59.8410	+14	68.5420	+14		− 2.8169	−2.8081						2
f	59.8450	+14	68.5425	+14		− 2.8152	−2.8035						2—3
III a	59.5525	+16	68.8200	+14		− 3.1000	−3.0487						3
b	59.5740	+15	68.7975	+13		− 3.0780	−3.0456						3
c	59.5560	+15	68.8200	+13		− 3.0983	−3.0663	−3.0588	−3.0371	+0.0042	−0.0010	**−3.0339**	3
d	59.5550	+14	68.8270	+14		− 3.1024	−3.0753						2—3
e	59.5895	+14	68.7895	+14		− 3.0664	−3.0576						3
f	59.5845	+14	68.7935	+14		− 3.0709	−3.0592						2—3
IV a	59.6335	+16	68.7495	+14		− 3.0243	−2.9730						3—4
b	59.6540	+15	68.7245	+13		− 3.0016	−2.9692						3
c	59.6345	+15	68.7560	+13		− 3.0270	−2.9950	−2.9846	−2.9634	+0.0045	−0.0010	**−2.9599**	4
d	59.6255	+14	68.7525	+14		− 3.0299	−3.0028						3—4
e	59.6650	+14	68.7140	+14		− 2.9909	−2.9821						2
f	59.6610	+14	68.7220	+14		− 2.9969	−2.9852						3

Scheinbare Ædiff: I—Centrum $= +23.'4035$ $\quad f^\circ_\alpha = 0.99288$ $\quad -i^\circ_\alpha = +0.00237$

O— » $= -52.3150$

K— » $= +27.2038$ $\quad f_\alpha = \mathbf{0.99258}$ $\quad -i_\alpha = \mathbf{+0.00236}$ $\quad ∢\, i_\alpha = -8.'1$

L— » $= +29.2360$ $\quad Refr. = +\ 20$

$Tx_♃ = \ 0$

$\alpha_♃ = 12^h\ 7.^m9$ $\quad f'_\alpha = \mathbf{0.99290}$ $\quad J_\alpha = \mathbf{+0.00256}$

1898. April 29.

he. Decl.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **63.5900**	mm/10000	mm **64.7856**	mm/10000	mm/10000	mm	mm	mm	mm	
63.5891	+ 9	64.7840	+16	0	0.0000		0.0000	0.0000	
63.9555	+17	64.4192	+14	0	+ 0.3661		− 0.0317	+ 0.3344	
73.4840	+31	54.8898	+16	− 7	+ 9.8950		− 0.1595	+ 9.7355	Bilder 4.
78.9172	+17	49.4525	+21	− 4	+15.3294		− 0.0432	+15.2862	
47.7410	+31	80.6318	+24	+ 4	−15.8468		− 0.0491	−15.8959	
68.7890	+14	59.6035	+14		+ 5.1906				
68.3620	+19	60.0290	+14		+ 4.7646	+ 4.7643			
67.9350	+19	60.4560	+14		+ 4.3376				Bilder 3—4.
67.2480	+ 9	61.1585	+10		+ 3.6425				
66.8210	+ 9	61.5740	+ 9		+ 3.2213	+ 3.2235			
66.4055	+ 9	61.9875	+ 9		+ 2.8068				
65.6380	+11	62.7540	+ 9		+ 2.0399				
65.2300	+17	63.1730	+ 9		+ 1.6267	+ 1.6179			
64.7835	+17	63.6055	+ 9		+ 1.1872				
62.4960	+10	65.9010	+18		− 1.1051				
62.0735	+10	66.3150	+18		− 1.5234	− 1.5224			
61.6635	+10	66.7370	+ 8		− 1.9388				
60.9310	+11	67.4585	+18		− 2.6663				
60.5280	+11	67.8640	+18		− 3.0706	− 3.0700			
60.1235	+15	68.2650	+18		− 3.4731				
59.3515	+11	69.0460	+13		− 4.2496				
58.9405	+11	69.4535	+13		− 4.6588	− 4.6588			
58.5330	+11	69.8640	+16		− 5.0680				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.2435	+14	59.1380	+10		+ 5.6508	+0.8865						
67.7130	+19	60.6685	+10		+ 4.1205	+0.8970						
66.0990	+11	62.2830	+ 9		+ 2.5059	+0.8880	+0.8904	+0.′8848	+0.′0040	0.′0000	+0.′0002	**+0.′8890**
62.9540	+10	65.4295	+16		− 0.6402	+0.8822						
61.4140	+11	66.9660	+ 8		− 2.1780	+0.8920						
59.8335	+15	68.5535	+13		− 3.7621	+0.8967						
69.6185	+17	58.7680	+10		+ 6.0234	+1.2591						
68.0870	+19	60.2970	+14		+ 4.4930	+1.2695						
66.4720	+11	61.9160	+ 9		+ 2.8759	+1.2580	+1.2628	+1.2549	+0.0059	0.0000	+0.0002	**+1.2610**
63.3280	+10	65.0545	+16		− 0.2658	+1.2566						
61.7895	+10	66.5940	+ 8		− 1.8044	+1.2656						
60.2015	+15	68.1790	+18		− 3.3911	+1.2677						
69.9900	+18	58.3930	+ 6		+ 6.3969	+1.6326						
68.4575	+20	59.9235	+15		+ 4.8650	+1.6415						
66.8475	+10	61.5350	+11		+ 3.2540	+1.6361	+1.6395	+1.6292	+0.0065	0.0000	+0.0002	**+1.6359**
63.7030	+10	64.6780	+17		+ 0.1100	+1.6324						
62.1700	+11	66.2130	+11		− 1.4237	+1.6463						
60.5820	+12	67.7980	+19		− 3.0106	+1.6482						
70.1020	+18	58.2830	+ 6		+ 6.5079	+1.7436						
68.5750	+15	59.8120	+15		+ 4.9793	+1.7558						
66.9645	+10	61.4270	+11		+ 3.3665	+1.7486	+1.7524	+1.7414	+0.0063	0.0000	+0.0002	**+1.7479**
63.8185	+10	64.5670	+17		+ 0.2232	+1.7456						
62.2815	+11	66.1010	+11		− 1.3120	+1.7580						
60.6990	+12	67.6870	+19		− 2.8962	+1.7626						

Scheinbare Decldiff: *I*—Centrum = + 0.′2845 $f^0_\delta = 0.99295$ $i^0_\delta = -0.00223$

O— » = + 9.7707

K— » = +15.1248 $f_\delta = \mathbf{0.99253}$ $i_\delta = \mathbf{-0.00231}$ $\measuredangle\, i_\delta = -7.'9$

L— » = −15.8417

$f'_\delta = \mathbf{0.99371}$ $J_\delta = \mathbf{-0.00211}$

$\delta_♃ = +0°\ 49.'6$

97. 1898. Mai 1.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**62.2361**		**65.1470**							
J	63.2352	+ 9	65.1453	+17	0	0.0000				1—2
I	84.3480	− 7	44.0328	+19	− 2	+21.1116				1
O	16.0775	+28	112.3038	+ 6	+32	−47.1534		**13ʰ 24ᵐ 20ˢ**		1—2 ellipt.
K	87.6855	− 1	40.6908	+30	− 5	+24.4508				1—2
L	89.7162	− 1	38.6642	+30	− 6	+26.4793				1
♃ a_w	62.8445	+10	65.5505	+16		− 0.3978				
a_c	63.2225	+10	65.1695	+16		− 0.0184	− 0.0152	13 11 10.5		1
a_o	63.6100	+ 9	64.7790	+16		+ 0.3706				
♃ b_w	62.8435	+10	65.5510	+16		− 0.3986				
b_c	63.2200	+10	65.1595	+16		− 0.0146	− 0.0159	12 26		1
b_o	63.6055	+ 9	64.7850	+16		+ 0.3654				
♃ c_w	62.8400	+10	65.5625	+16		− 0.4061				
c_c	63.2165	+10	65.1770	+16		− 0.0251	− 0.0214	13 40		1
c_o	63.5960	+ 9	64.7920	+16		+ 0.3671				
♃ d_w	62.8415	+ 9	65.5555	+17		− 0.4020			**13ʰ 14ᵐ 30ˢ**	
d_c	63.2200	+ 9	65.1675	+17		− 0.0187	− 0.0205	15 16		1
d_o	63.6000	+ 8	64.7915	+17		+ 0.3592				
♃ e_w	62.8645	+ 9	65.5295	+17		− 0.3774				
e_c	63.2435	+ 9	65.1500	+17		+ 0.0018	+ 0.0023	16 40		1
e_o	63.6270	+ 8	64.7720	+17		+ 0.3825				
♃ f_w	62.8710	+10	65.5275	+18		− 0.3732				
f_c	63.2405	+10	65.1440	+18		+ 0.0033	+ 0.0052	17 50		1
f_o	63.6280	+ 9	64.7670	+18		+ 0.3855				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	61.6220	+11	66.7650	+ 9		− 1.6160	−1.6008						1—2
b	61.6205	+10	66.7645	+ 8		− 1.6164	−1.6005						1—2
c	61.6200	+10	66.7695	+ 8		− 1.6192	−1.5978	−1.5940	−1′.5826	+0′.0019	−0′.0010	**−1′.5817**	1—2
d	61.6250	+ 9	66.7640	+ 9		− 1.6140	−1.5935						1
e	61.6515	+ 9	66.7355	+ 9		− 1.5866	−1.5889						1—2
f	61.6605	+10	66.7260	+ 9		− 1.5772	−1.5824						1—2
II a	65.4210	+17	62.9610	+ 9		+ 2.1858	+2.2010						1—2
b	65.4145	+17	62.9685	+ 9		+ 2.1788	+2.1947						1—2
c	65.4085	+16	62.9755	+ 9		+ 2.1723	+2.1937	+2.1907	+2.1750	−0.0025	−0.0010	**+2.1715**	1—2
d	65.4030	+16	62.9815	+10		+ 2.1665	+2.1870						1—2
e	65.4235	+16	62.9635	+10		+ 2.1858	+2.1835						1—2
f	65.4260	+17	62.9585	+11		+ 2.1895	+2.1843						1
III a	69.0420	+16	68.3415	+19		− 3.1944	−3.1792						2
b	60.0435	+15	68.3405	+18		− 3.1937	−3.1778						2
c	60.0400	+15	68.3435	+18		− 3.1964	−3.1750	−3.1729	−3.1502	+0.0036	−0.0010	**−3.1476**	2
d	60.0445	+14	68.3395	+19		− 3.1923	−3.1718						1—2
e	60.0705	+14	68.3140	+19		− 3.1666	−3.1689						1—2
f	60.0790	+14	68.3080	+19		− 3.1593	−3.1645						2
IV a	55.6200	+ 2	72.7660	+15		− 7.6182	−7.6030						1
b	55.6170	+ 1	72.7710	+14		− 7.6222	−7.6063						1
c	55.6100	+ 1	72.7780	+14		− 7.6292	−7.6078	−7.6079	−7.5533	+0.0103	−0.0010	**−7.5440**	1—2
d	55.6100	0	72.7790	+13		− 7.6297	−7.6092						1—2
e	55.6300	− 1	72.7600	+13		− 7.6104	−7.6127						2
f	55.6380	− 1	72.7535	+14		− 7.6030	−7.6082						2

Scheinbare Ædiff: I— Centrum $= +23'.4036$ $f^\circ_\alpha = 0.99280$ $-i^\circ_\alpha = +0.00261$

O— » $= -52.3149$

K— » $= +27.2039$ $f_\alpha =$ **0.99251** $-i_\alpha =$ **+0.00260** $\measuredangle\, i_\alpha = -8''.9$

L— » $= +29.2361$ *Refr.* $= +$ 14

$Tx_♃ =$ 0

$\alpha_♃ = 12^h\, 7^m.3$ $f'_\alpha =$ **0.99282** $J_\alpha =$ **+0.00274**

1898. Mai 1.

…he.

Decl.

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 63.6684	mm/10000	mm 64.7121	mm/10000	mm/10000	mm	mm	mm	mm	
63.6675	+ 9	64.7105	+16	0	0.0000		0.0000	0.0000	Bilder 2.
64.0408	+17	64.3420	+15	0	+ 0.3714		— 0.0317	+ 0.3397	
73.5500	+29	54.8318	+16	— 7	+ 9.8809		— 0.1595	+ 9.7214	
79.0045	+18	49.3750	+22	— 4	+15.3360		— 0.0432	+15.2928	
47.8298	+31	80.5515	+24	+ 4	—15.8382		— 0.0491	—15.8873	
68.8110	+14	59.5850	+14		+ 5.1348				
68.4440	+19	59.9510	+14		+ 4.7686	+ 4.7689			
68.0785	+19	60.3160	+14		+ 4.4034				
67.2140	+ 9	61.1840	+10		+ 3.5368				
66.8435	+ 9	61.5545	+ 9		+ 3.1664	+ 3.1709			
66.4860	+ 9	61.9105	+ 9		+ 2.8096				
65.6450	+11	62.7500	+ 9		+ 1.9694				
65.2810	+17	63.1140	+ 9		+ 1.6058	+ 1.6057			
64.9145	+17	63.4750	+ 9		+ 1.2420				
62.4900	+10	65.9050	+10		— 1.1856				
62.1260	+10	66.2720	+10		— 1.5512	— 1.5507			
61.7600	+10	66.6340	+10		— 1.9152				
60.9345	+11	67.4630	+18		— 2.7578				
60.5610	+11	67.8275	+18		— 3.1118	— 3.1143			
60.1990	+15	68.1890	+18		— 3.4733				
59.3680	+11	69.0310	+13		— 4.3098				
59.0000	+11	69.4005	+13		— 4.6785	— 4.6770			
58.6350	+11	69.7635	+16		— 5.0426				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_{♃}$	Mittel.	$f'_\delta (y_t - y_{♃})$	$J_\delta (x_t - x_{♃})$	$-(x_t^2 - x^2_{♃})\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
69.1465	+14	59.2445	+10		+ 5.4730	+0.7041						
67.5460	+19	60.8425	+10		+ 3.8740	+0.7031						
65.9805	+11	62.4080	+ 9		+ 2.3082	+0.7025	+0.7016	+0'.6972	+0'.0039	0'.0000	+0'.0002	**+0'.7013**
62.8200	+10	65.5705	+10		— 0.8534	+0.6973						
61.2640	+11	67.1275	+ 8		— 2.4098	+0.7045						
59.6970	+15	68.6985	+13		— 3.9788	+0.6982						
67.5160	+ 8	60.8695	+11		+ 3.8450	—0.9239						
65.9200	+10	62.4670	+10		+ 2.2484	—0.9225						
64.3560	+ 8	64.0310	+ 9		+ 0.6843	—0.9214	—0.9192	—0.9134	—0.0053	0.0000	+0.0002	**—0.9185**
61.1970	+10	67.1910	+ 9		— 2.4751	—0.9244						
59.6465	+14	68.7370	+14		— 4.0234	—0.9091						
58.0800	+ 5	70.3050	+17		— 5.5912	—0.9142						
69.7540	+17	58.6260	+10		+ 6.0862	+1.3173						
68.1570	+19	60.2255	+14		+ 4.4878	+1.3169						
66.5930	+ 9	61.7935	+ 9		+ 2.9217	+1.3160	+1.3146	+1.3064	+0.0077	0.0000	+0.0002	**+1.3143**
63.4300	+10	64.9530	+16		— 0.2400	+1.3107						
61.8745	+10	66.5145	+ 8		— 1.7980	+1.3163						
60.3035	+15	68.0805	+18		— 3.3668	+1.3102						
72.1890	+14	56.2000	+ 2		+ 8.5170	+3.7481						
70.5925	+15	57.7990	+ 8		+ 6.9190	+3.7481						
69.0275	+16	59.3600	+13		+ 5.3558	+3.7501	+3.7510	+3.7274	+0.0185	—0.0001	+0.0002	**+3.7460**
65.8710	+13	62.5220	+12		+ 2.1964	+3.7471						
64.3200	+11	64.0740	+11		+ 0.6448	+3.7591						
62.7510	+12	65.6415	+13		— 0.9234	+3.7536						

Scheinbare Decldiff: I—Centrum = + 0'.2845 $f^\circ_\delta = 0.99300$ $i^\circ_\delta = -0.00252$

O— » = + 9.7707

K— » = +15.1248 f_δ = **0.99259** i_δ = **—0.00258** ∢ $i_\delta = -$ 8'.9

L— » = —15.8417 f'_δ = **0.99371** J_δ = **—0.00244**

$\delta_{♃} = + 0° 52'.9$

98. 1898. Mai 2.

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Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w + ♃_c + ♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.0518**		**64.3186**							
J	64.0510	+ 8	64.3178	+ 8	0	0.0000				1—2
I	85.1740	— 2	43.2042	+21	— 2	+21.1170				1—2
O	16.9018	+29	111.4662	+ 6	+32	—47.1444		$14^h\ 17^m\ 15^s$		2
K	88.5140	— 1	39.8560	+31	— 5	+24.4603				1—2
L	90.5390	0	37.8380	+29	— 6	+26.4818				1
♃ a_w	63.5485	+10	64.8405	+17		— 0.5130				
a_c	63.9830	+10	64.4030	+ 9		— 0.0766	— 0.0745	14 5 10		2—3
a_o	64.4295	+10	63.9640	+ 9		+ 0.3662				
♃ b_w	63.5655	+ 9	64.8235	+16		— 0.4960				
b_c	64.0055	+ 9	64.3870	+ 8		— 0.0573	— 0.0591	6 16		2
b_o	64.4350	+ 9	63.9500	+ 8		+ 0.3760				
♃ c_w	63.5660	+ 9	64.8230	+16		— 0.4954				
c_c	64.0255	+ 9	64.3795	+ 8		— 0.0436	— 0.0456	7 12		3
c_o	64.4620	+ 9	63.9245	+ 8		+ 0.4022			$14^h\ 7^m\ 46^s$ *)	
♃ d_w	63.5960	+ 8	64.7935	+17		— 0.4658				
d_c	64.0370	+ 8	64.3545	+ 9		— 0.0254	— 0.0295	8 22		2—3
d_o	64.4655	+ 8	63.9270	+ 9		+ 0.4026				
♃ e_w	63.5825	+ 8	64.8095	+17		— 0.4806				
e_c	64.0230	+ 8	64.3725	+ 9		— 0.0414	— 0.0402	9 22		2—3
e_o	64.4610	+ 8	63.9250	+ 9		+ 0.4014				
♃ f_w	63.5980	+ 9	64.7930	+18		— 0.4646				
f_c	64.0275	+ 9	64.3630	+10		— 0.0344	— 0.0341	10 16		2—3
f_o	64.4590	+ 9	63.9320	+10		+ 0.3968				

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	Trabant — Jupiterscentrum. $x_t - x_♃$	Mittel.	$f'_\alpha(x_t - x_♃)$	$J_\alpha(y_t - y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder
							mm	mm					
I a	64.8635	+17	63.5160	+10		+ 0.8075	+0.8820						2—3
b	64.8710	+17	63.5030	+ 9		+ 0.8178	+0.8769						2
c	64.8850	+17	63.4880	+ 9		+ 0.8323	+0.8779	+0.8718	+0.′8656	—0.′0008	—0.′0011	**+0.′8637**	2—3
d	64.8930	+16	63.4880	+10		+ 0.8362	+0.8657						2—3
e	64.8845	+16	63.4950	+10		+ 0.8284	+0.8686						3
f	64.8800	+17	63.4960	+11		+ 0.8257	+0.8598						2
II a	61.4060	+12	66.9715	+ 9		— 2.6492	—2.5747						2—3
b	61.4190	+11	66.9615	+ 8		— 2.6377	—2.5786						2—3
c	61.4360	+11	66.9420	+ 8		— 2.6196	—2.5740	—2.5794	—2.5611	+0.0035	—0.0011	**—2.5587**	2
d	61.4405	+10	66.9380	+ 8		— 2.6152	—2.5857						2
e	61.4400	+10	66.9415	+ 9		— 2.6173	—2.5771						2—3
f	61.4340	+10	66.9420	+ 9		— 2.6206	—2.5865						2
III a	64.8700	+17	63.5050	+ 9		+ 0.8213	+0.8958						2—3
b	64.8915	+17	63.4810	+ 9		+ 0.8390	+0.8981						2—3
c	64.9090	+17	63.4600	+ 9		+ 0.8583	+0.9039	+0.9022	—0.8958	—0.0018	—0.0011	**+0.8929**	2—3
d	64.9255	+16	63.4505	+10		+ 0.8712	+0.9007						2
e	64.9210	+16	63.4525	+10		+ 0.8680	+0.9082						2—3
f	64.9265	+17	63.4495	+11		+ 0.8722	+0.9063						2
IV a	55.4950	+ 2	72.8850	+16		— 8.5623	—8.4878						2—3
b	55.5075	+ 2	72.8730	+14		— 8.5500	—8.4909						2—3
c	55.5255	+ 1	72.8545	+14		— 8.5318	—8.4862	—8.4874	—8.4270	+0.0107	—0.0011	**—8.4174**	3
d	55.5375	0	72.8385	+13		— 8.5178	—8.4883						2
e	55.5375	— 1	72.8450	+13		— 8.5210	— 8.4808						2—3
f	55.5325	— 1	72.8475	+14		— 8.5248	—8.4907						2

Scheinbare Ædiff: I—Centrum $= +23.'4036$ $\quad f^\circ_\alpha = 0.99282$ $\quad -i^\circ_\alpha = +0.00239$

O— » $= -52.3149$

K— » $= +27.2039$ $\quad f_\alpha = \mathbf{0.99251}$ $\quad -i_\alpha = \mathbf{+0.00237}$ $\quad \measuredangle\, i_\alpha = -\ 8.'1$

L— » $= +29.2361$ $\quad Refr. = + \quad 30$

$Tx_♃ = \quad 0$

$\alpha_♃ = 12^h\ 7.^m0$ $\quad f'_\alpha = \mathbf{0.99288}$ $\quad J_\alpha = \mathbf{+0.00267}$

*) Der Chronometer war nicht verglichen worden, die $= 0$ angenommene Correction dürfte um höchstens $\pm 5^s$ fehlerhaft sein.

ihe.

1898. Mai 2.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\, tg\delta \sin 1'$	$y - \frac{x^2}{2}\, tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm 64.2098	mm/10000	mm 64.1634	mm/10000	mm/10000	mm	mm	mm	mm	
64.2090	+ 8	64.1626	+ 8	0	0.0000		0.0000	0.0000	Bilder 3. Mondschein.
64.5810	+26	63.7955	+15	0	+ 0.3701		— 0.0317	+ 0.3384	
74.1015	+29	54.2712	+20	— 7	+ 9.8917		— 0.1595	+ 9.7322	
79.5410	+20	48.8265	+22	— 4	+15.3336		— 0.0432	+15.2904	
48.3640	+32	80.0102	+18	+14	—15.8452		— 0.0491	—15.8943	
69.4275	+13	58.9690	+10		+ 5.2062				
68.9980	+13	59.3970	+10		+ 4.7774	+ 4.7820			
68.5725	+13	59.8015	+10		+ 4.3624				
67.8360	+18	60.5515	+10		+ 3.6194				
67.4140	+ 8	60.9820	+10		+ 3.1927	+ 3.1976			
67.0025	+ 8	61.3945	+10		+ 2.7807				
66.2900	+10	62.0965	+ 9		+ 2.0736				
65.8715	+10	62.5290	+ 9		+ 1.6481	+ 1.6454			
65.4340	+10	62.9590	+ 9		+ 1.2144				
63.1260	+ 9	65.2655	+16		— 1.0933				
62.7000	+ 9	65.6910	+10		— 1.5188	— 1.5147			
62.2865	+ 9	66.1040	+10		— 1.9320				
61.5630	+10	66.8270	+ 8		— 2.6551				
61.1400	+10	67.2600	+ 8		— 3.0831	— 3.0834			
60.7070	+10	67.6840	+18		— 3.5121				
59.9755	+14	68.4150	+13		— 4.2429				
59.5660	+14	68.8350	+13		— 4.6566	— 4.6566			
59.1480	+10	69.2420	+13		— 5.0704				

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	Trabant — Jupiterscentrum. $y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x_♃^2)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.6650	+13	59.7130	+15		+ 4.4527	—0.3293						
67.0900	+ 8	61.2910	+11		+ 2.8762	—0.3214						
65.5345	+16	62.8455	+10		+ 1.3216	—0.3238	—0.3218	—0′.3198	—0′.0019	0′.0000	+0′.0002	**—0′.3215**
62.3750	+ 9	66.0030	+11		— 1.8373	—0.3226						
60.8090	+10	67.5730	+19		— 3.4056	—0.3222						
59.2450	+10	69.1350	+14		— 4.9684	—0.3118						
70.3155	+17	58.0640	+ 5		+ 6.1032	+1.3212						
68.7355	+14	59.6430	+14		+ 4.5230	+1.3254						
67.1785	+ 9	61.1990	+10		+ 2.9664	+1.3210	+1.3257	+1.3174	+0.0056	0.0000	+0.0002	**+1.3232**
64.0240	+ 9	64.3515	+ 8		— 0.1869	+1.3278						
62.4540	+10	65.9260	+10		— 1.7592	+1.3242						
60.8915	+11	67.4890	+ 8		— 3.3218	+1.3348						
68.3140	+19	60.0540	+15		+ 4.1070	—0.6750						
66.7355	+ 9	61.6370	+10		+ 2.5260	—0.6716						
65.1785	+17	63.1945	+10		+ 0.9692	— 0.6762	—0.6754	—0.6712	—0.0020	0.0000	+0.0002	**—0.6730**
62.0180	+10	66.2540	+11		— 2.1912	—0.6765						
60.4480	+15	67.9265	+19		— 3.7626	—0.6792						
58.8800	+11	69.4960	+14		— 5.3308	—0.6742						
73.0190	+16	55.3630	+ 2		+ 8.8055	+4.0235						
71.4310	+15	56.9465	+12		+ 7.2192	+4.0216						
69.8830	+19	58.5010	+ 8		+ 5.6684	+4.0230	+4.0233	+3.9981	+0.0185	—0.0002	+0.0002	**+4.0166**
66.7230	+11	61.6585	+12		+ 2.5090	+4.0237						
65.1490	+19	63.2305	+12		+ 0.9364	+4.0198						
63.5870	+11	64.7925	+19		— 0.6264	+4.0302						

Scheinbare Decldiff: I—Centrum $= +\ 0'.2845$ $\quad f^\circ_\delta = 0.99286 \quad i^\circ_\delta = -0.00238$

O— » $= +\ 9.7707$

K— » $= +15.1248$ $\quad f_\delta = \mathbf{0.99242} \quad i_\delta = \mathbf{-0.00249} \quad \measuredangle\, i_\delta = -8'.6$

L— » $= -15.8417$ $\quad f'_\delta = \mathbf{0.99373} \quad J_\delta = \mathbf{-0.00218}$

$\delta_♃ = +\ 0°\ 54'.6$

99. 1898. Mai 16.

Æ 2

Object.	Scalenablesung. P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Pulkowaer Sternzeit Mittel.	Bilder.
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**64.1768**		**64.1940**							
J	64.1760	+ 8	64.1932	+ 8	0	0.0000				1
I	85.2920	— 2	43.0800	+21	— 2	+21.1132				1
O	17.0152	+29	111.3518	+ 6	+32	—47.1554		15^h 16^m 30^s		1—2 ellipt.
K	88.6325	— 2	39.7380	+31	— 5	+24.4537				1
L	90.6590	0	37.7105	+29	— 6	+26.4809				1—2
♃ a_w	63.7235	+10	64.6680	+17		— 0.4640				
a_c	64.1355	+10	64.2525	+ 9		— 0.0498	— 0.0504	15 3 42		1—2
a_o	64.5480	+10	63.8400	+ 9		+ 0.3626				
♃ b_w	63.7430	+ 9	64.6480	+16		— 0.4442				
b_c	64.1545	+ 9	64.2310	+ 8		— 0.0296	— 0.0301	4 42		1—2
b_o	64.5700	+ 9	63.8200	+ 8		+ 0.3836				
♃ c_w	63.7510	+ 9	64.6380	+16		— 0.4352				
c_c	64.1640	+ 9	64.2310	+ 8		— 0.0248	— 0.0224	5 42		1
c_o	64.5785	+ 9	63.8100	+ 8		+ 0.3929			15^h 6^m 12^s	
♃ d_w	63.7770	+ 8	64.6135	+17		— 0.4101				
d_c	64.1870	+ 8	64.2000	+ 9		+ 0.0020	+ 0.0001	6 42		1—2
d_o	64.5975	+ 8	63.7980	+ 9		+ 0.4083				
♃ e_w	63.7780	+ 8	64.6080	+17		— 0.4068				
e_c	64.1905	+ 8	64.1965	+ 9		+ 0.0056	+ 0.0051	7 36		1—2
e_o	64.6045	+ 8	63.7885	+ 9		+ 0.4166				
♃ f_w	63.7555	+ 9	64.6340	+12		— 0.4308				
f_c	64.1700	+ 9	64.2145	+10		— 0.0137	— 0.0143	8 48		1—2
f_o	64.5890	+ 9	63.8030	+10		+ 0.4016				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	$t+k$	P.-Kr. 180°	$t+k$	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha\cos\delta$	Bilder.
							mm	mm					
I a	65.6850	+11	62.6905	+ 9		+ 1.5060	+1.5564						2
b	65.7055	+11	62.6725	+ 9		+ 1.5252	+1.5553						2—3
c	65.7130	+11	62.6680	+ 9		+ 1.5312	+1.5536	+1.5508	+1'.5399	—0'.0021	—0'.0016	**+1'.5362**	2
d	65.7300	+10	62.6490	+10		+ 1.5491	+1.5490						2
e	65.7350	+10	62.6450	+10		+ 1.5536	+1.5485						2
f	65.7085	+11	62.6705	+11		+ 1.5276	+1.5419						2—3
II a	62.3015	+11	66.0770	+11		— 1.8792	—1.8288						2—3
b	62.3220	+10	66.0570	+10		— 1.8589	—1.8288						2—3
c	62.3290	+10	66.0500	+10		— 1.8519	—1.8295	—1.8340	—1.8211	+0.0032	—0.0016	**—1.8195**	2—3
d	62.3450	+ 9	66.0320	+11		— 1.8350	—1.8351						2
e	62.3465	+ 9	66.0275	+11		— 1.8320	—1.8371						2
f	62.3220	+ 9	66.0570	+11		— 1.8590	—1.8447						2
III	Bedeckt.												
IV a	60.2310	+17	68.1450	+19		— 3.9485	—3.8981						2—3
b	60.2495	+16	68.1305	+19		— 3.9320	—3.9019						2—3
c	60.2600	+15	68.1200	+18		— 3.9216	—3.8992	—3.9032	—3.8757	+0.0068	—0.0016	**—3.8705**	3
d	60.2750	+14	68.1030	+18		— 3.9056	—3.9057						2—3
e	60.2800	+14	68.0980	+18		— 3.9006	—3.9057						2
f	60.2585	+14	68.1210	+19		— 3.9229	—3.9086						3

Scheinbare Ædiff.: I— Centrum = +23'.4039 f°_α = 0.99275 $-i^\circ_\alpha$ = +0.00257
O— » = —52.3149
K— » = +27.2046 f_α = **0.99240** $-i_\alpha$ = **+0.00252** ∡ i_α = — 8'.7
L— » = +29.2369 *Refr.* = + 63
$Tx_♃$ = 0
$\alpha_♃ = 12^h\ 4^m.3$ f'_α = **0.99295** J_α = **+0.00315**

1898. Mai 16.

he. **Decl.**

Scalenablesung. P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2} tg\delta \sin 1'$	$y - \frac{x^2}{2} tg\delta \sin 1'$	Bemerkungen zur Aufnahme.
mm **64.2023**	mm/10000	mm **64.1713**	mm/10000	mm/10000	mm	mm	mm	mm	
64.2015	+8	64.1705	+8	0	0.0000		0.0000	0.0000	Bilder 3.
64.5660	+26	63.8045	+15	0	+0.3660		−0.0317	+0.3343	Leichte Wolken.
70.0995	+29	54.2712	+20	−7	+9.8986		−0.1595	+9.7391	
79.5292	+20	48.8365	+22	−4	+15.3306		−0.0432	+15.2874	
48.3515	+32	80.0152	+18	+4	−15.8460		−0.0491	−15.8951	
69.3725	+13	59.0220	+10		+5.1596				Bilder 3—4.
68.9780	+13	59.4170	+10		+4.7654	+4.7642			
68.5765	+13	59.8110	+10		+4.3676				
67.7850	+8	60.6145	+10		+3.5698				
67.3845	+8	61.0020	+10		+3.1758	+3.1739			
66.9860	+8	61.4030	+10		+2.7761				
66.2205	+10	62.1770	+9		+2.0065				
65.8220	+10	62.5670	+9		+1.6122	+1.6110			
65.4240	+10	62.9650	+9		+1.2142				
63.0660	+9	65.3235	+16		−1.1444				
62.6660	+9	65.7180	+10		−1.5414	−1.5395			
62.2780	+9	66.1130	+10		−1.9328				
61.4870	+10	66.9060	+8		−2.7247				
61.0895	+10	67.2960	+8		−3.1184	−3.1186			
60.6980	+10	67.6920	+18		−3.5127				
59.9205	+14	68.4660	+13		−4.2880				
59.5270	+14	68.8670	+13		−4.6852	−4.6851			
59.1290	+10	69.2620	+13		−5.0820				

Trabant — Jupiterscentrum.

P.-Kr. 90°	$t+k$	P.-Kr. 270°	$t+k$	s	y	$y_t - y_♃$	Mittel.	$f'_\delta(y_t - y_♃)$	$J_\delta(x_t - x_♃)$	$-(x_t^2 - x^2_♃)\frac{T}{2}$	Ph.	$\Delta\delta$
						mm	mm					
68.2820	+18	60.0910	+15		+4.0804	−0.6838						
66.6980	+8	61.6845	+10		+2.4914	−0.6825						
65.1400	+16	63.2380	+10		+0.9360	−0.6750	−0.6784	−0'.6745	−0'.0027	0'.0000	+0'.0004	**−0'.6768**
61.9890	+9	66.3915	+11		−2.2166	−0.6771						
60.4110	+14	67.9665	+19		−3.7933	−0.6747						
58.8420	+10	69.5360	+17		−5.3626	−0.6775						
69.9790	+17	58.4000	+5		+5.7748	+1.0106						
68.3875	+19	59.9910	+14		+4.1832	+1.0093						
66.8300	+9	61.5500	+9		+2.6247	+1.0137	+1.0126	+1.0068	+0.0032	0.0000	+0.0004	**+1.0104**
63.6795	+9	64.7010	+16		−0.5264	+1.0131						
62.1030	+10	66.2750	+10		−2.1013	+1.0173						
60.5320	+11	67.8475	+18		−3.6734	+1.0117						
Bedeckt.												
71.1175	+13	57.2660	+10		+6.9106	+2.1464						
69.5290	+17	58.8530	+11		+5.3230	+2.1491						
67.9690	+19	60.4125	+15		+3.7632	+2.1522	+2.1484	+2.1360	+0.0069	0.0000	+0.0004	**+2.1433**
64.8135	+17	63.5660	+9		+0.6088	+2.1483						
63.2250	+10	65.1450	+17		−0.9706	+2.1480						
61.6675	+10	66.7150	+9		−2.5390	+2.1461						

Scheinbare Decldiff: I— Centrum = + 0'.2843 $\quad f^\circ_\delta = 0.99296 \quad i^\circ_\delta = -0.00222$

O— » = + 9.7712

K— » = +15.1250 $\quad f_\delta = \mathbf{0.99247} \quad i_\delta = \mathbf{-0.00241} \quad ∢\, i_\delta = -8'.3$

L— » = −15.8421 $\quad f'_\delta = \mathbf{0.99426} \quad J_\delta = \mathbf{-0.00177}$

$\delta_♃ = +1^\circ\ 9'.3$

100. **1898. Mai 19.**

Æ

Object.	Scalenablesung. P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$\frac{♃_w+♃_c+♃_o}{3}$	Pulkowaer Sternzeit der Aufnahmen.	Mittel.	Bilder
	mm	mm/10000	mm	mm/10000	mm/10000	mm	mm			
Ctr.	**63.5310**		**64.8411**							
J	63.5302	+ 8	64.8395	+16	0	0.0000				1—2 *)
I	84.6495	— 2	43.7272	+19	— 2	+21.1150				2
O	16.3770	+29	111.9908	+ 6	+32	—47.1475		**14h 22m 20s**		2
K	87.9905	— 1	40.3788	+31	— 5	+24.4588				2
L	90.0075	— 1	38.3628	+29	— 6	+26.4753				2—3
♃ a_w	63.1175	+11	65.2690	+17		— 0.4160				
a_c	63.5330	+10	64.8570	+17		— 0.0073	— 0.0041	14 10 30		3
a_o	63.9520	+10	64.4395	+17		+ 0.4110				
♃ b_w	63.1295	+10	65.2535	+16		— 0.4072				
b_c	63.5580	+ 9	64.8310	+16		+ 0.0182	+ 0.0187	12 11		3
b_o	63.9810	+ 9	64.4005	+16		+ 0.4450				
♃ c_w	63.1005	+10	65.2835	+16		— 0.4368				
c_c	63.5235	+ 9	64.8730	+16		— 0.0200	— 0.0179	13 12		3
c_o	63.9395	+ 9	64.4430	+16		+ 0.4030				
♃ d_w	63.1235	+ 9	65.3685	+17		— 0.4178			**14h 13m 43s**	W-rand 1.
d_c	63.5355	+ 8	64.8555	+17		— 0.0054	— 0.0042	14 22		O-rand 3.
d_o	63.9475	+ 8	64.4355	+17		+ 0.4106				
♃ e_w	63.1155	+ 9	65.2770	+17		— 0.4261				
e_c	63.5365	+ 8	64.8515	+17		— 0.0029	— 0.0047	15 31		2
e_o	63.9540	+ 8	64.4335	+17		+ 0.4148				
♃ f_w	63.1140	+10	65.2800	+18		— 0.4284				
f_c	63.5270	+ 9	64.8610	+18		— 0.0124	— 0.0104	16 30		3
f_o	63.9495	+ 9	64.4395	+18		+ 0.4096				

Trabant — Jupiterscentrum.

Object.	P.-Kr. 0°	t+k	P.-Kr. 180°	t+k	s	x	$x_t-x_♃$	Mittel.	$f'_\alpha(x_t-x_♃)$	$J_\alpha(y_t-y_♃)$	Ph.	$\Delta\alpha \cos\delta$	Bilder
							mm	mm					
I	Bedeckt.												
II a	64.5980	+17	63.7800	+ 8		+ 1.0645	+1.0686						2—3
b	64.6130	+17	63.7700	+ 8		+ 1.0770	+1.0583						3—4
c	64.5880	+17	63.7975	+ 8		+ 1.0508	+1.0687	+1.0596	+1′.0520	—0′.0009	—0′.0018	**+1′.0493**	2—3
d	64.5820	+16	63.7950	+ 9		+ 1.0489	+1.0531						3
e	64.5875	+16	63.7925	+ 9		+ 1.0529	+1.0576						3
f	64.5765	+17	63.8055	+10		+ 1.0409	+1.0513						3
III a	66.1830	+11	62.1885	+ 9		+ 2.6524	+2.6565						3
b	66.1950	+11	62.1740	+ 9		+ 2.6656	+2.6469						4
c	66.1730	+11	62.2010	+ 9		+ 2.6412	+2.6591						3
d	66.1795	+10	62.1945	+10		+ 2.6476	+2.6518	+2.6520	+2.6331	—0.0027	—0.0018	**+2.6286**	2—3
e	66.1800	+10	62.1960	+10		+ 2.6470	+2.6517						3
f	66.1675	+11	62.2080	+11		+ 2.6358	+2.6462						2—3
IV a	55.3655	+ 2	73.0155	+16		— 8.1706	—8.1665						3
b	55.3855	+ 2	72.9990	+14		— 8.1523	—8.1710						3 unterexpon.
c	55.3605	+ 1	73.0235	+14		— 8.1771	—8.1592	—8.1665	—8.1082	+0.0097	—0.0018	**—8.1003**	3—4
d	55.3650	0	73.0200	+13		— 8.1731	—8.1689						3
e	55.3690	— 1	73.0175	+13		— 8.1699	—8.1652						3 unterexpon.
f	55.3590	— 1	73.0245	+14		— 8.1784	—8.1680						3

Scheinbare Ædiff: I—Centrum $= +23'.4040$ $f^\circ_\alpha = 0.99279$ $-i^\circ_\alpha = +0.00222$

O— » $= -52.3143$

K— » $= +27.2047$ $f_\alpha = \mathbf{0.99248}$ $-i_\alpha = \mathbf{+0.00219}$ $\sphericalangle\, i_\alpha = -7'.5$

L— » $= +29.2370$ $Refr. = +\ 33$

$Tx_♃ = 0$

$\alpha_♃ = 12^h\ 3^m.9$ $f'_\alpha = \mathbf{0.99286}$ $J_\alpha = \mathbf{+0.00252}$

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*) Die Platte ist vom Mondlicht geschwärzt.

1898. Mai 19.

Decl.

Scalenablesung. P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$\frac{♃_n + ♃_c + ♃_s}{3}$	$-\frac{x^2}{2}\,tg\delta\sin 1'$	$y-\frac{x^2}{2}\,tg\delta\sin 1'$	Bemerkungen zur Aufnahme.
mm	mm/10000	mm	mm/10000	mm/10000	mm	mm	mm	mm	
64.2171		**64.1596**							
64.2162	+ 9	64.1588	+ 8	0	0.0000		0.0000	0.0000	Bilder 3.
64.5770	+26	63.8002	+15	0	+ 0.3602		— 0.0317	+ 0.3285	
74.1265	+29	54.2436	+20	— 7	+ 9.9124		— 0.1595	+ 9.7529	
79.5372	+20	48.8312	+22	— 4	+15.3238		— 0.0432	+15.2806	
48.3622	+32	80.0115	+18	+ 4	—15.8523		— 0.0491	—15.9014	
69.3550	+14	59.0400	+10		+ 5.1290				Bilder 3—4. Wind. Himmelsgrund sehr hell.
68.9540	+14	59.4360	+10		+ 4.7304	+ 4.7294			
68.5530	+14	59.8380	+14		+ 4.3288				
67.8255	+19	60.5610	+10		+ 3.6040				
67.4290	+ 9	60.9740	+10		+ 3.1987	+ 3.1987			
67.0165	+ 9	61.3720	+10		+ 2.7934				
66.2085	+11	62.1760	+ 9		+ 1.9876				
65.8090	+11	62.5960	+ 9		+ 1.5778	+ 1.5791			
65.3920	+11	62.9910	+ 9		+ 1.1718				
63.0960	+10	65.2910	+16		— 1.1266				
62.6950	+10	65.7015	+10		— 1.5320	— 1.5311			
62.2920	+10	66.1040	+10		— 1.9348				
61.5325	+11	66.8610	+ 8		— 2.6928				
61.1320	+11	67.2675	+ 8		— 3.0964	— 3.0999			
60.7150	+11	67.6790	+ 8		— 3.5106				
59.9335	+15	68.4600	+13		— 4.2919				
59.5370	+15	68.8650	+13		— 4.6926	— 4.6902			
59.1400	+11	69.2545	+13		— 5.0861				

Trabant — Jupiterscentrum.

P.-Kr. 90°	t+k	P.-Kr. 270°	t+k	s	y	$y_t-y_{♃}$	Mittel.	$f'_\delta(y_t-y_{♃})$	$J_\delta(x_t-x_{♃})$	$-(x_t^2-x_{♃}^2)\frac{T}{2}$	Ph.	Δδ
						mm	mm					
Bedeckt.												
68.5930	+13	59.7630	+15		+ 4.3712	—0.3582						
67.0595	+ 8	61.3235	+11		+ 2.8391	—0.3596						
65.4450	+16	62.9400	+10		+ 1.2240	—0.3551	—0.3544	—0.′3521	—0.′0018	0.′0000	+0.′0004	**—0.′3535**
62.3370	+ 9	66.0465	+11		— 1.8836	—0.3525						
60.7700	+10	67.6160	+19		— 3.4522	—0.3523						
59.1805	+10	69.2000	+14		— 5.0387	—0.3485						
67.8750	+18	60.4980	+15		+ 3.6599	—1.0695						
66.3415	+10	62.0320	+10		+ 2.1260	—1.0727						
64.7230	+16	63.6510	+ 9		+ 0.5076	—1.0715	—1.0697	—1.0631	—0.0045	0.0000	+0.0004	**—1.0672**
61.6180	+ 9	66.7625	+ 9		— 2.6010	—1.0699						
60.0510	+14	68.3300	+19		— 4.1685	—1.0688						
58.4640	+ 5	69.9180	+17		— 5.7564	—1.0662						
72.7875	+16	55.5985	+ 2		+ 8.5664	+3.8370						
71.2515	+15	57.1310	+12		+ 7.0316	+3.8329						
69.6315	+19	58.7510	+13		+ 5.4118	+3.8327	+3.8334	+3.8101	+0.0140	—0.0002	+0.0004	**+3.8243**
66.5260	+13	61.8620	+12		+ 2.3033	+3.8344						
64.9510	+19	63.4330	+12		+ 0.7306	+3.8305						
63.3640	+12	65.0200	+19		— 0.8571	+3.8331						

Scheinbare Decldiff: I—Centrum = + 0.′2843 $\quad f^\circ_\delta = 0.99299 \quad i^\circ_\delta = -0.00193$

O— » = + 9.7713

K— » = +15.1250 $\quad f_\delta = \mathbf{0.99254} \quad i_\delta = \mathbf{-0.00205} \quad \measuredangle\, i_\delta = -7.'0$

L— » = —15.8422

$f'_\delta = \mathbf{0.99387} \quad J_\delta = \mathbf{-0.00171}$

$\delta_{♃} = +1^\circ\ 10.'6$

POSITIONEN DER JUPITERSTRABANTEN

WÄHREND DER

OPPOSITIONEN 1891—1898.

32*

Opposition 1891.

1891.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	$\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
September *22* *)	$10^h\ 37^m\ 33^s$	I	+ 0′ 34.″23	+ 0′ 9.″97	6	$33^m\ 24^s$	1 A
		II	+ 1 22.44	+ 0 31.50			
		III	+ 5 2.84	+ 2 21.91			
		IV	— 7 45.94	— 3 39.07			
September 22	10 42 1	I	+ 0 32.36	+ 0 9.46	5	33 24	1 B
		II	+ 1 21.47	+ 0 31.34			
		III	+ 5 3.33	+ 2 22.07			
		IV	— 7 46.30	— 3 38.97			
September 24	10 38 38	I	— 1 12.62	— 0 37.13	3	33 29	2 A
		III	+ 1 32.11	+ 0 30.37			
		IV	— 9 47.69	— 4 21.02			
October *3*	8 58 40	I	— 1 42.61	— 0 48.84	4	33 59	2 B
		III	— 5 20.45	— 2 27.35			
		IV	+ 9 18.42	+ 4 2.38			
October *3*	11 33 18	I	— 2 5.71	— 0 58.23	3	33 59	2 C
		II	— 1 0.82	— 0 33.43			
		III	— 5 27.39	— 2 29.60			
		IV	+ 9 10.47	+ 3 57.28			
October 5	10 38 30	I	— 2 0.86	— 0 53.23	5	34 8	2 D
		II	+ 2 7.73	+ 1 1.20			
		IV	+ 4 22.18	+ 1 41.56			
October 13	11 40 47	I	+ 1 38.92	+ 0 41.40	3	34 46	5 B
		II	+ 2 31.07	+ 1 4.86			
		III	+ 3 48.00	+ 1 49.07			
		IV	— 4 55.81	— 1 58.27			
October 29	9 21 16	I	+ 1 39.63	+ 0 41.39	5	36 21	5 C
		II	— 2 36.50	— 1 8.42			
		III	+ 4 15.97	+ 1 48.38			
		IV	— 6 43.43	— 2 48.78			
October 31	8 15 32	I	+ 0 34.07	+ 0 10.98	5	36 34	5 D
		II	+ 1 57.68	+ 0 48.80			
		III	— 3 32.79	— 1 41.86			
		IV	— 0 47.31	— 0 8.92			
November *2*	7 54 13	I	— 0 46.44	— 0 17.36	5	36 46	6 A
		II	— 0 57.08	— 0 29.00			
		III	— 3 2.74	— 1 14.79			
		IV	+ 5 34.29	+ 2 35.98			

*) Für die durch Cursivschrift bezeichneten Daten wurden die Plattenconstanten vorhergehenden oder nachfolgenden Abenden entnommen.

1891.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	$\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
November 4	$7^h\ 50^m\ 31^s$	I III IV	— 1′ 56.″19 + 4 35.92 + 8 56.93	— 0 52.″97 + 2 6.41 + 3 56.88	5	$37^m\ 2^s$	6 B
November 4	9 19 33	I II III IV	— 2 0.63 — 0 41.81 + 4 42.74 + 8 58.59	— 0 53.98 — 0 23.30 + 2 8.96 + 3 57.37	4	37 2	6 C
November 8	8 32 39	II III IV	— 2 33.84 — 5 1.42 + 2 7.11	— 1 11.79 — 2 14.93 + 0 43.57	6	37 30	6 D
December 3	8 48 42	I II III IV	+ 1 12.36 — 2 40.83 + 4 36.75 — 2 0.37	+ 0 34.63 — 1 14.18 + 2 5.38 — 0 42.95	6	40 44	7 A
December 5	6 34 57	I II IV	+ 1 41.89 + 2 53.46 + 3 39.18	+ 0 46.71 + 1 19.40 + 1 46.81	5	40 57	7 B
December 7	5 58 8	I II III IV	+ 1 41.24 — 2 44.95 — 4 30.36 + 7 33.56	+ 0 43.84 — 1 15.08 — 2 1.57 + 3 25.41	5	41 13	7 C
December 19	8 51 14	I II III IV	+ 1 25.60 + 2 36.63 + 1 8.27 — 3 58.39	+ 0 40.10 + 1 12.96 + 0 20.32 — 1 38.46	4	42 46	7 D
December 22	6 22 47	I III IV	— 1 39.63 — 3 13.21 + 3 58.53	— 0 45.43 — 1 23.96 + 1 55.08	5	43 8	8 A

Opposition 1892—1893.

1892. August 21	12 45 16	I II III IV	+ 2 2.99 + 1 52.63 — 5 18.28 — 2 12.98	+ 0 41.53 + 0 49.96 — 2 14.16 — 1 26.80	5	35 49	9 A
August 22	12 58 28	I II III IV	— 2 6.14 — 2 59.60 — 3 24.09 — 5 27.32	— 0 53.21 — 1 23.20 — 1 9.99 — 2 43.22	5	35 43	9 B
August 24	12 53 46	I II III IV	— 1 27.97 + 3 18.90 + 4 40.23 — 9 12.36	— 0 31.34 + 1 25.21 + 2 7.59 — 3 57.96	5	35 30	9 C

1892.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
August 25	$11^h\ 27^m\ 3^s$	II III IV	+ 1′ 9″.42 + 5 7.08 − 9 14.85	+ 0′ 21″.99 + 2 2.07 − 3 47.27	6	$35^m\ 25^s$	9 D
August 30	14 3 49	I II III IV	+ 2 3.11 − 1 15.22 + 0 30.78 + 4 53.09	+ 0 48.82 − 0 20.05 + 0 33.93 + 2 30.56	5	34 55	10 A
September 6	13 49 48	I II IV	+ 2 10.39 − 1 51.57 − 0 6.35	+ 0 54.09 − 0 37.08 − 0 36.80	5	34 19	10 B
September 7	13 34 27	I II III IV	− 2 2.17 + 3 12.87 + 4 4.78 − 3 40.58	− 0 49.02 + 1 26.90 + 1 57.63 − 2 4.55	5	34 15	10 C
September 12	14 48 20	I II III IV	− 1 55.14 − 2 19.70 − 4 44.44 − 7 11.46	− 0 53.22 − 1 11.19 − 1 49.00 − 2 40.06	4	33 53	10 D
September 14	13 35 48	I II III IV	− 2 12.25 + 2 49.27 + 3 38.05 − 0 49.95	− 0 55.41 + 1 24.31 + 1 49.19 − 0 11.97	5	33 45	11 A
September 18	13 14 51	II III IV	+ 3 24.46 − 4 57.04 + 9 52.22	+ 1 24.70 − 2 17.99 + 4 17.10	5	33 31	11 B
September 20	12 25 29	I II III IV	+ 1 39.80 − 2 59.89 − 1 53.13 + 8 26.01	+ 0 47.52 − 1 11.50 − 0 27.78 + 3 16.34	5	33 25	11 C
September 23	13 27 21	I II III IV	− 1 46.07 − 3 23.26 + 4 7.34 − 1 30.71	− 0 40.37 − 1 33.81 + 1 29.81 − 1 13.33	6	33 16	11 D
September 26	12 1 18	II III IV	− 0 39.56 − 5 34.10 − 9 33.07	− 0 31.83 − 2 19.31 − 4 16.33	5	33 9	12 A
October 1	11 59 12	I II III IV	+ 1 51.83 − 1 22.89 + 0 35.59 + 0 25.11	+ 0 42.91 − 0 23.83 − 0 7.59 + 0 44.93	5	32 59	12 B
October 3	8 55 41	I II III IV	+ 1 16.95 + 0 44.56 − 5 42.61 + 6 51.84	+ 0 25.56 + 0 5.12 − 2 29.44 + 3 23.05	5	32 57	12 C
October 17	12 27 43	I II	+ 1 12.04 + 0 56.14	+ 0 24.14 + 0 11.42	5	32 55	12 D

1892.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
October 17	$12^h\ 27^m\ 43^s$	III	$-5'\ 39''.61$	$-2'\ 32''.36$	5	$32^m\ 55^s$	12 D
		IV	− 1 41.31	− 0 11.29			
October 18	11 52 37	I	− 0 34.95	− 0 7.28	5	32 56	13 A
		II	− 3 32.21	− 1 37.25			
		III	− 4 14.43	− 1 37.45			
		IV	+ 1 57.85	+ 1 24.67			
October 25	10 41 49	I	− 1 24.93	− 0 31.24	5	33 8	13 B
		II	− 3 16.62	− 1 34.29			
		III	− 4 45.84	− 1 55.38			
		IV	+ 3 20.13	+ 0 56.85			
October 26	8 59 58	I	+ 1 8.06	+ 0 22.42	3	33 10	13 C
		II	− 1 2.99	− 0 16.09			
		III	− 1 2.15	− 0 6.34			
		IV	− 0 7.76	− 0 36.76			
November 3	8 24 33	I	− 0 58.35	− 0 19.12	5	33 32	13 D
		II	+ 3 20.86	+ 1 34.75			
		III	+ 2 56.32	+ 1 36.60			
		IV	− 0 47.14	+ 0 10.45			
November 24	11 42 5	I	− 1 26.66	− 0 33.30	5	35 13	14 A
		II	+ 2 48.21	+ 1 24.01			
		III	+ 1 33.01	+ 1 0.92			
		IV	+ 9 24.33	+ 4 13.19			
November 25	9 1 5	I	+ 1 25.70	+ 0 33.42	5	35 19	14 B
		II	+ 1 49.78	+ 0 40.60	5		
		III	+ 4 39.59	+ 2 15.91	5		
	9 0 48	IV	+ 8 45.66	+ 3 46.45	4		
December 10	9 14 20	I	− 1 29.44	− 0 35.83	5	36 59	14 C
	9 14 30	II	− 2 18.92	− 1 11.62	4		
	9 14 20	III	+ 5 1.79	+ 2 14.62	5		
	9 14 20	IV	+ 8 22.67	+ 4 1.65	5		
December 20	7 50 30	II	+ 1 16.50	+ 0 25.00	5	38 13	14 D
		III	− 4 5.38	− 2 0.89			
		IV	− 8 0.61	− 3 28.70			
December 21	9 10 44	I	+ 0 54.74	+ 0 30.08	5	38 21	15 A
		II	− 2 59.68	− 1 24.61			
		III	− 4 33.44	− 1 58.25			
		IV	− 6 12.51	− 2 31.31			
1893. Januar 7	7 55 5	I	− 1 30.44	− 0 43.90	5	40 35	15 B
		III	+ 4 4.50	+ 1 57.32			
		IV	− 5 26.07	− 2 8.75			
Januar 25	9 6 48	I	− 1 23.69	− 0 33.55	5	42 56	15 C
		II	− 1 12.04	− 0 40.73			
		III	− 4 2.40	− 1 52.84			
		IV	− 1 59.78	− 0 31.84			
Februar 14	7 38 48	I	+ 1 3.31	+ 0 31.04	5	45 20	15 D
		II	+ 2 24.21	+ 1 6.63			

1893.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
Februar 14	$7^h\ 38^m\ 48^s$	III IV	+0′ 55″.05 +5 45.65	+0′ 9″.77 +2 41.26	5	$45^m\ 20^s$	15 D
März 11	8 19 2	I II III IV	+1 34.86 +2 28.40 —1 13.92 —4 58.95	+0 38.56 +1 3.37 —0 17.66 —2 16.68	5	47 43	17 B

Opposition 1893—1894.

1893.	Mittlere Pulk. Zeit.	Trabant.	Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
October 20	13 44 50	I III IV	+2 4.91 +2 18.42 —5 32.25	+0 21.52 +0 48.88 —0 41.69	5	34 23	18 A
October 21	11 58 48	I II III IV	—1 51.62 +3 49.28 +5 44.02 —2 3.10	—0 18.28 +0 48.70 +1 19.81 +0 6.11	6	34 19	18 B
October 27	12 31 49	I II III IV	+2 25.88 —1 22.83 +1 20.79 +9 37.27	+0 30.80 —0 3.86 +0 39.10 +1 49.64	4	33 59	18 C
October 30	12 29 53	II III IV	—0 41.39 +1 47.33 —3 48.55	—0 43.70 +0 1.99 —0 47.03	5	33 51	18 D
October 31	9 26 25	I II III IV	+0 40.86 +0 49.92 —2 51.78 —4 13.20	+0 0.35 +0 25.29 —0 57.30 —1 28.21	5	33 49	19 A
November 7	12 0 51	II III IV	+0 55.77 —2 44.37 —0 26.25	+0 27.35 —0 56.74 +0 28.74	5	33 35	19 B
November 8	11 9 40	II III IV	+3 35.28 —6 1.60 +3 29.12	+0 43.06 —1 27.10 +1 20.72	5	33 33	19 C
November 9	7 45 15	II III IV	—1 20.16 —5 30.21 +6 36.70	—0 32.97 —1 3.89 +1 58.53	5	33 33	19 D
November 13	12 32 38	I II III IV	—1 39.58 —3 55.90 +3 9.97 +8 47.44	—0 16.85 —0 56.79 +0 23.80 +1 41.41	5	33 29	20 A

1893.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	$\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
November 15	$11^h\ 24^m\ 43^s$	II III IV	$+3'\ 46''.37$ $-5\ 48.46$ $+1\ 58.26$	$+0'\ 49''.21$ $-1\ 29.12$ $-0\ 6.56$	5	$33^m\ 28^s$	20 B
December 5	8 34 33	I II III IV	$+2\ 24.44$ $-2\ 22.93$ $+0\ 57.38$ $-9\ 26.18$	$+0\ 36.62$ $-0\ 25.38$ $-0\ 7.32$ $-2\ 39.44$	5	33 56	20 C
December 17	7 39 0	II III IV	$+3\ 43.47$ $+4\ 52.78$ $+6\ 44.53$	$+0\ 56.75$ $+1\ 27.47$ $+1\ 20.64$	5	34 41	20 D
December 18	8 24 12	I II III IV	$-1\ 6.54$ $-1\ 17.70$ $+5\ 44.43$ $+3\ 7.93$	$-0\ 24.41$ $-0\ 33.97$ $+1\ 22.99$ $+0\ 18.54$	4	34 45	21 A
1894. Januar 24	7 51 46	I III IV	$-0\ 33.48$ $+1\ 7.59$ $-8\ 14.47$	$+0\ 2.31$ $+0\ 0.66$ $-2\ 26.32$	5	38 44	21 B
Februar 2	8 45 16	I III IV	$-1\ 5.05$ $-5\ 7.04$ $+8\ 53.49$	$-0\ 22.63$ $-1\ 23.25$ $+2\ 28.41$	5	39 55	22 A
Februar 7	8 34 48	I II III IV	$+1\ 4.83$ $-0\ 31.91$ $+2\ 19.21$ $-1\ 30.70$	$+0\ 11.69$ $-0\ 33.32$ $+0\ 21.73$ $-0\ 14.18$	5	40 35	22 B
Februar 8	10 53 20	II III IV	$+3\ 10.66$ $-2\ 23.62$ $-4\ 4.31$	$+0\ 51.79$ $-0\ 52.03$ $-1\ 26.90$	4, 5	40 44	22 C
Februar 9	8 29 44	I III IV	$-0\ 28.31$ $-4\ 50.94$ $-6\ 27.98$	$-0\ 13.45$ $-1\ 20.36$ $-1\ 59.38$	5	40 51	22 D
Februar 22	7 43 28	I II III IV	$-1\ 27.03$ $+2\ 16.30$ $-0\ 22.75$ $+4\ 59.40$	$-0\ 18.21$ $+0\ 41.72$ $-0\ 21.32$ $+0\ 56.77$	5	42 36	23 A
April 10	9 28 5	I II III IV	$+0\ 32.68$ $+2\ 8.83$ $+1\ 55.06$ $+7\ 22.79$	$+0\ 1.30$ $+0\ 19.33$ $+0\ 34.06$ $+1\ 35.88$	5	48 0	23 B
April 13	9 35 27	I II IV	$+1\ 21.61$ $+2\ 41.91$ $+5\ 21.45$	$+0\ 18.13$ $+0\ 33.30$ $+0\ 47.96$	5	48 16	23 C

Opposition 1894—1895.

1894.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.
December 6	$13^h\ 31^m\ 36^s$	I	+ 1′ 44.″51	— 0′ 0.″43	5	$34^m\ 51^s$	24 A
		II	— 2 12.54	+ 0 13.88			
		III	— 2 8.20	— 0 8.68			
		IV	— 0 31.83	— 0 22.23			
December 15	13 18 49	I	+ 2 26.79	— 0 3.53	5	34 37	24 B
		II	+ 1 17.55	— 0 12.79			
		III	— 5 53.13	+ 0 16.19			
		IV	+ 3 26.43	+ 0 16.81			
December 17	12 30 34	I	+ 2 18.67	— 0 6.52	5	34 35	24 C
		III	+ 3 27.30	+ 0 7.44			
		IV	+ 9 48.51	+ 0 1.77			
December 28	8 2 57	I	+ 0 39.24	— 0 6.01	5	34 38	24 D
		II	+ 1 26.69	+ 0 7.99			
		III	— 4 7.76	— 0 6.51			
		IV	—10 5.35	+ 0 17.43			
1895. Januar 2	8 45 20	I	+ 2 29.46	— 0 3.28	5	34 46	25 A
		II	+ 0 46.20	— 0 11.11			
		III	+ 5 58.48	— 0 10.27			
		IV	+ 7 50.37	+ 0 12.92			
Januar 24	7 38 3	I	— 2 16.57	— 0 3.58	5	36 2	25 B
		II	— 3 13.08	— 0 7.63			
		III	+ 4 7.40	— 0 10.05			
		IV	+ 3 44.67	— 0 18.86			
Januar 28	8 46 10	II	— 3 41.95	+ 0 1.04	5	36 23	25 C
		III	— 1 47.67	+ 0 12.25			
		IV	— 9 58.88	— 0 16.39			
Januar 29	7 51 56	II	+ 1 32.52	+ 0 9.56	5	36 28	25 D
		III	+ 3 10.13	+ 0 13.08			
		IV	—10 42.75	— 0 9.65			
Februar 22	8 2 46	I	+ 1 20.42	+ 0 3.57	5	39 7	26 A
		II	— 3 8.29	+ 0 0.31			
		III	+ 2 1.28	— 0 11.20			
		IV	+ 9 14.74	+ 0 17.26			
März 9	7 53 22	I	— 0 55.67	— 0 4.76	5	41 4	26 B
		II	+ 1 3.04	+ 0 8.26			
		III	— 1 15.14	— 0 12.26			
		IV	+ 4 47.68	— 0 20.10			
März 16	8 14 52	I	— 0 27.69	— 0 4.31	5	42 0	26 C
		III	— 0 32.53	— 0 11.38			

1895.	Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	$\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
März 19	$9^h\ 7^m\ 17^s$	I	$+2'\ 5''.21$	$-0'\ 0''.22$	5	$42^m\ 25^s$	26 D	
		II	$-2\ 17.27$	$+0\ 4.25$				
		III	$-1\ 52.93$	$+0\ 9.10$				
		IV	$-8\ 27.69$	$-0\ 13.31$				
März 22	8 29 58	I	$-0\ 50.23$	$+0\ 2.56$	5	42 49	27 A	
		II	$-3\ 9.74$	$-0\ 3.43$				
		III	$+4\ 7.99$	$-0\ 7.04$				
		IV	$-6\ 55.27$	$-0\ 6.26$				

Opposition 1895—1896.

November 27	13 17 24	I	$+1\ 3.77$	$-0\ 16.63$	5	39 31	28 A	H.
		II	$+2\ 3.05$	$-0\ 36.33$				
		III	$+5\ 3.20$	$-1\ 29.14$				
		IV	$-9\ 12.52$	$+2\ 39.19$				
November 28	13 52 45	I	$-1\ 51.13$	$+0\ 33.13$	5	39 24	28 B	H.
		II	$+2\ 41.09$	$-0\ 50.48$				
		III	$+4\ 7.24$	$-1\ 15.71$				
		IV	$-8\ 45.91$	$+2\ 33.84$				
December 27	12 39 37	I	$+2\ 4.79$	$-0\ 35.19$	4	36 41	36 A	P.
		III	$+3\ 8.17$	$-0\ 56.62$				
		IV	$-2\ 33.99$	$+0\ 36.83$				
December 27	13 1 21	I	$+2\ 7.24$	$-0\ 35.89$	4	36 41	36 B	P.
		III	$+3\ 4.58$	$-0\ 55.67$				
		IV	$-2\ 37.10$	$+0\ 37.48$				
1896. Januar 1	12 8 46	II	$-2\ 3.58$	$+0\ 37.95$	6	36 23	37	P.
		III	$+3\ 27.14$	$-0\ 55.97$				
		IV	$-8\ 30.33$	$+2\ 23.66$				
Januar 11	12 38 9	I	$-2\ 1.34$	$+0\ 32.62$	5	35 57	28 D	H.
		II	$-3\ 38.06$	$+1\ 0.68$				
		IV	$+3\ 31.29$	$-1\ 2.93$				
Januar 15	12 34 1	I	$-0\ 53.26$	$+0\ 15.21$	5	35 50	29 A	H.
		II	$-2\ 53.53$	$+0\ 49.64$				
		III	$+2\ 24.58$	$-0\ 36.34$				
		IV	$-9\ 28.42$	$+2\ 26.76$				
Januar 17	11 11 57	I	$+0\ 31.27$	$-0\ 7.27$	5	35 48	29 B	H.
		II	$+2\ 0.45$	$-0\ 35.68$				
		III	$+4\ 56.26$	$-1\ 22.01$				
		IV	$-9\ 44.87$	$+2\ 35.03$				
Januar 20	10 38 41	I	$-2\ 15.10$	$+0\ 35.96$	6	35 46	38	P.
		II	$+3\ 37.13$	$-0\ 58.87$				
		III	$-5\ 50.33$	$+1\ 33.89$				
		IV	$-1\ 17.06$	$+0\ 27.01$				

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum.		Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
				$\Delta\alpha$	$\Delta\delta$				
Januar	20	$13^h\ 9^m\ 17^s$	I	$-2'\ 15''.57$	$+0'\ 35''.90$	5	$35^m\ 46^s$	29 C	H.
			II	+3 35.12	−0 59.39				
			III	−5 47.00	+1 32.78				
			IV	−0 58.62	+0 20.26				
Januar	23	10 51 19	I	+1 7.67	−0 19.18	5	35 46	29 D	H.
			II	+1 57.11	−0 29.30				
			III	+5 16.69	−1 22.25				
			IV	+8 42.53	−2 10.99				
Januar	26	10 53 48	I	+1 34.76	−0 24.71	5	35 46	30 A	H.
			II	−1 25.49	+0 24.85				
			III	−3 25.72	+0 50.19				
			IV	+8 36.95	−2 16.11				
Januar	27	9 37 58	I	−1 53.36	+0 29.03	4	35 47	40 A	P.
			II	+3 29.42	−0 54.74				
			III	−5 49.45	+1 30.86				
			IV	+6 2.60	−1 37.35				
Januar	27	9 45 45	I	−1 54.85	+0 29.36	4	35 47	40 B	P.
			II	+3 30.13	−0 55.04				
			III	−5 49.52	+1 30.85				
			IV	+6 1.75	−1 37.10				
Januar	30	12 58 49	I	+1 0.76	−0 16.90	5	35 49	30 B	H.
			II	+1 55.93	−0 28.10				
			III	+5 10.82	−1 18.65				
			IV	−5 37.01	+1 18.11				
Februar	1	11 21 3	II	−2 49.12	+0 42.50	4	35 52	41 A	P.
			III	+2 3.92	−0 35.08				
			IV	−10 0.15	+2 27.22				
Februar	1	11 27 8	II	−2 49.94	+0 42.43	4	35 52	41 B	P.
			III	+2 2.77	−0 35.12				
			IV	−10 0.23	+2 26.95				
Februar	1	12 37 34	I	−0 43.27	+0 9.69	5	35 52	30 C	H.
			II	−3 1.61	+0 45.49				
			III	+1 48.42	−0 31.58				
			IV	−10 3.17	+2 27.56				
Februar	3	11 32 42	I	−1 55.19	+0 28.58	4	35 55	42 A	P.
			II	+3 27.93	−0 53.04				
			III	−5 46.69	+1 27.61				
			IV	−9 7.60	+2 18.39				
Februar	3	12 1 12	I	−1 56.78	+0 28.96	4	35 55	42 B	P.
			II	+3 28.66	−0 53.34				
			III	−5 46.92	+1 27.70				
			IV	−9 7.01	+2 18.08				
Februar	4	10 37 30	I	+2 13.00	−0 33.27	5	35 57	43	P.
			II	+0 32.83	−0 11.69				
			III	−4 30.35	+1 10.99				
			IV	−6 48.53	+1 45.59				

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	Trabant — Jupiterscentrum. $\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
Februar	6	$10^h\ 6^m\ 4^s$	I II III	+ 0′ 45″.89 + 2 1.41 + 2 29.15	− 0′ 8″.61 − 0 31.12 − 1 5.36	4	$36^m\ 1^s$	44 A	P.
Februar	6	10 33 24	I II III	+ 0 38.72 + 2 5.84 + 4 25.49	− 0 6.84 − 0 32.12 − 1 4.47	4	36 1	44 B	P.
Februar	7	12 21 38	I II III IV	− 0 49.97 + 3 3.19 + 5 40.52 + 4 19.10	+ 0 17.99 − 0 48.56 − 1 26.32 − 0 56.41	4	36 3	45 A	P.
Februar	7	12 38 15	I II III IV	− 0 44.58 + 3 0.90 + 5 39.77 + 4 21.56	+ 0 12.48 − 0 48.05 − 1 26.20 − 0 57.07	4	36 3	45 B	P.
Februar	10	11 36 2	I II III IV	− 1 32.39 + 3 13.73 − 5 30.13 + 10 14.84	+ 0 21.74 − 0 47.77 + 1 22.30 − 2 28.32	5	36 11	30 D	H.
Februar	11	11 21 35	I II III IV	+ 2 4.95 + 0 56.81 − 4 48.31 + 8 34.07	− 0 30.49 − 0 17.70 + 1 13.36 − 2 20.85	5	36 14	31 A	H.
Februar	14	9 31 8	I II III IV	− 1 58.76 + 3 32.35 + 5 48.94 + 0 55.40	+ 0 29.35 − 0 54.13 − 1 26.05 − 0 20.47	5	36 23	31 B	H.
Februar	17	12 23 52	I II III IV	− 1 16.22 + 3 0.52 − 5 23.15 − 9 5.41	+ 0 17.18 − 0 43.42 + 1 16.81 + 2 4.67	5	36 34	31 C	H.
Februar	18	11 7 20	I II III IV	+ 1 34.06 + 1 41.32 − 5 8.90 − 10 7.94	− 0 26.08 − 0 23.59 + 1 16.64 + 2 21.49	5	36 38	31 D	H.
Februar	19	10 59 41	I II III IV	− 2 7.43 − 3 30.64 − 1 19.06 − 9 51.29	+ 0 30.23 + 0 51.15 + 0 23.07 + 2 19.93	4	36 41	46 A	P.
Februar	19	11 25 0	I II III IV	− 2 9.89 − 3 32.11 − 1 13.73 − 7 50.33	+ 0 30.87 + 0 51.62 + 0 21.65 + 2 19.68	4	36 41	46 B	P.
Februar	22	9 32 29	I II III IV	+ 1 47.74 − 0 50.33 + 4 5.78 − 2 8.04	− 0 26.50 + 0 9.22 − 1 1.68 + 0 36.94	4	36 55	47 A	P.

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
Februar	22	$9^h\ 51^m\ 25^s$	I	+1′ 43.″93	−0′ 25.″43	4	$36^m\ 55^s$	47 B	P.
			II	−0 54.97	+0 10.57				
			III	+4 3.22	−1 0.87				
			IV	−2 4.94	+0 36.47				
Februar	23	8 55 7	I	−1 13.66	+0 18.71	4	36 59	48 A	P.
			II	−3 22.57	+0 50.61				
			IV	+1 31.95	−0 13.95				
Februar	23	11 21 19	I	−0 28.85	+0 8.10	3	36 59	48 B	P.
		11 21 49	II	−3 5.38	+0 47.13	4			
			III	−0 53.08	+0 8.95				
			IV	+1 54.60	−0 19.42				
Februar	24	8 58 2	II	+1 55.04	−0 25.22	4	37 3	49 A	P.
			III	−4 39.28	+1 3.13				
			IV	+5 5.13	−1 3.96				
Februar	24	11 8 30	II	+2 21.94	−0 32.20	4	37 3	49 B	P.
			III	−4 53.81	+1 8.05				
			IV	+5 22.19	−1 8.73				
Februar	25	10 20 40	I	+0 59.56	−0 12.83	4	37 8	50 A	P.
			II	+2 13.90	−0 35.40				
			III	−5 25.26	+1 18.71				
			IV	+8 1.57	−1 46.44				
Februar	25	10 45 58	I	+1 7.02	−0 14.63	4	37 8	50 B	P.
			II	+2 8.76	−0 33.68				
			III	−5 23.75	+1 18.40				
			IV	+8 4.12	−1 47.10				
Februar	26	10 12 33	I	−1 39.42	+0 22.70	4	37 13	51 A	P.
			II	−3 9.64	+0 44.48				
			III	−2 7.71	+0 34.09				
			IV	+9 39.52	−2 11.36				
Februar	26	11 29 11	I	−1 43.25	+0 23.66	4	37 13	51 B	P.
			II	−3 11.84	+0 44.96				
			III	−2 4.50	+0 33.38				
			IV	+9 39.92	−2 11.44				
März	8	9 7 23	I	−1 55.18	+0 27.20	4	38 14	52ª A	P.
			II	−3 30.25	+0 49.90				
			III	+1 0.49	−0 18.03				
März	8	10 32 27	I	−1 39.67	+0 24.05	4	38 14	52ª B	P.
			II	−3 28.09	+0 49.87				
			III	+0 43.26	−0 13.94				
März	9	9 50 11	I	+1 12.10	−0 18.03	5	38 20	32 A	H.
			II	+0 57.79	−0 10.79				
			III	−3 40.57	+0 47.87				
			IV	−4 12.25	+1 2.78				
März	9	11 3 3	I	+0 50.86	−0 13.00	4	38 20	52ᵇ A	P.
			II	+1 15.22	−0 14.76				

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
März	9	$11^h\ 3^m\ 3^s$	III IV	— 3′ 51″.82 — 4 2.32	+ 0′ 50″.66 + 1 0.79	4	$38^m\ 20^s$	52ᵇ A	P.
März	9	11 22 27	I II III IV	+ 0 45.16 + 1 20.03 — 3 54.40 — 3 59.47	— 0 11.57 — 0 15.86 + 0 51.50 + 1 0.26	4	38 20	52ᵇ B	P.
März	11	10 8 55	I II III IV	— 0 37.24 — 2 18.20 — 3 17.96 + 2 56.51	+ 0 7.34 + 0 30.12 + 0 48.96 — 0 32.54	4	38 33	53 A	P.
März	11	10 28 20	I II III IV	— 0 43.10 — 2 21.73 — 3 14.69 + 2 59.41	+ 0 8.78 + 0 31.11 + 0 48.25 — 0 33.30	4	38 33	53 B	P.
März	14	11 11 0	I II III IV	+ 2 10.21 + 0 34.79 + 4 56.54 + 9 34.33	— 0 30.40 — 0 11.77 — 1 10.43 — 2 7.51	5	38 53	32 B	H.
März	16	9 54 7	I III IV	+ 1 35.85 — 3 3.50 + 7 47.43	— 0 22.85 + 0 38.82 — 1 48.17	4	39 5	54 A	P.
März	16	10 8 47	I III IV	+ 1 32.95 — 3 5.50 + 7 46.55	— 0 22.15 + 0 39.40 — 1 47.81	4	39 5	54 B	P.
März	16	10 34 4	I III IV	+ 1 27.29 — 3 9.61 — 7 44.59	— 0 21.37 + 0 39.86 — 1 47.89	5	39 5	32 C	H.
März	24	9 40 42	I II III IV	— 1 21.94 + 3 16.92 — 5 9.49 — 8 14.21	+ 0 19.57 — 0 46.49 + 1 9.97 + 1 52.54	4	40 2	55 A	P.
März	24	10 1 34	I II III IV	— 1 17.03 + 3 16.21 — 5 10.60 — 8 12.91	+ 0 18.72 — 0 46.40 + 1 10.29 + 1 52.40	4	40 2	55 B	P.
März	29	9 33 7	I II III IV	— 1 58.82 — 2 56.69 + 2 49.84 + 6 33.80	+ 0 26.89 + 0 39.99 — 0 42.19 — 1 22.53	4	40 39	56 A	P.
März	29	9 49 28	I II III IV	— 2 0.06 — 2 58.48 + 2 47.08 + 6 35.40	+ 0 27.21 + 0 40.55 — 0 41.65 — 1 22.84	4	40 39	56 B	P.
März	30	9 47 41	I II	+ 2 2.33 — 0 50.90	— 0 27.94 + 0 15.19	4	40 47	57 A	P.

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	Trabant — Jupiterscentrum. $\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
März	30	$9^h\ 47^m\ 41^s$	III	$-1'\ 38''.20$	$+0'\ 19''.09$	4	$40^m\ 47^s$	57 A	P.
			IV	$+8\ 27.59$	$-1\ 49.83$				
März	30	10 3 8	I	$+2\ 1.52$	$-0\ 27.88$	4	40 47	57 B	P.
			II	$-0\ 47.05$	$+0\ 14.30$				
			III	$-1\ 40.88$	$+0\ 19.64$				
			IV	$+8\ 28.51$	$-1\ 50.20$				
März	31	9 32 24	I	$-1\ 43.64$	$+0\ 24.47$	4	40 55	58 A	P.
			II	$+3\ 14.07$	$-0\ 45.28$				
			III	$-4\ 49.36$	$+1\ 4.97$				
			IV	$+9\ 8.89$	$-2\ 1.78$				
März	31	9 47 18	I	$-1\ 41.32$	$+0\ 23.93$	4	40 55	58 B	P.
			II	$+3\ 14.17$	$-0\ 45.40$				
			III	$-4\ 50.42$	$+1\ 5.22$				
			IV	$+9\ 8.78$	$-2\ 1.79$				
März	31	10 4 26	I	$-1\ 37.92$	$+0\ 22.60$	5	40 55	32 D	H.
			II	$+3\ 14.60$	$-0\ 46.09$				
			III	$-4\ 51.30$	$+1\ 5.00$				
			IV	$+9\ 9.05$	$-2\ 2.43$				
April	1	10 56 21	I	$+0\ 49.11$	$-0\ 12.78$	5	41 2	33 A	H.
			II	$-0\ 46.54$	$+0\ 7.58$				
			III	$-4\ 24.31$	$+1\ 2.33$				
			IV	$+8\ 29.23$	$-1\ 56.06$				
April	7	9 2 2	I	$-1\ 57.01$	$+0\ 26.90$	5	41 49	33 B	H.
			II	$+3\ 2.45$	$-0\ 42.59$				
			III	$-4\ 21.43$	$+0\ 58.07$				
			IV	$-7\ 46.32$	$+1\ 40.33$				
April	8	9 32 39	I	$+1\ 34.02$	$-0\ 22.39$	4	41 57	59 A	P.
			III	$-4\ 43.99$	$+1\ 7.12$				
			IV	$-8\ 51.83$	$+1\ 57.98$				
April	8	9 55 6	I	$+1\ 30.11$	$-0\ 21.38$	4	41 57	59 B	P.
			III	$-4\ 42.07$	$+1\ 6.84$				
			IV	$-8\ 51.86$	$+1\ 58.08$				
April	10	10 29 59	II	$+1\ 13.70$	$-0\ 14.62$	4	42 12	60 A	P.
			III	$+2\ 44.86$	$-0\ 35.05$				
			IV	$-7\ 13.70$	$+1\ 41.07$				
April	10	10 48 48	II	$+1\ 17.68$	$-0\ 14.89$	4	42 12	60 B	P.
			III	$+2\ 47.66$	$-0\ 35.68$				
			IV	$-7\ 12.35$	$+1\ 40.99$				
April	14	9 34 45	I	$-1\ 56.99$	$+0\ 27.37$	4	42 44	61 A	P.
			II	$+2\ 48.17$	$-0\ 39.00$				
			III	$-3\ 55.03$	$+0\ 52.76$				
			IV	$+4\ 22.43$	$-0\ 53.72$				
April	14	9 49 24	I	$-1\ 56.83$	$+0\ 27.24$	4	42 44	61 B	P.
			II	$+2\ 49.75$	$-0\ 39.24$				
			III	$-3\ 56.63$	$+0\ 53.15$				
			IV	$+4\ 24.07$	$-0\ 54.14$				

1896.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
April	19	9h 37m 45s	I	−0′ 52.″13	+0′ 11.″21	4	43m 24s	62 A	P.
			II	−1 35.98	+0 20.63				
			III	+4 6.45	−1 0.04				
			IV	+5 47.08	−1 23.79				
April	19	9 51 19	I	−0 55.44	+0 12.33	4	43 24	62 B	P.
			II	−1 38.42	+0 21.71				
			III	+4 5.34	−0 59.56				
			IV	+5 45.50	−1 23.26				

Opposition 1897.

1897.		Mittlere Pulk. Zeit.	Trabant.	Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
Februar	5	11 33 8	I	−0 51.23	+0 25.40	6	37 5	67	P.
			II	−3 11.77	+1 26.77				
			III	+1 55.19	−0 58.75				
			IV	−8 54.25	+3 50.27				
März	7	12 22 19	I	−0 42.52	+0 21.07	6	36 52	69	P.
			II	+3 2.90	−1 21.39				
			III	+5 8.90	−2 11.54				
			IV	−5 1.25	+2 15.58				
März	9	12 45 24	I	−1 55.56	+0 50.36	6	36 56	70	P.
			II	−3 14.53	+1 24.30				
			III	−1 41.89	+0 50.95				
			IV	−8 56.40	+3 48.28				
März	10	9 28 54	I	+1 53.41	−0 49.21	6	36 58	71	P.
			III	−4 36.37	+2 1.48				
			IV	−9 8.94	+3 49.25				
März	11	10 20 48	I	−2 0.87	+0 50.84	5	37 1	72	P.
			II	+3 1.74	−1 17.30				
			III	−4 41.06	+1 56.78				
			IV	−8 8.53	+3 20.09				
März	11	15 19 35	I	−1 17.68	+0 30.74	5	37 1	73	P.
			II	+2 26.32	−1 0.20				
			III	−4 12.32	+1 43.66				
			IV	−7 47.02	+3 11.59				
März	22	13 9 23	I	+0 45.45	−0 22.21	5	37 37	63 A	H.
			II	+1 11.32	−0 26.77				
			III	+3 35.42	−1 26.36				
März	23	9 25 7	I	−0 26.60	+0 14.10	6	37 40	74	P.
			II	−2 52.57	+1 16.12				
			IV	−2 41.72	+1 15.94				
März	23	12 49 41	I	−1 20.19	+0 35.44	6	37 41	75	P.
			II	−3 8.41	+1 21.48				

1897.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. $\Delta\alpha$	Trabant — Jupiterscentrum. $\Delta\delta$	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
März	23	12^h 49^m 41^s	III	− 0′ 27″.58	+ 0′ 18″.52	6	37^m 41^s	75	P.
			IV	− 3 9.30	+ 1 26.94				
März	26	10 43 38	I	+ 2 0.59	− 0 50.97	5	37 53	63 B	H.
			II	− 0 45.58	+ 0 23.17				
			III	− 2 21.71	+ 0 52.73				
			IV	− 8 55.76	+ 3 41.14				
März	27	9 20 12	I	− 1 53.93	+ 0 46.81	6	37 58	76	P.
			II	− 3 1.48	+ 1 16.08				
			III	+ 1 41.82	− 0 48.99				
			IV	− 8 43.87	+ 3 33.79				
März	28	11 17 40	I	+ 1 6.19	− 0 25.48	5	38 3	63 C	H.
			II	+ 1 54.80	− 0 52.69				
			III	+ 4 51.62	− 2 4.40				
			IV	− 7 10.70	+ 2 52.01				
März	30	10 53 55	II	− 2 44.33	+ 1 12.18	5	38 13	63 D	H.
			III	+ 0 33.05	− 0 7.24				
			IV	− 1 34.42	+ 0 32.51				
März	31	13 3 11	I	+ 1 35.42	− 0 41.41	6	38 18	77	P.
			II	− 0 35.24	+ 0 10.77				
			III	− 3 47.62	+ 1 39.65				
			IV	+ 1 55.28	− 0 56.02				
April	2	9 51 56	I	+ 1 53.84	− 0 48.22	6	38 28	78	P.
			III	− 2 59.77	+ 1 9.86				
			IV	+ 7 0.68	− 2 58.16				
April	6	9 25 38	I	+ 0 35.01	− 0 12.02	6	38 50	79	P.
			II	− 2 10.45	+ 0 58.33				
			III	+ 1 24.31	− 0 29.17				
			IV	+ 5 36.43	− 2 11.43				
April	7	9 35 56	II	− 1 47.39	+ 0 42.13	6	38 56	80	P.
			III	− 2 47.89	+ 1 15.11				
			IV	+ 2 41.32	− 0 57.98				
April	9	9 17 2	I	+ 1 33.44	− 0 40.15	6	39 8	81	P.
			II	+ 0 38.40	− 0 12.17				
			III	− 3 30.21	+ 1 23.18				
			IV	− 3 43.08	+ 1 38.67				
April	10	9 36 41	I	− 0 53.36	+ 0 47.36	6	39 14	82	P.
			II	− 3 5.81	+ 1 18.65				
			IV	− 6 22.82	+ 2 41.90				
April	13	9 50 50	I	+ 0 56.10	− 0 21.22	6	39 32	83	P.
			II	− 1 48.02	+ 0 48.79				
			III	+ 1 54.32	− 0 42.14				
			IV	− 8 1.99	+ 3 13.25				
April	15	9 41 19	I	− 0 32.65	+ 0 15.77	6	39 45	84	P.
			II	+ 2 30.79	− 1 6.00				
			III	− 4 44.05	+ 1 59.08				
			IV	− 3 43.89	+ 1 23.99				

1897.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
April	15	$12^h\ 21^m\ 52^s$	I	$-1'\ 18''.61$	$+0'\ 31''.51$	5	$39^m\ 46^s$	64 A	H.
			II	+2 47.44	−1 12.69				
			III	−4 48.70	+2 0.22				
			IV	−3 24.34	+1 15.87				
April	18	10 54 0	I	+1 54.16	−0 47.41	5	40 5	64 B	H.
			III	+3 44.74	−1 37.41				
			IV	+5 21.85	−2 18.96				
April	23	10 20 35	I	+1 23.89	−0 32.00	6	40 40	85	P.
			II	+0 58.00	−0 25.98				
			III	−4 1.81	+1 37.24				
			IV	+4 24.15	−1 41.27				
April	23	10 29 8	I	+1 22.25	−0 32.03	5	40 40	64 C	H.
			II	+1 0.33	−0 27.97				
			III	−4 0.05	+1 36.16				
			IV	+4 23.30	−1 41.83				
April	24	10 41 14	I	−1 32.71	+0 38.71	5	40 47	64 D	H.
			II	−2 51.86	+1 12.76				
			III	−0 35.93	+0 8.83				
			IV	+1 24.32	−0 27.86				
April	25	10 36 38	I	+1 51.05	−0 46.82	5	40 54	65 A	H.
			III	+3 12.20	−1 24.15				
			IV	−1 43.08	+0 48.41				
April	26	10 24 28	I	−1 48.19	+0 43.20	5	41 2	65 B	H.
			II	+2 54.47	−1 14.03				
			III	+4 42.43	−1 57.56				
			IV	−4 34.52	+1 57.17				
April	28	10 26 1	I	−0 55.85	+0 19.96	5	41 16	65 C	H.
			II	−2 35.47	+1 2.86				
			III	−1 3.45	+0 30.60				
			IV	−8 2.42	+3 16.93				
Mai	8	11 27 53	I	−1 55.43	+0 24.04	5	42 32	65 D	H.
			II	−2 22.49	+1 1.80				
			III	−1 39.32	+0 36.03				
			IV	+7 22.51	−2 58.84				
Mai	15	11 26 54	I	−0 27.25	+0 12.79	5	43 26	66 A	H.
			II	−1 59.72	+0 52.67				
			III	−2 11.23	+0 49.79				
			IV	−7 48.08	+3 11.82				
Mai	17	12 10 44	I	−1 36.27	+0 40.25	5	43 42	66 B	H.
			II	+2 35.33	−1 7.18				
			III	+4 11.99	−1 47.02				
			IV	−6 15.92	+2 30.22				
Mai	18	12 0 29	I	+1 44.84	−0 44.33	5	43 50	66 C	H.
			III	+3 44.12	−1 31.66				
			IV	−4 9.43	+1 36.29				
Mai	20	11 45 57	I	+1 13.67	−0 29.62	5	44 6	66 D	H.
			III	−2 55.79	+1 16.73				

Opposition 1898.

1898.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum. Δα	Δδ	Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
März	16	12ʰ 27ᵐ 38ˢ	I	— 1′ 26″.89	+ 0′ 35″.87	6	37ᵐ 11ˢ	86	P.
			II	+ 1 25.61	— 0 29.90				
			III	+ 2 27.38	— 0 24.59				
			IV	— 4 55.76	+ 1 57.02				
März	25	13 4 2	II	— 0 36.95	+ 0 5.68	6	37 2	87	P.
			III	— 4 53.55	+ 2 22.49				
			IV	+ 2 32.37	— 0 46.97				
März	26	11 30 36	II	+ 3 5.35	— 1 29.92	6	37 3	88	P.
			III	— 4 4.88	+ 1 45.89				
			IV	— 0 32.76	+ 0 41.00				
März	27	12 13 13	I	+ 1 0.55	— 0 34.04	6	37 3	89	P.
			II	— 0 27.89	+ 0 25.42				
			IV	— 3 50.77	+ 2 11.80				
April	11	10 2 0	II	— 3 4.40	+ 1 29.98	6	37 23	90	P.
			III	+ 2 24.01	— 1 22.90				
			IV	+ 1 36.76	— 0 21.55				
April	14	10 32 45	I	+ 1 55.57	— 0 55.43	6	37 31	91	P.
			II	— 1 28.96	+ 0 53.02				
			IV	— 7 7.03	+ 3 35.97				
April	23	11 42 5	I	+ 1 36.25	— 0 41.95	6	38 2	92	P.
			II	+ 2 10.11	— 1 10.02				
			III	— 4 48.37	+ 2 15.52				
			IV	+ 7 58.18	— 3 53.78				
April	24	10 46 23	I	— 2 14.18	+ 0 30.16	6	38 6	93	P.
			II	+ 1 47.30	— 0 42.94				
			III	— 2 30.67	+ 1 3.32				
			IV	+ 8 29.00	— 4 0.59				
April	25	10 29 21	I	+ 0 39.10	— 0 12.90	6	38 10	94	P.
			II	— 2 45.00	+ 1 23.86				
			III	+ 1 20.33	— 0 53.35				
			IV	+ 7 49.43	— 3 33.25				
April	28	9 51 26	I	+ 0 22.39	— 0 43.31	6	38 23	95	P.
			II	— 0 19.92	+ 0 20.50				
			III	+ 1 9.71	— 0 18.15				
			IV	+ 0 21.18	+ 0 12.85				
April	29	11 4 7	I	— 1 51.68	+ 0 53.34	6	38 28	96	P.
			II	— 2 47.58	+ 1 15.66				
			III	— 3 2.05	+ 1 38.15				
			IV	— 2 57.62	+ 1 44.87				

1898.		Mittlere Pulk. Zeit.	Trabant.	Trabant — Jupiterscentrum.		Zahl der Aufnahmen.	Aberrationszeit.	№ der Platte.	Ort der Aufnahme.
				$\Delta\alpha$	$\Delta\delta$				
Mai	1	$10^h\ 35^m\ 21^s$	I	$-1'\ 34''.91$	$+0'\ 42''.08$	6	$38^m\ 38^s$	97	P.
			II	+2 10.31	−0 55.11				
			III	−3 8.88	+1 18.86				
			IV	−7 32.70	+3 44.76				
Mai	2	11 24 33	I	+0 51.83	−0 19.29	6	38 43	98	P.
			II	−2 33.55	+1 19.39				
			III	+0 53.58	−0 40.38				
			IV	−8 25.12	+4 1.00				
Mai	16	11 27 46	I	+1 32.19	−0 40.61	6	40 4	99	P.
			II	−1 49.19	+1 0.62				
			IV	−3 52.28	+2 8.60				
Mai	19	10 23 38	II	+1 2.97	−0 21.21	6	40 23	100	P.
			III	+2 37.75	−1 4.03				
			IV	−8 6.13	+3 49.46				

ЗАПИСКИ ИМПЕРАТОРСКОЙ АКАДЕМІИ НАУКЪ.
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VIIIe SÉRIE.
ПО ФИЗИКО-МАТЕМАТИЧЕСКОМУ ОТДѢЛЕНІЮ. Томъ XIII. № 2.
CLASSE PHYSICO-MATHÉMATIQUE. Volume XIII. № 2.

SUR UNE SÉRIE

DANS LA THÉORIE

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DU SECOND ORDRE À COEFFICIENTS PÉRIODIQUES.

PAR

A. Liapounoff.

(Lu le 25 septembre 1902.)

С.-ПЕТЕРБУРГЪ. 1902. ST.-PÉTERSBOURG.

Продается у коммиссіонеровъ Императорской Академіи Наукъ:
И. И. Глазунова, М. Эггерса и Комп. и **К. Л. Риккера** въ С.-Петербургѣ,
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Напечатано по распоряженію Императорской Академіи Наукъ.
С.-Петербургъ, Декабрь 1902 г. Непремѣнный Секретарь, Академикъ *Н. Дубровинъ.*

ТИПОГРАФІЯ ИМПЕРАТОРСКОЙ АКАДЕМІИ НАУКЪ.
Вас. Остр., 9 л., № 12.

Sur une série dans la théorie des équations différentielles linéaires du second ordre à coefficients périodiques.

---

1. Les équations différentielles de la forme

$$\frac{d^2y}{dx^2} + p\frac{dy}{dx} + qy = 0$$

se ramenant toujours à celles binomes, nous ne considérerons que ces dernières.

Soit donc

$$\frac{d^2y}{dx^2} + py = 0 \tag{1}$$

l'équation proposée, x étant une variable réelle et p une fonction donnée de x que nous supposerons continue et périodique à période ω, de sorte que, $p(x)$ étant sa notation fonctionnelle, on aura

$$p(x+\omega) = p(x),$$

quel que soit x.

La fonction p étant continue, on pourra parler des solutions de l'équation (1) comme des fonctions définies pour toutes les valeurs de x.

Cela posé, soit $\psi(x)$ une solution quelconque qui ne se réduit pas identiquement à zéro.

Quelle qu'elle soit, le rapport

$$\frac{\psi(x+\omega)+\psi(x-\omega)}{\psi(x)}$$

aura une valeur constante, qui sera nécessairement la même pour toutes les solutions.

C'est une proposition fondamentale, dont la preuve est bien facile. Il suffit de remarquer que $\psi(x+\omega)$ est une solution de l'équation (1). Il en résulte, en effet, que l'expression

$$\psi(x)\,\psi'(x+\omega)-\psi(x+\omega)\,\psi'(x),$$

$\psi'(x)$ étant la dérivée de $\psi(x)$, a une valeur constante, et que, par suite, on a

$$\psi(x)\,\psi'(x+\omega)-\psi(x+\omega)\,\psi'(x)=\psi(x-\omega)\,\psi'(x)-\psi(x)\,\psi'(x-\omega),$$

ou bien

$$[\psi'(x+\omega)+\psi'(x-\omega)]\,\psi(x)-[\psi(x+\omega)+\psi(x-\omega)]\,\psi'(x)=0.$$

On aura donc

(2) $$\frac{\psi(x+\omega)+\psi(x-\omega)}{\psi(x)}=2A,$$

A étant une constante, et en appliquant ce résultat à deux solutions indépendantes et à leur somme, on arrivera à la conclusion que cette constante ne dépend point du choix de la solution $\psi(x)$.

La constante A ainsi définie est ce que nous avons appelé ailleurs *constante caractéristique* de l'équation considérée pour la période ω.

On voit qu'il est bien important de savoir calculer sa valeur. Mais surtout il est important de savoir reconnaître si A est un nombre réel ou imaginaire, et, dans le premier cas, si l'on $A^2<1$, $A^2>1$ ou $A^2=1$; car c'est cela ce qu'il faut connaître avant tout, lorsque on veut savoir si les solutions de l'équation proposée sont des fonctions limitées, c'est-à-dire telles que leurs modules restent au-dessous de certaines limites, quel que soit x.

Cette question peut être rattachée à la considération de l'expression de $\psi(x+n\omega)$, n étant un entier quelconque.

Cherchons cette expression.

La relation (2) montre que $\psi(x+n\omega)$ est une solution de l'équation aux différences finies

$$y_{n+2}-2Ay_{n+1}+y_n=0.$$

Or, si l'on pose

$$T_n=\frac{(A+\sqrt{A^2-1})^n-(A-\sqrt{A^2-1})^n}{2\sqrt{A^2-1}},$$

le cas de $A^2=1$ étant considéré comme cas limite, T_n vérifiera la même équation, et d'ailleurs T_n et T_{n-1} en seront des solutions indépendantes.

Donc, eu égard à ce que $T_0 = 0$, $T_1 = 1$, $T_{-1} = -1$, on aura

$$\psi(x + n\omega) = T_n \psi(x + \omega) - T_{n-1} \psi(x). \tag{3}$$

Si A est un nombre réel, il convient de poser: dans le cas de $A^2 < 1$,

$$A = \cos\alpha,$$

et dans le cas de $A^2 > 1$,

$$A = \frac{1}{2}\left(a + \frac{1}{a}\right).$$

Alors il viendra: dans le premier cas,

$$T_n = \frac{\sin n\alpha}{\sin\alpha},$$

et dans le second,

$$T_n = \frac{a^n - a^{-n}}{a - a^{-1}}.$$

De là on tire cette conclusion:

Si A est un nombre réel vérifiant l'inégalité $A^2 < 1$, toutes les solutions de l'équation (1) seront des fonctions limitées. Si $A^2 > 1$, toutes les solutions, autres que $y = 0$, seront, au contraire, illimitées, et la même chose aura lieu dans le cas où A est un nombre imaginaire.

En ce qui concerne le cas de $A^2 = 1$, on aura toujours des solutions limitées; mais on pourra aussi avoir celles illimitées.

Dans ce cas il viendra

$$T_n = (\pm 1)^{n+1} n,$$

où l'on doit prendre celui des deux signes qui appartient à A, et la formule (3) se réduira à

$$\psi(x + n\omega) = (\pm 1)^n \psi(x) + (\pm 1)^{n+1} [\psi(x + \omega) \mp \psi(x)]\, n.$$

De là on voit que, si la fonction

$$\psi(x + \omega) \mp \psi(x) \tag{4}$$

n'est pas identiquement nulle, la solution $\psi(x)$ sera illimitée; mais la fonction (4), qui est encore une solution, sera limitée, puisque, cette fonction étant désignée par $\theta(x)$, la relation (2) donne

$$\theta(x + \omega) = \pm\, \theta(x).$$

Il pourra d'ailleurs arriver que toutes les solutions vérifieront la relation

$$\psi(x+\omega) = \pm \psi(x).$$

Il n'y aura alors que des solutions limitées.

On voit donc que le cas de $A^2 = 1$ exige une discussion complémentaire, tandis que dans tous les autres cas la question se résout immédiatement.

Lorsque, pour l'équation proposée, on a $A^2 = 1$, il est en général très difficile de le constater. C'est de quoi provient la principale difficulté de la question.

Mais ce cas ne se présentera que très rarement, et le plus souvent on se trouvera dans l'un des autres cas, ce que l'on pourra toujours reconnaître en calculant A avec une approximation suffisante.

Si la fonction p est réelle, la constante A le sera aussi, et ces derniers cas se réduiront à deux: $A^2 < 1$ et $A^2 > 1$.

Dans ce qui suit, nous proposons une méthode pour les reconnaître, lorsque la fonction p ne devient jamais négative. Cette méthode réussit toujours, à moins que l'on ne se trouve dans le cas de $A^2 = 1$.

2. Pour le calcul approximatif de la constante caractéristique on peut proposer plusieurs méthodes, plus ou moins expéditives suivant les cas, et entre autres, on peut signaler divers développements de cette constante en séries.

Or, parmi ces séries, il y a une qui mérite une attention particulière. C'est cette série que nous allons considérer ici.

Soient $f(x)$ et $\varphi(x)$ deux solutions de l'équation (1), définies par les conditions suivantes:

$$f(0) = 1, \quad f'(0) = 0; \qquad \varphi(0) = 0, \quad \varphi'(0) = 1.$$

La relation (2) donnera

$$2A = f(\omega) + f(-\omega).$$

Or il est facile de prouver que l'on a

$$f(-\omega) = \varphi'(\omega).$$

En effet, la fonction

$$\varphi'(\omega) f(x+\omega) - f'(\omega)\, \varphi(x+\omega)$$

est une solution de l'équation (1), et cette solution se réduit, pour $x = 0$, à 1, puisque l'on a

$$f(x)\, \varphi'(x) - \varphi(x)\, f'(x) = 1,$$

quel que soit x. En même temps, sa dérivée s'annule pour $x = 0$. Cette solution ne peut donc différer de $f(x)$, et l'égalité

$$f(x) = \varphi'(\omega) f(x + \omega) - f'(\omega) \varphi(x + \omega)$$

donne bien $f(-\omega) = \varphi'(\omega)$.

De cette manière nous obtenons

$$2A = f(\omega) + \varphi'(\omega),$$

ce qui est la formule qui nous servira du point de départ.

Cela posé, au lieu de l'équation (1), considérons celle-ci

$$\frac{d^2y}{dx^2} + \mu p y = 0,$$

où μ est un paramètre arbitraire.

Pour cette nouvelle équation, toute solution, qui est définie par des conditions initiales indépendantes de μ, pourra être développée suivant les puissances ascendantes de μ (entières et positives), ce qui conduira à une série convergente, quel que soit x et quel que soit μ. D'ailleurs, la première dérivée de cette solution se représentera par la série, dont les termes seront les dérivées de ceux de la précédente.

Pour ce qui concerne les solutions qui corresponderont aux conditions initiales de $f(x)$ et $\varphi(x)$, on aura les développements suivants

$$1 - f_1(x)\mu + f_2(x)\mu^2 - f_3(x)\mu^3 + \ldots,$$

$$x - \varphi_1(x)\mu + \varphi_2(x)\mu^2 - \varphi_3(x)\mu^3 + \ldots,$$

où $f_n(x)$, $\varphi_n(x)$ sont des fonctions que l'on calculera par les formules récurrentes

$$(5) \qquad \left\{ \begin{aligned} f_n(x) &= \int_0^x dx \int_0^x p\, f_{n-1}(x)\, dx, \\ \varphi_n(x) &= \int_0^x dx \int_0^x p\, \varphi_{n-1}(x)\, dx, \end{aligned} \right.$$

en partant des fonctions

$$f_0(x) = 1, \quad \varphi_0(x) = x.$$

De ces développements, en posant $\mu = 1$, on déduit

$$f(x) = 1 - f_1(x) + f_2(x) - f_3(x) + \ldots,$$

$$\varphi(x) = x - \varphi_1(x) + \varphi_2(x) - \varphi_3(x) + \ldots$$

Par suite, si l'on pose

$$f_n(\omega) + \varphi_n'(\omega) = 2A_n,$$

on aura cette expression pour A:

$$A = 1 - A_1 + A_2 - A_3 + \ldots, \tag{6}$$

le terme général étant $(-1)^n A_n$.

Nous avons déjà considéré cette série dans le Travail intitulé *Problème général de la stabilité du mouvement*, où nous en avons déduit certaines conclusions à l'égard de A, en supposant que la fonction p ne change jamais de signe.

On voit que, si cette fonction est négative, les termes de la suite

$$A_1, \quad A_2, \quad A_3, \quad A_4, \quad \ldots$$

seront alternativement négatifs et positifs, de sorte que la série (6) aura tous ses termes positifs. On aura donc, dans ce cas, toujours $A > 1$.

Si, au contraire, la fonction p est positive, les A_n le seront aussi, et les termes de la série (6) seront alternativement positifs et négatifs. D'ailleurs, à partir d'un certain rang, ces termes iront constamment en décroissant en valeurs absolues, comme le montre l'inégalité

$$A_n < \frac{A_1}{n} A_{n-1},$$

qui a été établie dans le Travail cité*).

Par cette inégalité on voit que, si $A_1 \leqq 2$, on aura certainement

$$A_1 > A_2 > A_3 > A_4 > \ldots,$$

par suite de quoi il viendra

$$1 > A > 1 - A_1,$$

et l'on aura $A^2 < 1$.

---

*) Comme on le verra dans la suite, on peut obtenir une inégalité analogue qui donne, pour $\frac{A_n}{A_{n-1}}$, une limite supérieure plus précise.

Quant à la condition $A_1 \leqq 2$, elle se réduit à

$$\omega \int_0^\omega p\, dx \leqq 4. \tag{7}$$

On parvient donc à la conclusion que, dans le cas où p est une fonction positive, la condition (7) assure l'inégalité $A^2 < 1$.

Remarquons que, si A_1 est plus grand que 2, quelle que soit d'ailleurs sa valeur, la fonction positive p peut toujours être choisie de manière que l'on ait $A^2 > 1$, ou $A^2 < 1$, à volonté. Donc, le résultat que nous venons de signaler contient tout ce qu'on peut dire sur le signe de $A^2 - 1$, si l'on ne connaît que le premier terme de la suite

$$A_1, \quad A_2, \quad A_3, \quad \ldots,$$

et ne sait rien de plus à l'égard de p, si ce n'est que c'est une fonction positive.

Dans ce qui suit, nous allons montrer ce qu'on peut tirer de la considération des termes suivants.

3. Les formules (5) conduisent à diverses expressions de A_n sous forme des intégrales multiples, dont nous allons signaler quelques-unes.

En entendant par $x_1, x_2, x_3, \ldots$ diverses notations de la variable indépendante x, posons, pour abréger,

$$p(x_1) = p_1, \quad p(x_2) = p_2, \quad p(x_3) = p_3, \quad \ldots.$$

Alors, pour les fonctions $f_n(x)$, $\varphi_n'(x)$, nous aurons ces expressions:

$$\left\{\begin{aligned} f_n(x) &= \int_0^x dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{2n-1}} p_2\, p_4 \ldots p_{2n}\, dx_{2n}, \\ \varphi_n'(x) &= \int_0^x dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{2n-1}} p_1\, p_3 \ldots p_{2n-1}\, dx_{2n}, \end{aligned}\right. \tag{8}$$

où l'intégration par rapport à x_i doit être effectuée entre les limites 0 et x_{i-1}, en remplaçant x_0 par x.

De là on tire

$$A_n = \frac{1}{2} \int_0^\omega dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{2n-1}} (p_1\, p_3 \ldots p_{2n-1} + p_2\, p_4 \ldots p_{2n})\, dx_{2n}. \tag{9}$$

Pour $n = 1$, cette formule, qui contient alors une intégrale double, se réduit à

$$A_1 = \frac{\omega}{2}\int_0^\omega p\,dx.$$

Une semblable réduction est possible aussi dans le cas général, l'intégrale multiple d'ordre $2n$, qui figure dans la formule (9), se réduisant toujours à une intégrale d'ordre n.

En effet, reportons-nous aux formules (8) et, en remarquant que les intégrales qui y figurent peuvent être considérées comme celles étendues aux valeurs des variables x_1, $x_2, \ldots, x_{2n}$ vérifiant, si $x > 0$, les inégalités

$$x > x_1 > x_2 > \ldots > x_{2n} > 0$$

et, si $x < 0$, celles-ci

$$x < x_1 < x_2 < \ldots < x_{2n} < 0,$$

effectuons l'intégration, pour $f_n(x)$, par rapport aux variables $x_1, x_3, \ldots, x_{2n-1}$ et, pour $\varphi_n'(x)$, par rapport aux variables $x_2, x_4, \ldots, x_{2n}$. Alors, en introduisant pour les n variables qui restent la notation $x_1, x_2, \ldots, x_n$, nous obtiendrons

$$f_n(x) = \int_0^x p_1\,dx_1\int_0^{x_1} p_2\,dx_2\ldots\int_0^{x_{n-1}}(x-x_1)(x_1-x_2)\ldots(x_{n-1}-x_n)\,p_n\,dx_n,$$

$$\varphi_n'(x) = \int_0^x p_1\,dx_1\int_0^{x_1} p_2\,dx_2\ldots\int_0^{x_{n-1}}(x_1-x_2)(x_2-x_3)\ldots(x_{n-1}-x_n)\,x_n\,p_n\,dx_n.$$

Par suite, nous aurons

$$(10)\quad A_n = \frac{1}{2}\int_0^\omega p_1\,dx_1\int_0^{x_1} p_2\,dx_2\ldots\int_0^{x_{n-1}}(\omega-x_1+x_n)(x_1-x_2)(x_2-x_3)\ldots(x_{n-1}-x_n)\,p_n\,dx_n.$$

Si l'on introduit la fonction

$$\int p\,dx = P(x) = P,$$

on pourra obtenir, pour A_n, encore d'autres expressions sous forme des intégrales d'ordre n. On les obtiendra, en effectuant les intégrations dans les formules (8) par rapport à n variables quelconques dont les indices diffèrent entre eux au moins de deux unités.

La plus simple de ces expressions s'obtient en effectuant l'intégration, pour $f_n(x)$, par rapport aux variables $x_2, x_4, \ldots, x_{2n}$ et, pour $\varphi_n'(x)$, par rapport aux variables $x_1, x_3, \ldots, x_{2n-1}$. De cette manière, en posant

$$P(x_i) = P_i, \quad P(0) = P_0,$$

et en changeant la notation des variables, on trouve

$$f_n(x) = \int_0^x dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{n-1}} (P_1 - P_2)(P_2 - P_3)\ldots(P_{n-1} - P_n)(P_n - P_0)\, dx_n,$$

$$\varphi_n'(x) = \int_0^x dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{n-1}} (P - P_1)(P_1 - P_2)(P_2 - P_3)\ldots(P_{n-1} - P_n)\, dx_n.$$

De là, si l'on pose

$$\int_0^\omega p\, dx = \Omega,$$

il vient

$$A_n = \frac{1}{2}\int_0^\omega dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{n-1}} (\Omega - P_1 + P_n)(P_1 - P_2)(P_2 - P_3)\ldots(P_{n-1} - P_n)\, dx_n, \tag{11}$$

formule qui a une grande analogie avec celle (10).

4. Avant d'aller plus loin, nous nous arrêterons, pour un moment, aux formules précédentes, pour signaler quelques inégalités qui en découlent immédiatement, et qui donnent une idée sur la manière dont converge la série (6).

Nous nous bornerons à la supposition que p est une fonction réelle ne changeant jamais de signe.

Il est clair que, dans ce cas, A_n sera compris entre des limites de la forme

$$\frac{\omega^{2n} L^n}{1.2.3\ldots(2n-1)\,2n},$$

L étant la plus grande ou la plus petite valeur de p.

Mais on peut obtenir des limites plus précises pour A_n.

Reportons-nous, à cet effet, à la formule (9), et supposons, pour fixer les idées, que l'on a toujours $p \geqq 0$.

En remarquant que

$$p_1 p_3 \ldots p_{2n-1} \leqq \frac{1}{n}(p_1^n + p_3^n + \ldots + p_{2n-1}^n),$$

$$p_2 p_4 \ldots p_{2n} \leqq \frac{1}{n}(p_2^n + p_4^n + \ldots + p_{2n}^n),$$

nous aurons

$$A_n \leqq \frac{1}{2n}\int_0^\omega dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{2n-1}} (p_1^n + p_2^n + \ldots + p_{2n}^n)\, dx_{2n}.$$

Or l'intégrale qui figure ici est égale au produit de celles-ci:

$$\int_0^\omega p^n dx \qquad \text{et} \qquad \int_0^\omega dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{2n-2}} dx_{2n-1}.$$

Il viendra donc

$$A_n \leqq \frac{\omega^{2n-1}}{1.2.3\ldots(2n-1)2n}\int_0^\omega p^n dx. \tag{12}$$

Pour obtenir une limite inférieure, nous nous servirons de l'inégalité

$$p_1 p_3 \ldots p_{2n-1} + p_2 p_4 \ldots p_{2n} \geqq 2\sqrt{p_1}\sqrt{p_2}\ldots\sqrt{p_{2n}},$$

en vertu de laquelle il viendra

$$A_n \geqq \frac{1}{1.2.3\ldots(2n-1)2n}\left(\int_0^\omega \sqrt{p}\, dx\right)^{2n}.$$

Remarquons que le second membre représente ici une limite inférieure *précise* de A_n, étant donnée la valeur de l'intégrale

$$\int_0^\omega \sqrt{p}\, dx,$$

puisque cette limite est atteinte, lorsque la fonction p se réduit à une constante.

De même, la limite supérieure, définie par l'inégalité (12), est une limite précise, étant donnés ω et la valeur de l'intégrale

$$\int_0^\omega p^n\,dx.$$

En partant de la formule (10) ou de celle (11), on peut obtenir, dans la même supposition $p \geqq 0$, une autre limite supérieure pour A_n.

En supposant, comme il est permis, $\omega > 0$ *), le champ de l'intégration dans la formule (10) se représentera par les inégalités

$$\omega > x_1 > x_2 > \ldots > x_n > 0.$$

Or, en vertu de ces inégalités, les quantités

$$\omega - x_1 + x_n, \quad x_1 - x_2, \quad x_2 - x_3, \quad \ldots, \quad x_{n-1} - x_n$$

seront toutes positives.

Par suite, leur somme étant égale à ω, on aura

$$(\omega - x_1 + x_n)(x_1 - x_2)(x_2 - x_3)\ldots(x_{n-1} - x_n) \leqq \left(\frac{\omega}{n}\right)^n,$$

et la formule (10) conduira à l'inégalité

$$A_n < \frac{1}{2}\,\frac{1}{1.2.3\ldots n}\left(\frac{\omega}{n}\int_0^\omega p\,dx\right)^n,$$

que l'on pourrait aussi obtenir en partant de la formule (11).

Nous sommes ainsi arrivés à une limite supérieure exprimée en fonction de la quantité

$$\omega\int_0^\omega p\,dx.$$

Mais ce n'est pas une limite précise, cette quantité ayant une valeur donnée.

*) Nous retiendrons cette supposition dans tout ce qui suit.

On pourrait présumer que la limite supérieure précise de cette espèce fût donnée par l'expression

(13) $$\frac{1}{1.2.3.\ .(2n-1)2n}\left(\omega\int_0^\omega p\,dx\right)^n.$$

Mais il ne nous a pas réussi à le démontrer d'une manière générale, et nous ne pouvons l'affirmer que pour les deux cas les plus simples, ceux de $n=2$ et de $n=3$.

Tout revient à prouver que l'expression ci-dessus est une limite supérieure pour A_n.

Or, dans le cas de $n=2$, on le prouve aisément en partant de la formule

$$A_2 = \frac{1}{2}\int_0^\omega dx_1\int_0^{x_1}(\Omega - P_1 + P_2)(P_1 - P_2)\,dx_2.$$

En effet, on en déduit

$$A_2 = \Omega\int_0^\omega Px\,dx - \frac{\omega}{2}\int_0^\omega P^2\,dx + \frac{1}{2}\left(\int_0^\omega P\,dx\right)^2 - \frac{\omega}{2}\,\Omega\int_0^\omega P\,dx,$$

ce qui, en posant

$$\omega\int_0^\omega\left(P-\Omega\,\frac{x}{\omega}\right)^2 dx - \left[\int_0^\omega\left(P-\Omega\,\frac{x}{\omega}\right)dx\right]^2 = R,$$

peut être présenté sous la forme

$$A_2 = \frac{1}{24}\,\omega^2\Omega^2 - \frac{1}{2}\,R.$$

De là, en remarquant que R ne peut jamais être négatif, on conclut

(14) $$A_2 \leqq \frac{1}{24}\,\omega^2\Omega^2,$$

et le second membre de cette inégalité n'est autre chose que l'expression (13) pour $n=2$.

Le cas de $n=3$ présente plus de difficulté, et nous le traiterons plus tard.

5. Passons à l'objet principal de ce Mémoire.

Nous nous proposons de démontrer que, dans le cas où p est une fonction positive, la série (6) jouit de cette propriété que le rapport

$$\frac{A_n}{A_{n-1}}$$

décroît constamment, lorsque n augmente.

A cet effet, nous allons établir une formule, qui donnera une certaine expression pour le produit $A_m A_n$ de deux termes quelconques de la suite

$$A_1, \quad A_2, \quad A_3, \quad \ldots .$$

Pour arriver à cette expression, nous pouvons nous servir indifféremment de la formule (10) ou de celle (11). Nous nous arrêterons à cette dernière.

Nous allons considérer $n+m$ variables

$$x_1, \quad x_2, \quad x_3, \quad \ldots, \quad x_{n+m}$$

et, en entendant par $j_1, j_2, \ldots, j_k$ des nombres quelconques de la suite

$$1, \quad 2, \quad 3, \quad \ldots, \quad n+m,$$

nous poserons, d'une manière générale,

$$(P_{j_1} - P_{j_2})(P_{j_2} - P_{j_3}) \ldots (P_{j_{k-1}} - P_{j_k})(\Omega - P_{j_1} + P_{j_k}) = [j_1, j_2, \ldots, j_k].$$

La formule (11) pourra alors s'écrire ainsi

$$A_n = \frac{1}{2}\int_0^\omega dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{n-1}} [1, 2, 3, \ldots, n]\, dx_n,$$

et l'on aura

$$A_m = \frac{1}{2}\int_0^\omega dx_{n+1} \int_0^{x_{n+1}} dx_{n+2} \ldots \int_0^{x_{n+m-1}} [n+1, n+2, \ldots, n+m]\, dx_{n+m}.$$

De là, pour le produit $4A_m A_n$, il résulte cette expression

$$\iint \ldots \int [1, 2, \ldots, n]\, [n+1, n+2, \ldots\, n+m]\, dx_1\, dx_2 \ldots dx_{n+m},$$

l'intégrale multiple d'ordre $n+m$ étant étendue à toutes les valeurs des variables $x_1, x_2, \ldots, x_{n+m}$, qui satisfont aux inégalités

$$\left\{\begin{array}{l} \omega > x_1 > x_2 > \ldots > x_n > 0, \\ \omega > x_{n+1} > x_{n+2} > \ldots > x_{n+m} > 0. \end{array}\right. \tag{15}$$

Or cette intégrale est égale à la somme des intégrales de la même forme qu'on obtient en supposant que chacune des variables

$$x_{n+1}, \quad x_{n+2}, \quad \ldots, \quad x_{n+m}$$

se trouve dans l'un des intervalles

$$(0, x_n), \quad (x_n, x_{n-1}), \quad \ldots, \quad (x_2, x_1), \quad (x_1, \omega),$$

et en faisant, à cet égard, toutes les hypothèses compatibles avec les inégalités (15).

Considérons une de ces intégrales et permutons y les notations des variables de telle manière que le champ de l'intégration soit exprimé par les inégalités

$$\omega > x_1 > x_2 > \ldots > x_{n+m} > 0.$$

Nous aurons alors, pour cette intégrale, une expression de la forme

$$\int_0^{\omega} dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{m+n-1}} [j_1, j_2, \ldots, j_n]\, [i_1, i_2, \ldots, i_m]\, dx_{m+n},$$

$i_1, i_2, \ldots, i_m$ étant des nombres inégals de la suite

$$1, \quad 2, \quad 3, \quad \ldots, \quad n+m,$$

rangés dans l'ordre croissant, et $j_1, j_2, \ldots, j_n$ les autres nombres de la même suite, rangés aussi dans l'ordre croissant.

En faisant toutes les suppositions possibles à l'égard des nombres $i_1, i_2, \ldots, i_m$, nous aurons toutes les intégrales en question, et leur somme représentera notre intégrale primitive.

De cette manière nous obtiendrons

$$4A_m A_n = \int_0^{\omega} dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{m+n-1}} \sum [i_1, i_2, \ldots, i_m]\, [j_1, j_2, \ldots, j_n]\, dx_{m+n},$$

où la somme est étendue à toutes les combinaisons possibles de $m+n$ nombres de la suite $1, 2, 3, \ldots, m+n$ pris m à m, les nombres de la combinaison représentant les valeurs de $i_1, i_2, \ldots, i_m$, les autres nombres de la même suite celles de $j_1, j_2, \ldots, j_n$, et cela de telle manière qu'on ait

$$i_1 < i_2 < i_3 < \ldots < i_m,$$

$$j_1 < j_2 < j_3 < \ldots < j_n.$$

6. Nous allons maintenant nous occuper de certaines transformations de la somme

$$\sum [i_1, i_2, \ldots, i_m] [j_1, j_2, \ldots, j_n]$$

qui représente la fonction à intégrer dans la formule précédente; mais, pour quelques simplifications de nature purement formelle, au lieu de cette somme elle-même, nous allons considérer son rapport à l'expression

$$[1, 2, 3, \ldots, m+n].$$

Posons

$$\sum \frac{[i_1, i_2, \ldots, i_m] [j_1, j_2, \ldots, j_n]}{[1, 2, 3, \ldots, m+n]} = S$$

et introduisons les notations suivantes:

$$P_1 - P_2 = D_1, \; P_2 - P_3 = D_2, \; \ldots, \; P_{m+n-1} - P_{m+n} = D_{m+n-1}, \; \Omega - P_1 + P_{m+n} = D_{m+n}.$$

Alors il viendra

$$[1, 2, 3, \ldots, m+n] = D_1 D_2 D_3 \ldots D_{m+n} = D_{i_1} D_{i_2} \ldots D_{i_m} D_{j_1} D_{j_2} \ldots D_{j_n},$$

et en posant

$$\frac{[i_1, i_2, \ldots, i_m]}{D_{i_1} D_{i_2} \ldots D_{i_m}} = K_{i_1, i_2, \ldots, i_m}, \quad \frac{[j_1, j_2, \ldots, j_n]}{D_{j_1} D_{j_2} \ldots D_{j_n}} = K_{j_1, j_2, \ldots, j_n},$$

nous aurons

$$S = \sum K_{i_1, i_2, \ldots, i_m} K_{j_1, j_2, \ldots, j_n}.$$

Considérons de plus près les expressions désignées par $K_{i_1, \ldots, i_m}$ et $K_{j_1, \ldots, j_n}$.

Chacune de ces deux expressions a la forme d'une fraction, dans laquelle le numérateur et le dénominateur sont des produits d'un même nombre de facteurs. Par exemple, dans la première, le numérateur est le produit de m facteurs

$$P_{i_1} - P_{i_2}, \quad P_{i_2} - P_{i_3}, \quad \ldots, \quad P_{i_{m-1}} - P_{i_m}, \quad \Omega - P_{i_1} + P_{i_m}.$$

Or ces facteurs peuvent être exprimés au moyen des D_i.

Par exemple, on a

$$P_{i_1} - P_{i_2} = D_{i_1} + D_{i_1+1} + \ldots + D_{i_2-1} = \sum_{i_1}^{i_2-1} D_i\,^{*)},$$

et l'on aura des expressions analogues pour

$$P_{i_2} - P_{i_3}, \quad P_{i_3} - P_{i_4}, \quad \ldots, \quad P_{i_{m-1}} - P_{i_m}.$$

Quant à ce qui concerne le facteur $\Omega - P_{i_1} + P_{i_m}$, pour le présenter sous la même forme, il faudra étendre la définition des D_i aux valeurs de i qui surpassent $m+n$, en admettant les égalités de la forme

$$D_{m+n+s} = D_s.$$

Alors, en posant

$$i_1 + m + n = i_1',$$

nous aurons

$$\Omega - P_{i_1} + P_{i_m} = \sum_{i_m}^{i_1'-1} D_i.$$

Il viendra donc

$$[i_1, i_2, \ldots, i_m] = \sum_{i_1}^{i_2-1} D_i \sum_{i_2}^{i_3-1} D_i \ldots \sum_{i_m}^{i_1'-1} D_i,$$

et pareillement, en posant

$$j_1 + m + n = j_1',$$

on aura

$$[j_1, j_2, \ldots, j_n] = \sum_{j_1}^{j_2-1} D_j \sum_{j_2}^{j_3-1} D_j \ldots \sum_{j_n}^{j_1'-1} D_j.$$

---

*) Par la notation $\sum\limits_k^l u_s$, k et $l \geqq k$ étant des entiers, nous entendrons toujours la somme étendue à toutes les valeurs entières de s, de k à l *inclusivement*.

Nous remarquons maintenant que chacune des sommes, qui figurent dans ces expressions, peut se réduire à un seul terme, ce qui aura lieu, pour quelques-unes d'entre elles, toutes les fois que, parmi les nombres

$$i_2 - i_1, \quad \ldots, \quad i_1' - i_m, \quad j_2 - j_1, \quad \ldots, \quad j_1' - j_n,$$

il s'en trouve qui soient éguax à 1.

Dans ce cas, le numérateur et le dénominateur au moins d'une des fractions $K_{i_1, \ldots, i_m}$, $K_{j_1, \ldots, j_n}$ auront des facteurs communs, et, si l'on désigne par g le nombre des termes égaux à 1 dans la suite

$$i_2 - i_1, \quad i_3 - i_2, \quad \ldots, \quad i_1' - i_m$$

et par h celui des termes égaux à 1 dans la suite

$$j_2 - j_1, \quad j_3 - j_2, \quad \ldots, \quad j_1' - j_n,$$

les termes de la première fraction auront g facteurs communs et ceux de la seconde h.

Ces fractions seront donc réductibles, et il est facile de voir qu'après la réduction complète le nombre des facteurs au dénominateur sera le même pour les deux fractions, en d'autres termes, que l'on aura

$$m - g = n - h.$$

En effet, introduisons la notation

$$i_2 - i_1 = \delta i_1, \quad i_3 - i_2 = \delta i_2, \quad \ldots, \quad i_1' - i_m = \delta i_m,$$

δi_s étant considéré comme une certaine caractéristique du nombre i_s dans la suite $i_1, i_2, \ldots, i_m$, et, en posant $m - g = l$, désignons par $\alpha_1, \alpha_2, \ldots, \alpha_l$ ceux-là des nombres i_s, pour lesquels $\delta i_s > 1$. Il est évident que, si l'on considère tous les nombres contenus dans les intervalles

$$(\alpha_1, \alpha_1 + \delta\alpha_1), \quad (\alpha_2, \alpha_2 + \delta\alpha_2), \quad \ldots, \quad (\alpha_l, \alpha_l + \delta\alpha_l),$$

sans y compter les α_s et les $\alpha_s + \delta\alpha_s$, ces nombres ou leurs résidus positifs suivant le module $m + n$ donneront tous les nombres du groupe $(j_1, j_2, \ldots, j_n)$. Par conséquent, on aura

$$(\delta\alpha_1 - 1) + (\delta\alpha_2 - 1) + \ldots + (\delta\alpha_l - 1) = n,$$

$$(\delta\alpha_1 - 2) + (\delta\alpha_2 - 2) + \ldots + (\delta\alpha_l - 2) = h,$$

et de là il vient $n - h = l$.

Cela posé, effectuons la réduction de nos fractions.

Nous aurons

$$K_{i_1, i_2, \dots, i_m} = \frac{\sum\limits_{\alpha_1}^{\alpha_1+\delta\alpha_1-1} D_\alpha \sum\limits_{\alpha_2}^{\alpha_2+\delta\alpha_2-1} D_\alpha \dots \sum\limits_{\alpha_l}^{\alpha_l+\delta\alpha_l-1} D_\alpha}{D_{\alpha_1} D_{\alpha_2} \dots D_{\alpha_l}},$$

et pareillement, en posant

$$j_2 - j_1 = \delta j_1, \quad j_3 - j_2 = \delta j_2, \quad \dots, \quad j_1' - j_n = \delta j_n$$

et en entendant par $\beta_1, \beta_2, \dots, \beta_l$ ceux-là des nombres j_s, pour lesquels $\delta j_s > 1$,

$$K_{j_1, j_2, \dots, j_n} = \frac{\sum\limits_{\beta_1}^{\beta_1+\delta\beta_1-1} D_\beta \sum\limits_{\beta_2}^{\beta_2+\delta\beta_2-1} D_\beta \dots \sum\limits_{\beta_l}^{\beta_l+\delta\beta_l-1} D_\beta}{D_{\beta_1} D_{\beta_2} \dots D_{\beta_l}}.$$

Nous supposerons

$$\alpha_1 < \alpha_2 < \alpha_3 < \dots < \alpha_l,$$

$$\beta_1 < \beta_2 < \beta_3 < \dots < \beta_l.$$

Alors nous aurons nécessairement : ou bien

$$\alpha_1 + \delta\alpha_1 - 1 = \beta_1, \quad \alpha_2 + \delta\alpha_2 - 1 = \beta_2, \quad \dots, \quad \alpha_l + \delta\alpha_l - 1 = \beta_l,$$

ou bien

$$\alpha_1 + \delta\alpha_1 - 1 = \beta_2, \quad \alpha_2 + \delta\alpha_2 - 1 = \beta_3, \quad \dots, \quad \alpha_l + \delta\alpha_l - 1 = \beta_1 + m + n.$$

Pour s'en assurer, il n'y a qu'à remarquer que les nombres de la suite

$$\alpha_1 + \delta\alpha_1 - 1, \quad \alpha_2 + \delta\alpha_2 - 1, \quad \dots, \quad \alpha_l + \delta\alpha_l - 1,$$

si $\alpha_l + \delta\alpha_l - 1 \leqq m + n$, ou ceux de la suite

$$\alpha_l + \delta\alpha_l - m - n - 1, \quad \alpha_1 + \delta\alpha_1 - 1, \quad \dots, \quad \alpha_{l-1} + \delta\alpha_{l-1} - 1,$$

si $\alpha_l + \delta\alpha_l > m + n$, appartiennent au groupe $(j_1, j_2, \dots, j_n)$, ont des caractéristiques δj_s supérieures à 1 et sont rangés dans l'ordre croissant.

Pareillement, nous aurons toujours : ou bien

$$\beta_1 + \delta\beta_1 - 1 = \alpha_2, \quad \beta_2 + \delta\beta_2 - 1 = \alpha_3, \quad \dots, \quad \beta_l + \delta\beta_l - 1 = \alpha_1 + m + n,$$

ou bien

$$\beta_1 + \delta\beta_1 - 1 = \alpha_1, \quad \beta_2 + \delta\beta_2 - 1 = \alpha_2, \quad \ldots, \quad \beta_l + \delta\beta_l - 1 = \alpha_l.$$

Par suite, si

$$\lambda_1, \quad \lambda_2, \quad \lambda_3, \quad \lambda_4, \quad \ldots, \quad \lambda_{2l-1}, \quad \lambda_{2l}$$

sont les nombres

$$\alpha_1, \quad \alpha_2, \quad \ldots, \quad \alpha_l, \quad \beta_1, \quad \beta_2, \quad \ldots, \quad \beta_l,$$

rangés dans l'ordre croissant, il viendra

$$K_{i_1,\ldots,i_m} K_{j_1,\ldots,j_n} = \frac{\sum_{\lambda_1}^{\lambda_2} D_\lambda \sum_{\lambda_2}^{\lambda_3} D_\lambda \cdots \sum_{\lambda_{2l-1}}^{\lambda_{2l}} D_\lambda \sum_{\lambda_{2l}}^{\lambda_1'} D_\lambda}{D_{\lambda_1} D_{\lambda_2} \cdots D_{\lambda_{2l-1}} D_{\lambda_{2l}}}, \tag{16}$$

où l'on à posé

$$\lambda_1' = \lambda_1 + m + n.$$

Remarquons que les nombres $\lambda_1, \lambda_2 \ldots, \lambda_{2l}$ vérifieront toujours ou bien la relation

$$\lambda_2 - \lambda_1 + \lambda_4 - \lambda_3 + \ldots + \lambda_{2l} - \lambda_{2l-1} = n,$$

ou bien celle-ci:

$$\lambda_2 - \lambda_1 + \lambda_4 - \lambda_3 + \ldots + \lambda_{2l} - \lambda_{2l-1} = m.$$

En effet, la somme

$$(\lambda_2 - \lambda_1) + (\lambda_4 - \lambda_3) + \ldots + (\lambda_{2l} - \lambda_{2l-1})$$

est égale: dans le cas de $\lambda_1 = \alpha_1$, à

$$(\delta\alpha_1 - 1) + (\delta\alpha_2 - 1) + \ldots + (\delta\alpha_l - 1) = n$$

et dans celui de $\lambda_1 = \beta_1$, à

$$(\delta\beta_1 - 1) + (\delta\beta_2 - 1) + \ldots + (\delta\beta_l - 1) = m.$$

7. La formule (16) conduit à celle-ci:

$$K_{i_1,\ldots,i_m} K_{j_1,\ldots,j_n} = \sum \frac{D_{\mu_1} D_{\mu_2} \ldots D_{\mu_{2l}}}{D_{\lambda_1} D_{\lambda_2} \ldots D_{\lambda_{2l}}}, \tag{17}$$

où la somme est étendue à toutes les valeurs

$$\begin{array}{llllll}
\text{de } \mu_1, \text{ appartenant à la suite} & \lambda_1, & \lambda_1+1, & \ldots, & \lambda_2-1, & \lambda_2, \\
\text{» } \mu_2, \quad \text{» \quad » \quad »} & \lambda_2, & \lambda_2+1, & \ldots, & \lambda_3-1, & \lambda_3, \\
\ldots\ldots & & & & & \\
\text{» } \mu_{2l}, \quad \text{» \quad » \quad »} & \lambda_{2l}, & \lambda_{2l}+1, & \ldots, & \lambda_1'-1, & \lambda_1'.
\end{array}$$

Cette somme contient deux termes égaux à 1, dont l'un correspond à la supposition

$$\mu_1 = \lambda_1, \quad \mu_2 = \lambda_2, \quad \ldots, \quad \mu_{2l} = \lambda_{2l},$$

l'autre à celle-ci:

$$\mu_1 = \lambda_2, \quad \mu_2 = \lambda_3, \quad \ldots, \quad \mu_{2l} = \lambda_1 .$$

Quant aux autres termes, ils seront de la forme

$$\frac{D_{b_1} D_{b_2} \ldots D_{b_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}}, \tag{18}$$

$a_1, a_2, \ldots, a_k$ étant des nombres de la suite

$$\lambda_1, \quad \lambda_2, \quad \lambda_3, \quad \ldots, \quad \lambda_{2l}$$

et $b_1, b_2, \ldots, b_k$ des nombres de la suite

$$1, \quad 2, \quad 3, \quad \ldots, \quad m+n$$

qui diffèrent des a_s.

Considérons ces termes de plus près, en supposant, pour fixer les idées,

$$a_1 < a_2 < a_3 < \ldots < a_k,$$

$$b_1 < b_2 < b_3 < \ldots < b_k.$$

Tout d'abord, nous remarquons que les nombres $a_1, a_2, \ldots, a_k$, k étant supposé plus grand que 1, vérifieront nécessairement les inégalités

$$a_2 - a_1 > 1, \quad a_3 - a_2 > 1, \quad \ldots, \quad a_k - a_{k-1} > 1, \quad a_1 + m + n - a_k > 1.$$

En effet, toutes les fois qu'on a

$$\lambda_{s+1} - \lambda_s = 1,$$

μ_s ne pourra recevoir que les deux valeurs λ_s et λ_{s+1}, et, par suite les nombres λ_s et λ_{s+1} ne pourront se rencontrer tous les deux dans la suite $a_1, a_2, \ldots, a_k$. Pareillement, lorsque

$$\lambda_1 + m + n - \lambda_{2l} = 1,$$

μ_{2l} ne pourra recevoir que les deux valeurs λ_{2l} et λ_1', et les nombres λ_{2l} et λ_1 ne se rencontreront pas en même temps dans la suite $a_1, a_2, \ldots, a_k$.

Dans le cas où les nombres $\lambda_1, \lambda_2, \ldots, \lambda_{2l}$ satisfont aux inégalités

$$\lambda_2 - \lambda_1 > 1, \quad \lambda_3 - \lambda_2 > 1, \quad \ldots, \quad \lambda_{2l} - \lambda_{2l-1} > 1, \quad \lambda_1 + m + n - \lambda_{2l} > 1,$$

il y aura des termes pour lesquels $k = 2l$. Tous ces termes s'obtiendront en attribuant à $\mu_1, \mu_2, \ldots, \mu_{2l}$ des valeurs satisfaisant aux inégalités

$$\lambda_1 < \mu_1 < \lambda_2 < \mu_2 < \ldots < \lambda_{2l} < \mu_{2l} < \lambda_1'.$$

Par suite, dans le cas de $k = 2l$, on aura toujours: ou

$$a_1 < b_1 < a_2 < b_2 < \ldots < a_k < b_k,$$

ou bien

$$b_1 < a_1 < b_2 < a_2 < \ldots < b_k < a_k.$$

Nous allons maintenant montrer que la même chose aura lieu dans le cas de $k < 2l$.

En entendant par $\alpha_1, \alpha_2, \ldots, \alpha_q$ des nombres quelconques de la suite $1, 2, \ldots, m+n$ et en supposant

$$\alpha_1 < \alpha_2 < \ldots < \alpha_q,$$

désignons, d'une manière générale, par

$$\{\alpha_1, \alpha_2, \ldots, \alpha_q\}$$

la somme

$$\sum \frac{D_{\beta_1} D_{\beta_2} \ldots D_{\beta_q}}{D_{\alpha_1} D_{\alpha_2} \ldots D_{\alpha_q}},$$

étendue à toutes les valeurs

de β_1, appartenant à la suite $\alpha_1, \quad \alpha_1 + 1, \quad \ldots, \quad \alpha_2 - 1, \quad \alpha_2$,

» β_2, » » » $\alpha_2, \quad \alpha_2 + 1, \quad \ldots, \quad \alpha_3 - 1, \quad \alpha_3$,

. . . .

» β_q, » » » $\alpha_q, \quad \alpha_q + 1, \quad \ldots, \quad \alpha_1 + m + n$.

Ainsi la somme (17) se représentera par

$$\{\lambda_1, \lambda_2, \ldots, \lambda_{2l}\}.$$

Cela posé, considérons tous les termes de cette somme, pour lesquels la suite $a_1, a_2, \ldots, a_k$ ne contient pas le nombre λ_1.

On obtiendra ces termes en faisant successivement les deux suppositions suivantes:

$$1) \qquad \mu_{2l} \leqq \lambda_1 + m + n, \quad \mu_1 = \lambda_1,$$

$$2) \qquad \mu_{2l} = \lambda_1 + m + n, \quad \mu_1 > \lambda_1.$$

De là on voit que l'ensemble de ces termes ne sera autre chose que l'expression

$$\{\lambda_2, \lambda_3, \ldots, \lambda_{2l}\}.$$

Pareillement, il est facile de voir que l'ensemble des termes de la somme (17), pour lesquels la suite $a_1, a_2, \ldots, a_k$ ne contient pas le nombre λ_{2l}, se représentera par

$$\{\lambda_1, \lambda_2, \ldots, \lambda_{2l-1}\},$$

et que, en général, l'ensemble des termes, pour lesquels λ_s manque dans cette suite, coïncidera avec

$$\{\lambda_1, \ldots, \lambda_{s-1}, \lambda_{s+1}, \ldots, \lambda_{2l}\}.$$

D'après cela on peut conclure que les termes de la somme (17), qui correspondent à un ensemble donné des nombres $a_1, a_2, \ldots, a_k$, se trouveront tous parmi les termes de la somme

$$\{a_1, a_2, \ldots, a_k\},$$

et que, par suite, on obtiendra ces termes, en attribuant aux indices $c_1, c_2, \ldots, c_k$ dans l'expression

$$\frac{D_{c_1} D_{c_2} \ldots D_{c_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}}$$

des valeurs, vérifiant les inégalités

$$a_1 < c_1 < a_2 < c_2 < \ldots < a_k < c_k < a_1 + m + n.$$

On voit donc que l'on aura toujours: ou bien

$$(19) \qquad a_1 < b_1 < a_2 < b_2 < \ldots < a_k < b_k,$$

ou bien

(20) $$b_1 < a_1 < b_2 < a_2 < \ldots < b_k < a_k.$$

En même temps on voit qu'à toute supposition possible sur les nombres a_s, b_s, assujettis aux conditions signalées, correspondra un terme, et seulement un terme, de la somme (17).

En ce qui concerne le nombre k, il est à remarquer qu'il ne pourra jamais surpasser le plus petit des nombres m et n.

En effet, si nous désignons par q le nombre des termes égaux à 1 dans la suite

$$\lambda_2 - \lambda_1, \quad \lambda_4 - \lambda_3, \quad \ldots, \quad \lambda_{2l-2} - \lambda_{2l-3}, \quad \lambda_{2l} - \lambda_{2l-1}$$

et par q' celui des termes égaux à 1 dans la suite

$$\lambda_3 - \lambda_2, \quad \lambda_5 - \lambda_4, \quad \ldots, \quad \lambda_{2l-1} - \lambda_{2l-2}, \quad \lambda_1' - \lambda_{2l},$$

nous aurons, évidemment, ces deux inégalités

$$k \leqq 2l - q, \quad k \leqq 2l - q'.$$

Mais, d'autre part, la somme des termes de la première suite étant désignée par Σ et celle de la seconde par Σ', on a

$$\Sigma \geqq q + 2(l - q), \quad \Sigma' \geqq q' + 2(l - q').$$

On voit donc que le nombre k ne surpassera pas le plus petit des nombres Σ et Σ'; et de ces derniers l'un est égal à m, l'autre à n, car on a

$$\Sigma + \Sigma' = m + n,$$

et Σ, comme nous avons vu au numéro précédent, est toujours égal à n ou à m.

Dans ce qui suit, nous supposerons $m \leqq n$, et, conformément à ce que nous venons de montrer, nous ne donnerons à k que des valeurs qui ne surpassent par m.

8. Reprenons l'expression

$$S = \sum K_{i_1, i_2, \ldots, i_m} K_{j_1, j_2, \ldots, j_n}.$$

Chaque terme est ici une somme de la forme (17), et cette somme, outre les termes de la forme (18), qui sont tous distincts, contient encore deux termes égaux à 1.

En considérant d'abord ces derniers termes, nous obtenons, pour leur somme dans l'expression ci-dessus,

$$2\,\frac{(n+1)(n+2)\ldots(n+m)}{1.2.3\ldots m},$$

car le nombre des termes de l'expression S est celui des combinaisons qu'on peut former de $n+m$ éléments m à m.

Passant ensuite aux termes de la forme (18), nous remarquons que chacun d'eux sera répété dans l'expression S autant de fois qu'il y a de suppositions distinctes sur les nombres $i_1, i_2, \ldots, i_m$, dans lesquelles la suite

$$\lambda_1, \quad \lambda_2, \quad \lambda_3, \quad \ldots, \quad \lambda_{2l} \tag{21}$$

contienne tous les nombres $a_1, a_2, \ldots, a_k$.

Soit $N_{a_1, a_2, \ldots, a_k}$ le nombre de ces suppositions.

En introduisant la notation connue

$$\frac{q(q-1)(q-2)\ldots(q-r+1)}{1.2.3\ldots r} = C_q^{(r)},$$

nous aurons

$$S = 2C_{m+n}^{(m)} + \sum_{k=1}^{k=m} \sum N_{a_1, a_2, \ldots, a_k} \frac{D_{b_1} D_{b_2} \ldots D_{b_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}},$$

où la seconde somme est étendue à toutes les suppositions possibles qu'on peut faire sur les nombres

$$a_1, \quad a_2, \quad \ldots, \quad a_k, \quad b_1, \quad b_2, \quad \ldots, \quad b_k,$$

appartenant à la suite $1, 2, 3, \ldots, m+n$, en les assujettissant successivement à chacune des deux conditions (19) et (20).

Reste à calculer le coefficient $N_{a_1, a_2, \ldots, a_k}$, qui dépendra, comme nous verrons tout de suite, non pas des valeurs des a_s, mais seulement de leur nombre k.

En nous arrêtant à un groupe déterminé des nombres $a_1, a_2, \ldots, a_k$, considérons toutes les combinaisons possibles $(i_1, i_2, \ldots, i_m)$ conjointement avec les combinaisons correspondantes $(j_1, j_2, \ldots, j_n)$, et toutes ces combinaisons partageons en diverses classes suivant le mode de la distribution des nombres $a_1, a_2, \ldots, a_k$ entre les deux groupes $(i_1, i_2, \ldots, i_m)$ et $(j_1, j_2, \ldots, j_n)$. Comme chacun des nombres a_s peut appartenir à chacun de ces deux groupes, le nombre de tous les modes de distribution et, par suite, aussi des classes sera égal à 2^k.

Cela posé, considérons un mode de distribution quelconque et voyons, combien y a-t-il de combinaisons $(i_1, i_2, \ldots, i_m)$ de la classe correspondante qui remplissent cette condition que la suite (21) contient chacun des nombres $a_1, a_2, \ldots, a_k$.

Soient

$$\alpha_1, \quad \alpha_2, \quad \ldots, \quad \alpha_i$$

ceux-là des nombres a_s qui appartiennent au groupe $(i_1, i_2, \ldots, i_m)$, et

$$\beta_1, \quad \beta_2, \quad \ldots, \quad \beta_j$$

ceux-là d'entre eux qui appartiennent au groupe $(j_1, j_2, \ldots, j_n)$, i et j étant des entiers positifs ou nuls liés par la relation $i + j = k$.

En supposant que α_i est le plus grand des α et β_j le plus grand des β et en nous reportant à ce qui a été montré au numéro 6, nous pouvons affirmer que les nombres a_1, a_2, $\ldots$, a_k ne pourront se rencontrer tout à la fois dans la suite (21) que si les nombres

$$\alpha_1 + 1, \quad \alpha_2 + 1, \quad \ldots, \quad \alpha_i + 1 \quad (\text{ou } \alpha_i + 1 - m - n)$$

appartiennent au groupe $(j_1, j_2, \ldots, j_n)$ et les nombres

$$\beta_1 + 1, \quad \beta_2 + 1, \quad \ldots, \quad \beta_j + 1 \quad (\text{ou } \beta_j + 1 - m - n)$$

au groupe $(i_1, i_2, \ldots, i_m)$.

Par conséquent, le groupe $(i_1, i_2, \ldots, i_m)$ devra contenir les k nombres suivants

$$\alpha_1, \quad \alpha_2, \quad \ldots, \quad \alpha_i, \quad \beta_1 + 1, \quad \beta_2 + 1, \quad \ldots, \quad \beta_j + 1 \quad (\text{ou } \beta_j + 1 - m - n),$$

qui sont tous distincts, comme cela résulte de ce que les a_s satisfont aux inégalités

$$a_2 - a_1 > 1, \quad a_3 - a_2 > 1, \quad \ldots, \quad a_1 + m + n - a_k > 1.$$

En même temps, le groupe $(j_1, j_2, \ldots, j_n)$ devra contenir les k nombres

$$\beta_1, \quad \beta_2, \quad \ldots, \quad \beta_j, \quad \alpha_1 + 1, \quad \alpha_2 + 1, \quad \ldots, \quad \alpha_i + 1 \quad (\text{ou } \alpha_i + 1 - m - n),$$

qui sont encore tous distincts.

Cette condition nécessaire est d'ailleurs suffisante.

On voit donc que la condition que doivent remplir les combinaisons considérées se réduit à celle-ci: les $2k$ nombres fixes de la suite $1, 2, 3, \ldots, m + n$ doivent être répartis k à k, et d'une manière déterminée, entre les deux groupes $(i_1, i_2, \ldots, i_m)$ et $(j_1, j_2, \ldots, j_n)$.

Il s'ensuit que le nombre des combinaisons en question est celui des combinaisons qu'on peut former de $m + n - 2k$ objets $m - k$ à $m - k$.

De tout ce qui a été dit il résulte

$$N_{a_1, a_2, \ldots, a_k} = 2^k C_{n+m-2k}^{(m-k)},$$

la notation $C_q^{(r)}$ étant employée avec la convention connue

$$C_q^{(0)} = 1. \qquad (q = 0, 1, 2, 3, \ldots)$$

Les coefficients N étant ainsi déterminés, nous n'avons plus rien d'inconnu dans l'expression de S, que nous pouvons maintenant présenter sous la forme

$$S = \sum_{k=0}^{m} 2^k C_{n+m-2k}^{(m-k)} S_k,$$

en posant

$$S_0 = 2$$

et en entendant par S_k, pour $k > 0$, la somme de tous les termes de la forme

$$\frac{D_{b_1} D_{b_2} \ldots D_{b_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}}$$

qui correspondent à une valeur donnée de k.

Quant à cette somme, on pourra écrire

$$S_k = \sum \left\{ \frac{D_{b_1} D_{b_2} \ldots D_{b_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}} + \frac{D_{a_1} D_{a_2} \ldots D_{a_k}}{D_{b_1} D_{b_2} \ldots D_{b_k}} \right\}, \tag{22}$$

en supposant que la sommation s'étend à toutes les combinaisons possibles de $n+m$ nombres de la suite $1, 2, 3, \ldots, n+m$ pris $2k$ à $2k$, les nombres de chaque combinaison représentant les valeurs des a_s et des b_s conformément aux inégalités

$$a_1 < b_1 < a_2 < b_2 < \ldots < a_k < b_k.$$

9. Revenons maintenant à l'expression de $4A_m A_n$ qui a été obtenue au numéro 5. Cette expression peut être présentée sous la forme

$$4 A_m A_n = \int_0^{\omega} dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{m+n-1}} S\, D_1\, D_2 \ldots D_{m+n}\, dx_{m+n}.$$

Par suite, en posant

$$(23) \qquad J_k = \frac{1}{4}\int_0^{\omega} dx_1 \int_0^{x_1} dx_2 \ldots \int_0^{x_{m+n-1}} S_k D_1 D_2 \ldots D_{m+n} dx_{m+n}$$

et en supposant

$$m \leqq n,$$

nous aurons

$$(24) \qquad A_m A_n = \sum_{k=0}^{m} 2^k C_{n+m-2k}^{(m-k)} J_k.$$

C'est cette formule que nous avons voulu établir.

Vu les applications que nous en aurons à faire, il est utile de remarquer que la quantité désignée par J_k ne dépend des nombres m et n que par l'intermédiaire de la combinaison $m+n$. C'est ce qu'on voit par les formules (23) et (22), en tenant compte de la signification du signe sommatoire dans la dernière.

Donc, la somme $m+n$ ayant une valeur constante, la quantité J_k ne dépendra que du nombre k.

Remarquons encore que l'on a

$$J_0 = A_{m+n}.$$

10. Nous allons à présent supposer que la fonction p ne peut recevoir que des valeurs positives ou nulles, supposition que nous retiendrons dans tout ce qui suit.

Ceci admis, l'intégrale

$$P = \int p\, dx$$

sera une fonction croissante de x, et les quantités $D_1, D_2, \ldots, D_{m+n}$ ne pourront pas devenir négatives, lorsque les x_i vérifient les inégalités

$$\omega > x_1 > x_2 > x_3 > \ldots > x_{m+n} > 0$$

qui définissent le champ d'intégration dans la formule (23).

Il en résulte que, dans la supposition adoptée, tous les J_k, ainsi que les A_s, seront des nombres positifs.

D'ailleurs, les D_i étant positifs, il viendra

$$\frac{D_{b_1} D_{b_2} \ldots D_{b_k}}{D_{a_1} D_{a_2} \ldots D_{a_k}} + \frac{D_{a_1} D_{a_2} \ldots D_{a_k}}{D_{b_1} D_{b_2} \ldots D_{b_k}} \geqq 2,$$

et la formule (22) donnera

$$S_k \geqq 2\, C_{n+m}^{(2k)};$$

d'où l'on voit qu'on aura

$$J_k \geqq C_{m+n}^{(2k)} A_{m+n}, \tag{25}$$

le signe d'égalité se rapportant au cas de $k = 0$.

En se servant de cette inégalité, on pourra déduire de la formule (24) diverses inégalités entre les quantités A_s, dont nous allons signaler les plus importantes.

En premier lieu, posons, dans cette formule, $m = 1$.

Il viendra

$$A_1 A_n = (n+1)\, J_0 + 2 J_1,$$

ce qui, en vertu de (25), conduit à cette inégalité

$$A_1 A_n > (n+1)^2 A_{n+1}.$$

De là, en remplaçant n par $n-1$, on tire

$$A_n < \frac{A_1}{n^2} A_{n-1}, \tag{26}$$

ce qui donne, pour le rapport

$$\frac{A_n}{A_{n-1}},$$

une limite supérieure plus précise que celle signalée au n° 2.

Maintenant, en entendant par i un entier positif ou nul, remplaçons, dans la formule (24), n par $n+i$ et m par $n-i$.

Nous aurons

$$A_{n-i} A_{n+i} = \sum_{k=0}^{n-i} 2^k C_{2n-2k}^{(n-i-k)} J_k,$$

où, d'après ce que nous avons dit au numéro précédent, les J_k ne dépendront point du nombre i.

Nous aurons donc, avec les mêmes valeurs des J_k, ces deux formules

$$A_n^{\,2} = \sum_{k=0}^{n} 2^k C_{2n-2k}^{(n-k)} J_k,$$

$$A_{n-1} A_{n+1} = \sum_{k=0}^{n-1} 2^k C_{2n-2k}^{(n-1-k)} J_k,$$

dont la seconde pourra être écrite ainsi :

$$A_{n-1}A_{n+1} = \sum_{k=0}^{n} 2^k \frac{n-k}{n+1-k} C_{2n-2k}^{(n-k)} J_k.$$

De là on voit immédiatement qu'on aura toujours

$$A_n^2 > A_{n-1}A_{n+1},$$

ou bien

$$\frac{A_n}{A_{n-1}} > \frac{A_{n+1}}{A_n},$$

et c'est la proposition que nous avons voulu démontrer.

On peut d'ailleurs obtenir un résultat plus précis.

A cet effet, éliminons des formules ci-dessus la quantité J_1 (ce qui suppose $n > 1$). Il viendra

$$A_n^2 - \frac{n}{n-1} A_{n-1}A_{n+1} = \sum_{k=0}^{n} \frac{(k-1)2^k}{(n-1)(n+1-k)} C_{2n-2k}^{(n-k)} J_k.$$

Or il est facile de s'assurer que la somme, qui figure au second membre, représente une quantité positive.

En effet, cette somme est plus grande que la quantité

$$\frac{4}{(n-1)^2} C_{2n-4}^{(n-2)} J_2 - \frac{1}{n^2-1} C_{2n}^{(n)} J_0,$$

qu'on obtient en rejetant tous les termes pour lesquels $k > 2$, et cette quantité, en vertu de (25), est plus grande que celle-ci

$$\left\{\frac{4}{(n-1)^2} C_{2n-4}^{(n-2)} C_{2n}^{(4)} - \frac{1}{n^2-1} C_{2n}^{(n)}\right\} A_{2n} = \frac{(n^2-3)(n^2+2)}{6(n^2-1)} C_{2n}^{(n)} A_{2n}.$$

On voit donc que l'on aura

(27) $$A_n^2 > \frac{n}{n-1} A_{n-1}A_{n+1}$$

pour toutes les valeurs de n à partir de $n = 2$.

11. Nous venons de montrer que le rapport

$$\frac{A_n}{A_{n-1}}$$

décroît constamment, lorsque n augmente.

Il en résulte que, si, pour une valeur quelconque de n, on a $A_n \leqq A_{n-1}$, on aura certainement

$$A_n > A_{n+1} > A_{n+2} > \ldots .$$

Par suite, si, en calculant successivement A_1, A_2, A_3, ..., on parvient à un terme A_n qui ne surpasse pas le précédent A_{n-1}, on pourra conclure que la valeur de A est comprise entre les limites

$$1 - A_1 + A_2 - A_3 + \ldots + (-1)^{n-1} A_{n-1}$$

et

$$1 - A_1 + A_2 - A_3 + \ldots + (-1)^{n-1} A_{n-1} + (-1)^n A_n,$$

et que les calculs ultérieurs conduiront à des limites de plus en plus resserrées.

D'ailleurs, si l'on pose

$$A = 1 - A_1 + A_2 - A_3 + \ldots + (-1)^n (A_n - R_n),$$

on aura, d'une part,

$$R_n < A_{n+1}, \quad R_n < A_{n+1} - A_{n+2} + A_{n+3}, \quad \ldots,$$

et d'autre part,

$$R_n > 0, \quad R_n > A_{n+1} - A_{n+2}, \quad \ldots,$$

d'où l'on pourra tirer des conclusions utiles, sans pousser le calcul au-delà du terme A_n, si l'on connaît des limites supérieures et inférieures des termes

$$A_{n+1}, \quad A_{n+2}, \quad A_{n+3}, \quad \ldots .$$

Par exemple, si l'on se sert de l'inégalité (27), on pourra conclure

$$R_n < \frac{n-1}{n} \frac{A_n^2}{A_{n-1}},$$

et l'on aura

$$A = 1 - A_1 + A_2 - A_3 + \ldots + (-1)^n A_n \left(1 - \theta \frac{n-1}{n} \frac{A_n}{A_{n-1}}\right),$$

θ étant une quantité comprise entre 0 et 1.

Remarquons que cette formule sera exacte non-seulement dans le cas où $A_n \leqq A_{n-1}$, mais encore dans tous les cas où l'on a $A_{n+1} \geqq A_{n+2}$, n ayant une valeur quelconque supérieure à 1.

Si l'on a $A_2 \leqq A_1$, les conclusions précédentes seront applicables quel que soit n, et l'expression

$$1 - A_1 + A_2 - A_3 + \dots + (-1)^n A_n$$

se rapprochera constamment de A, à mesure que n augmente en restant toujours pair, ou toujours impair.

Si, au contraire, on a $A_2 > A_1$, la suite

$$A_1, \quad A_2, \quad A_3, \quad \dots$$

ira jusqu'à un certain terme en croissant, et l'expression ci-dessus ne commencera à se rapprocher de A qu'à partir de la valeur de n qui correspond au terme maximum.

Quant à cette valeur, elle sera toujours plus petite que $\sqrt{A_1}$, comme on le voit par l'inégalité (26).

Il est à remarquer que, si l'on a $A_1 \leqq 6$, on aura toujours $A_2 \leqq A_1$. C'est ce que montre l'inégalité (14), que nous pouvons présenter sous la forme

$$A_2 \leqq \frac{1}{6} A_1^2. \tag{28}$$

Comme dans le cas de $A_2 \leqq A_1$ on a $A < 1$, il en résulte que la condition $A_1 \leqq 6$ assure l'inégalité $A < 1$.

12. Toutes les fois que $A_{n+1} \geqq A_{n+2}$, on aura : dans le cas de n impair

$$A > 1 - A_1 + A_2 - A_3 + \dots + (-1)^n A_n,$$

et dans celui de n pair

$$A < 1 - A_1 + A_2 - A_3 + \dots + (-1)^n A_n.$$

Par suite, si, dans le cas de n impair, on trouve

$$1 - \alpha - A_1 + A_2 - A_3 + \dots + (-1)^n A_n \geqq 0, \tag{29}$$

α étant un nombre donné quelconque, on pourra conclure l'inégalité $A > \alpha$.

Pareillement, si, n étant pair, on a

$$(30) \qquad 1-\alpha-A_1+A_2-A_3+\ldots+(-1)^n A_n \leqq 0,$$

on pourra conclure $A < \alpha$.

Nous avons supposé $A_{n+1} \geqq A_{n+2}$, condition nécessaire pour que les conclusions ci-dessus soient légitimes. Mais, dans certains cas, cette condition sera déjà impliquée dans celles (29) et (30).

Tel sera, par exemple, le cas où le nombre α est compris entre -5 et $+1$. Dans ce cas, la condition (29) ou (30), suivant que n est impair ou pair, entraînera non-seulement l'inégalité $A_{n+1} > A_{n+2}$, mais encore, si $n > 1$, celle $A_{n-1} \geqq A_n$ et, pour $n = 1$, celle $A_1 \geqq A_2$.

En effet, d'après ce que nous avons remarqué au numéro précédent, on ne peut avoir $A_2 > A_1$ que si l'on a $A_1 > 6$, et d'autre part, l'inégalité $A_n > A_{n-1}$, pour $n > 1$, entraîne celles-ci:

$$A_1 < A_2 < \ldots < A_n.$$

Donc, si l'on avait $A_n > A_{n-1}$, pour $n > 1$, ou $A_2 > A_1$, pour $n = 1$, le premier membre des conditions (29) et (30) serait, dans le cas de n impair, inférieur à $-\alpha-5$ et, dans celui de n pair, supérieur à $1-\alpha$, et aucune de ces conditions ne pourrait être remplie pour les valeurs considérées de α.

Par suite, dans le cas que nous venons de signaler, la condition (29), n étant impair, assure toujours l'inégalité $A > \alpha$ et celle (30), n étant pair, assure toujours l'inégalité $A < \alpha$.

Donc, en posant $\alpha = \pm 1$, on a cette proposition:

Toutes les fois que, pour une valeur quelconque de n dans la suite 1, 2, 3, ...,

on trouve: $-A_1+A_2-A_3+\ldots+A_{2n} \leqq 0$, *on aura* $A < +1$,

» » $2-A_1+A_2-\ldots-A_{2n-1} \geqq 0$, » » $A > -1$,

» » $2-A_1+A_2-\ldots+A_{2n} \leqq 0$, » » $A < -1$,

» » $-A_1+A_2-A_3+\ldots-A_{2n+1} \geqq 0$, » » $A > +1$.

13. La proposition que nous venons d'énoncer conduit à une méthode pour décider si A se trouve dans l'intervalle $(-1, +1)$, ou non.

Pour résoudre cette question, on commencera par calculer A_1. Alors, si l'on trouve $A_1 \leqq 2$, on sera certain que

$$-1 < A < 1.$$

Si, au contraire, on a $A_1 > 2$, on calculera A_2 et l'on distinguera les trois cas suivants qui pourront se présenter:

$$1)\ A_2 \leqq A_1 - 2, \qquad 2)\ A_1 - 2 < A_2 \leqq A_1, \qquad 3)\ A_2 > A_1.$$

Dans le premier cas on pourra conclure $A < -1$, et la question sera résolue.

Dans le deuxième cas on aura seulement $A < 1$ et l'on devra encore décider si l'on a $A > -1$, ou $A < -1$.

A cet effet, on calculera A_3. Alors, si l'on trouve

$$A_3 \leqq A_2 - A_1 + 2,$$

on conclura que $A > -1$. Si, au contraire, on trouve

$$A_3 > A_2 - A_1 + 2,$$

on calculera A_4, et la question sera résolue, si l'on a

$$A_4 \leqq A_3 - A_2 + A_1 - 2,$$

auquel cas on aura $A < -1$. Dans le cas contraire, on calculera A_5, et l'on continuera ainsi de suite, jusqu'à ce qu'on arrive à une inégalité de la forme

$$A_n \leqq A_{n-1} - A_{n-2} + \ldots \pm A_1 \mp 2,$$

laquelle ne manquera pas à se présenter, si A n'est pas égal à -1. Alors, si n est pair, on aura $A < -1$ et, si n est impair, on aura $A > -1$.

Dans le troisième cas on devra distinguer les trois cas suivants:

$$1)\ A_3 \leqq S_2, \qquad 2)\ S_2 < A_3 \leqq S_2 + 2, \qquad 3)\ A_3 > S_2 + 2,$$

où l'on a posé pour abréger

$$A_2 - A_1 = S_2.$$

Si, après avoir calculé A_3, on se trouve dans le premier de ces cas, il sera certain que $A > 1$, et la question sera résolue.

Si l'on se trouve dans le deuxième cas, on pourra seulement conclure $A > -1$, et l'on devra encore décider si l'on a $A < 1$, ou $A > 1$.

On calculera donc A_4. Alors, si l'on trouve

$$A_4 \leqq A_3 - A_2 + A_1,$$

on aura $A < 1$, et la question sera résolue. Dans le cas contraire, on calculera A_5. Si l'on trouve alors

$$A_5 \leqq A_4 - A_3 + A_2 - A_1,$$

on aura $A > 1$. Si, au contraire, on a

$$A_5 > A_4 - A_3 + A_2 - A_1,$$

on calculera A_6, et l'on continuera les calculs jusqu'à ce qu'on parvienne à une inégalité de la forme

$$A_n \leqq A_{n-1} - A_{n-2} + \ldots \pm A_2 \mp A_1,$$

ce qui ne manquera pas à arriver, si A n'est pas égal à 1. Alors, si n est un nombre pair, on aura $A < 1$ et, si c'est un nombre impair, on aura $A > 1$.

En ce qui concerne enfin le troisième cas, on le subdivisera en trois cas, qui se distingueront par la valeur de A_4. En posant

$$A_3 - S_2 = A_3 - A_2 + A_1 = S_3,$$

ces cas seront les suivants:

$$1)\ A_4 \leqq S_3 - 2, \qquad 2)\ S_3 - 2 < A_4 \leqq S_3, \qquad 3)\ A_4 > S_3.$$

Dans le premier de ces nouveaux cas la question sera résolue immédiatement, car on aura $A < -1$.

Le deuxième cas se traitera de la même manière que le deuxième cas défini précédemment par la valeur de A_2.

Quant au troisième, on le divisera en trois cas nouveaux, qui se distingueront par la valeur de A_5 et qui présenteront les mêmes circonstances que les trois cas relatifs aux valeurs de A_3.

On voit donc que chacun des termes de la suite

$$A_2, \quad A_3, \quad A_4, \quad \ldots$$

conduit à une distinction de trois cas, dont le troisième se subdivise en nouveaux trois cas, qui se distinguent par la valeur du terme suivant.

Il est évident que l'on ne pourra pas se trouver toujours dans le troisième cas, et que l'on finira par tomber ou sur un des premiers cas, où la question se résout immédiatement, ou bien sur un des deuxièmes que l'on traitera comme il a été montré.

La méthode ne sera en défaut que si l'on a $A = \pm 1$, cas dans lequel les calculs pourront se prolonger à l'infini sans conduire à une conclusion décisive. C'est ce qui est du reste dans la nature de la chose, la méthode n'étant au fond qu'une suite d'approximations successives.

14. Dans certains cas, on pourra simplifier les calculs exigés par la méthode en se servant des limites supérieures des A_s.

Supposons, par exemple, qu'après avoir calculé

$$A_1, \quad A_2, \quad A_3, \quad \ldots, \quad A_n,$$

on ait réconnu que A vérifie l'inégalité $A < 1$, mais qu'on ne connaîsse pas encore si l'on a $A > -1$, ou $A < -1$.

On aura alors

$$A_n > A_{n-1} - A_{n-2} + \ldots \pm A_1 \mp 2$$

et l'on devra examiner si A_{n+1} vérifie l'inégalité

$$A_{n+1} \leqq A_n - A_{n-1} + \ldots \mp A_1 \pm 2.$$

Soit L une des limites supérieures que l'on pourra assigner à A_{n+1}, lorsqu'on connaît les valeurs des termes précédents.

Avant de calculer A_{n+1}, il sera utile d'examiner cette limite. Si l'on trouve

$$L \leqq A_n - A_{n-1} + \ldots \mp A_1 \pm 2,$$

la question sera résolue immédiatement.

Arrêtons-nous au cas de $n = 2$.

Supposons que l'on ait

$$A_1 > 2, \quad A_2 > A_1 - 2$$

et que l'on veuille savoir si l'on a

(31) $$A_3 \leqq A_2 - A_1 + 2.$$

Les inégalités (26) et (27) donnent, pour A_3, ces deux limites supérieures:

$$\frac{A_1 A_2}{9} \quad \text{et} \quad \frac{1}{2}\frac{A_2^2}{A_1}.$$

La seconde, en vertu de (28), étant plus précise, posons

$$L = \frac{1}{2}\frac{A_2^2}{A_1}.$$

Nous aurons ainsi l'inégalité

(32) $$A_2^2 - 2A_1A_2 + 2A_1(A_1 - 2) \leqq 0,$$

qui assurera celle (31). Voyons, en quels cas pourra-t-elle être vérifiée.

Tout d'abord, elle exige que les racines de l'équation

$$x^2 - 2A_1x + 2A_1(A_1 - 2) = 0$$

soient réelles, ce qui s'exprime par l'inégalité $A_1 \leqq 4$.

Elle exige ensuite que A_2 soit compris entre ces racines.

Pour exprimer cette dernière condition, il suffira d'écrire

(33) $$A_2 \geqq A_1 - \sqrt{A_1(4 - A_1)},$$

puisque, sous la condition $A_1 \leqq 4$, on aura toujours $A_2 < A_1$.

Une condition doit encore être satisfaite, pour que l'inégalité (33) soit possible: en vertu de (28), on doit avoir

$$\frac{1}{6}A_1^2 \geqq A_1 - \sqrt{A_1(4 - A_1)},$$

ce qui se réduit à

(34) $$A_1^3 - 12A_1^2 + 72A_1 - 144 \leqq 0$$

et exige que A_1 ne surpasse pas le nombre 3,345..., représentant la racine réelle unique de l'équation

$$x^3 - 12x^2 + 72x - 144 = 0.$$

On voit que la condition (32) assure non-seulement l'inégalité $A > -1$, mais encore celle $A < 1$.

15. Pour le calcul successif des termes $A_1, A_2, A_3, \ldots$ exigé par la méthode, on peut se servir des formules (5), qui permettent de calculer de proche en proche les fonctions $f_1(x)$, $f_2(x)$, $f_3(x)$, ..., $\varphi_1(x)$, $\varphi_2(x)$, $\varphi_3(x)$, ..., d'où l'on déduit les A_n par la formule

$$A_n = \frac{1}{2}[f_n(\omega) + \varphi_n'(\omega)].$$

On peut aussi se servir des formules que nous avons signalées au n° 3 et qui permettent de calculer immédiatement un terme quelconque. Toutefois, dans le cas le plus important, celui où la fonction p est donnée sous forme d'une suite des sinus et des cosinus des multiples de x, ces formules ne sont pas assez commodes pour les calculs, et avant de les appliquer, il convient de les faire subir certaines transformations. C'est ce que nous allons maintenant faire pour la formule (11) dans les cas de $n=2$ et de $n=3$.

En ce qui concerne le cas de $n=2$, nous avons trouvé au n° 4

$$A_2=\frac{1}{24}\omega^2\Omega^2-\frac{1}{2}R,$$

R étant donné par la formule

$$R=\omega\int_0^\omega\left(P-\Omega\frac{x}{\omega}\right)^2dx-\left[\int_0^\omega\left(P-\Omega\frac{x}{\omega}\right)dx\right]^2.$$

Or cette expression peut être simplifiée par le choix convenable de la constante arbitraire que contient la fonction

$$P=\int p\,dx.$$

Nous choisirons cette constante de manière à avoir

$$\int_0^\omega P\,dx=\frac{1}{2}\omega\Omega.$$

Alors il viendra

$$\int_0^\omega\left(P-\Omega\frac{x}{\omega}\right)dx=0,$$

et nous aurons

$$R=\omega\int_0^\omega\left(P-\Omega\frac{x}{\omega}\right)^2dx.$$

Remarquons que $P-\Omega\frac{x}{\omega}$ est une fonction périodique de x à période ω et que, pour la détermination adoptée de P, l'intégrale de cette fonction sera encore une fonction périodique. Donc, en posant

$$\frac{x}{\omega}=t,$$

nous aurons

$$P = \Omega\,[t + \Theta'(t)],$$

$\Theta'(t)$ étant la dérivée d'une fonction périodique $\Theta(t)$ ayant pour période 1.

Avec ces notations, nous obtenons

$$A_2 = \left[\frac{1}{24} - \frac{1}{2}\int_0^1 \Theta'^2\,dt\right]\omega^2\,\Omega^2.$$

16. En général, si l'on pose pour abréger

$$t + \Theta'(t) = Q,$$

en ajoutant l'indice i, lorsque t est remplacé par t_i, la formule (11) donnera

$$A_n = a_n\,\omega^n\,\Omega^n,$$

où

$$a_n = \frac{1}{2}\int_0^1 dt_1\int_0^{t_1} dt_2 \ldots \int_0^{t_{n-1}} (1 - Q_1 + Q_n)\,(Q_1 - Q_2)\ldots(Q_{n-1} - Q_n)\,dt_n.$$

Nous venons de trouver

(35) $$a_2 = \frac{1}{24} - \frac{1}{2}\int_0^1 \Theta'^2\,dt.$$

Occupons-nous maintenant de la transformation de l'expression

$$a_3 = \frac{1}{2}\int_0^1 dt_1\int_0^{t_1} dt_2\int_0^{t_2}(1 - Q_1 + Q_3)\,(Q_1 - Q_2)\,(Q_2 - Q_3)\,dt_3.$$

La fonction à intégrer se réduit ici à

$$Q_1 Q_2 + Q_2 Q_3 - Q_1 Q_3 - Q_2^2 + (Q_3 - Q_2)\,Q_1^2 + (Q_1 - Q_3)\,Q_2^2 + (Q_2 - Q_1)\,Q_3^2.$$

Par suite, en remarquant que

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_1 Q_2\, dt_3 = \int_0^1 Q_1\, dt_1 \int_0^{t_1} t_2\, Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_2 Q_3\, dt_3 = \int_0^1 (1-t_1)\, Q_1\, dt_1 \int_0^{t_1} Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_1 Q_3\, dt_3 = \int_0^1 Q_1\, dt_1 \int_0^{t_1} (t_1 - t_2)\, Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_2^2\, dt_3 \;= \int_0^1 (1-t)\, t\, Q^2\, dt,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_3 Q_1^2\, dt_3 = \int_0^1 Q_1^2\, dt_1 \int_0^{t_1} (t_1 - t_2)\, Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_2 Q_1^2\, dt_3 = \int_0^1 Q_1^2\, dt_1 \int_0^{t_1} t_2\, Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_1 Q_2^2\, dt_3 = \int_0^1 Q_1\, dt_1 \int_0^{t_1} t_2\, Q_2^2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_3 Q_2^2\, dt_3 = \int_0^1 (1-t_1)\, Q_1^2\, dt_1 \int_0^{t_1} Q_2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_2 Q_3^2\, dt_3 = \int_0^1 (1-t_1)\, Q_1\, dt_1 \int_0^{t_1} Q_2^2\, dt_2,$$

$$\int_0^1 dt_1 \int_0^{t_1} dt_2 \int_0^{t_2} Q_1 Q_3^2\, dt_3 = \int_0^1 Q_1\, dt_1 \int_0^{t_1} (t_1 - t_2)\, Q_2^2\, dt_2,$$

on trouve, après quelques réductions,

$$a_3 = \frac{1}{4}\left(\int_0^1 Q\, dt\right)^2 - \frac{1}{2}\int_0^1 (1-t)\, t\, Q^2\, dt + \int_0^1 Q_1\, dt_1 \int_0^{t_1} (t_2 - t_1)\, Q_2\, dt_2$$
$$+ \int_0^1 Q\, dt \cdot \int_0^1 t\, Q^2\, dt - \int_0^1 t\, Q\, dt \cdot \int_0^1 Q^2\, dt + \frac{1}{2}\int_0^1 Q_1\, dt_1 \int_0^{t_1} (Q_2 - Q_1)\, Q_2\, dt_2.$$

Remplaçons maintenant Q par son expression $t + \Theta'(t)$.

La fonction $\Theta(t)$ étant périodique à période 1, nous aurons

$$\int_0^1 Q\, dt = \frac{1}{2},$$

en vertu de quoi il viendra

$$\int_0^1 Q\, dt \cdot \int_0^1 t\, Q^2\, dt - \frac{1}{2}\int_0^1 (1-t)\, t\, Q^2\, dt = \frac{1}{2}\int_0^1 t^2\, Q^2\, dt.$$

Pour aller plus loin, nous devons définir d'une manière précise la fonction $\Theta(t)$, qui n'a été définie que par sa dérivée. C'est ce que nous ferons en admettant l'égalité

$$\int_0^1 \Theta(t)\, dt = 0. \tag{36}$$

D'ailleurs, pour simplifier les calculs, nous supposerons

$$\Theta(0) = \Theta(1) = 0.$$

C'est une restriction; mais nous verrons qu'elle n'a rien d'essentiel.

Cela posé, on trouve facilement

$$\int_0^1 t\, Q\, dt = \frac{1}{3},$$

$$\int_0^1 Q^2\, dt = \frac{1}{3} + \int_0^1 \Theta'^2\, dt,$$

$$\int_0^1 t^2\, Q^2\, dt = \frac{1}{5} - 6\int_0^1 t^2\, \Theta\, dt + \int_0^1 t^2\, \Theta'^2\, dt,$$

$$\int_0^1 Q_1\, dt_1 \int_0^{t_1} (t_2 - t_1)\, Q_2\, dt_2 = -\frac{1}{30} + \int_0^1 t^2\, \Theta\, dt + \int_0^1 \Theta^2\, dt,$$

$$\int_0^1 Q_1\, dt \int_0^{t_1} (Q_2 - Q_1)\, Q_2\, dt_2 = -\frac{1}{30} + 4\int_0^1 t^2\, \Theta\, dt + 2\int_0^1 \Theta^2\, dt + \frac{1}{2}\int_0^1 \Theta'^2\, dt$$
$$- \int_0^1 t^2\, \Theta'^2\, dt - 2\int_0^1 \Theta\Theta'^2\, dt,$$

et d'après cela il vient

$$a_3 = \frac{1}{720} - \frac{1}{12}\int_0^1 \Theta'^2\,dt + 2\int_0^1 \Theta^2\,dt - \int_0^1 \Theta\Theta'^2\,dt. \tag{37}$$

Nous avons établi cette formule dans la supposition que $\Theta(0) = 0$. Mais il est facile de s'assurer que la formule est exacte quelle que soit la valeur de $\Theta(0)$.

En effet, la constante caractéristique de l'équation

$$\frac{d^2y}{dx^2} + \mu\, p(x + c)\, y = 0,$$

c étant un nombre constant quelconque, est la même que celle de l'équation

$$\frac{d^2y}{dx^2} + \mu\, p(x)\, y = 0.$$

Donc, en considérant le développement de cette constante suivant les puissances du paramètre μ, on parvient à la conclusion que la valeur de A_n ne change pas, si l'on remplace, dans son expression, $p(x)$ par $p(x + c)$.

De là il résulte que la valeur de a_3 ne sera pas changée, si l'on remplace la fonction $\Theta(t)$ par $\Theta(t + \alpha)$, α étant une constante arbitraire.

Cela posé, prenons pour α une des valeurs de t qui annulent la fonction $\Theta(t)$, et dont l'existence est assurée par la condition (36). Nous aurons pour a_3 une expression qui s'obtiendra en remplaçant dans celle (37) la fonction $\Theta = \Theta(t)$ par $\Theta(t + \alpha)$, et comme, dans cette expression, les intégrales ne porteront que sur des fonctions périodiques, nous pourrons supprimer α sans changer les valeurs des intégrales. Nous retrouverons donc la formule (37).

17. En partant de la formule (37), on peut établir que l'expression (13) pour $n = 3$ représente une limite supérieure pour A_3.

Tout d'abord nous remarquons que l'intégration par parties donne

$$\int_0^1 \Theta\Theta'^2\,dt = -\frac{1}{2}\int_0^1 \Theta^2\,\Theta''\,dt.$$

Par suite la formule (37) peut être présentée sous la forme

$$a_3 = \frac{1}{720} - \frac{1}{12}\int_0^1 \Theta'^2\,dt + \frac{3}{2}\int_0^1 \Theta^2\,dt + \frac{1}{2}\int_0^1 \Theta^2(\Theta'' + 1)\,dt,$$

ou bien

$$a_3 = \frac{1}{720} - \frac{1}{12}\int_0^1 T(\Theta'' + 1)\,dt, \tag{38}$$

en posant

$$T = \int_0^1 \Theta'^2\,dt - 18\int_0^1 \Theta^2\,dt - 6\,\Theta^2.$$

Or, en vertu de la supposition que la fonction p ne devient jamais négative, on a

$$\Theta'' + 1 \geqq 0,$$

puisque l'égalité

$$P(\omega t) = \Omega[t + \Theta'(t)]$$

donne

$$\omega\,p(\omega t) = \Omega[1 + \Theta''(t)];$$

et nous allons maintenant montrer qu'on aura toujours

$$T \geqq 0.$$

De là il résultera

$$a_3 \leqq \frac{1}{720}$$

et, par suite,

$$A_3 \leqq \frac{1}{720}\,\omega^3\Omega^3, \tag{39}$$

où le second membre est la valeur de l'expression (13) pour $n = 3$.

Pour établir l'inégalité $T \geqq 0$, nous allons nous servir de la proposition connue que toute fonction périodique dont la dérivée est continue peut être développée en une série uniformément convergente suivant les sinus et les cosinus des multiples de l'argument.

En vertu de cette proposition, la fonction $\Theta''(t)$ étant continue (puisque la fonction p est supposée continue), nous aurons, pour $\Theta'(t)$, une expression de la forme

$$\Theta'(t) = \sum(\alpha_k \cos 2\pi kt + \beta_k \sin 2\pi kt),$$

les α_k et les β_k étant des constantes, et la sommation s'étendant à toutes les valeurs entières et positives de k, à partir de $k = 1$.

De là, en tenant compte de la condition (36), on déduit

$$\Theta(t) = \sum \frac{1}{2\pi k} (\alpha_k \sin 2\pi k t - \beta_k \cos 2\pi k t).$$

Par ces expressions de Θ' et Θ on trouve*)

$$\text{(40)} \qquad \left\{ \begin{aligned} \int_0^1 \Theta'^2\, dt &= \sum \frac{1}{2} (\alpha_k^2 + \beta_k^2), \\ \int_0^1 \Theta^2\, dt &= \sum \frac{1}{8\pi^2 k^2} (\alpha_k^2 + \beta_k^2), \end{aligned} \right.$$

ce qui fait voir que

$$\text{(41)} \qquad \int_0^1 \Theta'^2\, dt - 4\pi^2 \int_0^1 \Theta^2\, dt \geqq 0.$$

En même temps, on obtient

$$|\Theta| < \sum \frac{1}{2\pi k} \sqrt{\alpha_k^2 + \beta_k^2},$$

d'où, en remarquant que

$$\left(\sum \frac{1}{k} \sqrt{\alpha_k^2 + \beta_k^2}\right)^2 < \sum \frac{1}{k^2} \sum (\alpha_k^2 + \beta_k^2),$$

$$\sum \frac{1}{k^2} = \frac{\pi^2}{6},$$

on déduit

$$\Theta^2 < \frac{1}{12} \int_0^1 \Theta'^2\, dt.$$

Or cette inégalité donne

$$\text{(42)} \qquad 2T > \int_0^1 \Theta'^2\, dt - 36 \int_0^1 \Theta^2\, dt,$$

*) Remarquons que les formules (40), les α_k et les β_k étant donnés par des intégrales définies connues, sont exactes dans des conditions beaucoup plus générales que celles admises ici. Dans une des séances de la Société Mathématique de Kharkow, nous avons montré que ces formules ne dépendent point de la possibilité du développement de la fonction Θ' en série de Fourier et qu'elles sont valables toutes les fois que Θ' est ce qu'on appelle une fonction intégrable, pourvu que cette fonction satisfasse à la condition

$$\int_0^1 \Theta'\, dt = 0.$$

et de là, en vertu de (41), il vient $T > 0$. On voit d'ailleurs qu'on ne pourra avoir $T = 0$ que dans le cas où la fonction Θ est identiquement nulle.

18. L'inégalité (39) donne, pour A_3, une limite supérieure qui peut être utile dans les considérations que nous avons développées au nº 14.

En introduisant au second membre de cette inégalité la quantité A_1, on trouve

$$A_3 \leqq \frac{1}{90} A_1^3.$$

Donc, si l'on a

$$A_2 \geqq \frac{1}{90} A_1^3 + A_1 - 2, \tag{43}$$

on pourra conclure l'inégalité

$$A_3 \leqq A_2 - A_1 + 2$$

et, par suite, celle-ci $A > -1$.

Il est d'ailleurs facile de montrer que la condition (43) assure aussi l'inégalité $A < 1$.

En effet, en vertu de (28), cette condition n'est possible que si l'on a

$$\frac{1}{6} A_1^2 \geqq \frac{1}{90} A_1^3 + A_1 - 2,$$

ou bien

$$A_1^3 - 15 A_1^2 + 90 A_1 - 180 \leqq 0, \tag{44}$$

ce qui exige que A_1 ne surpasse pas le nombre 3,7859..., représentant la racine réelle unique de l'équation

$$x^3 - 15 x^2 + 90 x - 180 = 0;$$

et nous avons vu que pour $A_1 \leqq 6$ on a toujours $A < 1$.

Du reste il est facile d'obtenir, pour A_3, une limite supérieure plus précise.

En effet, l'inégalité (42), en vertu de (41), donne

$$2T > \left(1 - \frac{9}{\pi^2}\right) \int_0^1 \Theta'^2 \, dt,$$

ce qui, eu égard à (35), peut être présenté sous la forme

$$T > \left(1 - \frac{9}{\pi^2}\right)\left(\frac{1}{24} - a_2\right).$$

Par suite, la formule (38) conduit à cette inégalité

$$a_3 < \frac{1}{720} - \frac{1}{12}\left(1 - \frac{9}{\pi^2}\right)\left(\frac{1}{24} - a_2\right),$$

laquelle, dans le cas de $p = \text{const.}$, se réduira à une égalité.

En tenant compte de cette circonstance, on obtient, après avoir multiplié les deux membres par $\omega^3\Omega^3$,

$$A_3 \leqq \frac{1}{90}A_1^3 - \left(1 - \frac{9}{\pi^2}\right)\frac{A_1}{6}\left(\frac{1}{6}A_1^2 - A_2\right),$$

ou bien

$$A_3 \leqq \frac{\pi^2 - 9}{6\pi^2}A_1A_2 + \frac{15 - \pi^2}{60\pi^2}A_1^3,$$

ce qui donne la limite dont il s'agissait.

En vertu de cette inégalité, si l'on a

$$(45) \qquad \left(1 - \frac{\pi^2 - 9}{6\pi^2}A_1\right)A_2 \geqq \frac{15 - \pi^2}{60\pi^2}A_1^3 + A_1 - 2,$$

on aura certainement

$$A_3 \leqq A_2 - A_1 + 2.$$

Il est facile de voir que la condition (45), comme celle (43), ne peut être remplie que si A_1 satisfait à l'inégalité (44). Par suite, sous la condition (45), on aura, comme précédemment, non-seulement $A > -1$, mais encore $A < 1$.

On voit que la condition (44) embrasse un peu plus de cas que celle (34), à laquelle nous avons été conduit au n° 14. Mais on ne peut pas dire la même chose relativement à la condition (45) rapprochée de celle (32), puisque, pour des valeurs de A_1 assez voisines de 2, la condition (32) a, évidemment, plus d'étendue.

Il serait important d'avoir, pour A_3, une limite supérieure précise, correspondant à des valeurs données de A_1 et A_2. Mais la recherche de cette limite est, évidemment, un problème très difficile*), et nous ne nous y arrêterons pas.

19. Revenons à notre objet, la recherche des formules pour le calcul de A_2 et A_3.

Présentons la fonction p sous la forme

$$p = C + \Phi''(x),$$

*) La difficulté de ce problème, où l'on doit avoir égard à *l'inégalité* $\Theta'' + 1 \geqq 0$, provient principalement de la présence dans la formule (37) du terme

$$\int_0^1 \Theta\Theta'^2\, dt.$$

Pour le cas, où ce terme est égal à zéro, nous aurions pu donner la solution du problème. Mais il serait inutile de la reproduire ici, puisque, dans ce cas, le calcul de A_3 ne présente pas plus de difficulté que le calcul de A_2.

où C désigne une constante et $\Phi''(x)$ la dérivée du second ordre d'une fonction périodique $\Phi(x) = \Phi$ satisfaisant à la condition

$$\int_0^\omega \Phi(x)\,dx = 0.$$

Nous aurons

$$\Omega = C\omega, \qquad \Theta''(t) = \frac{1}{C}\Phi''(x)$$

et, par suite,

$$\Theta'(t) = \frac{1}{C\omega}\Phi'(x), \qquad \Theta(t) = \frac{1}{C\omega^2}\Phi(x).$$

Donc il viendra

$$A_1 = \frac{C\omega^2}{2},$$

et les formules (35) et (37), eu égard à ce que $A_n = a_n C^n \omega^{2n}$, donneront

$$A_2 = \frac{C^2\omega^4}{24} - \frac{\omega}{2}\int_0^\omega \Phi'^2\,dx,$$

$$A_3 = \frac{C^3\omega^6}{720} - \frac{C\omega^3}{12}\int_0^\omega \Phi'^2\,dx + 2C\omega\int_0^\omega \Phi^2\,dx - \omega\int_0^\omega \Phi\Phi'^2\,dx.$$

Telles sont les plus simples formules pour le calcul de A_2 et A_3, dans le cas où l'on connaît le développement de la fonction p en série de Fourier. Par ces formules on voit que A_2 se présentera sous forme d'une série simple, tandis que, pour A_3, grâce à la présence dans son expression de l'intégrale

$$\int_0^\omega \Phi\Phi'^2\,dx,$$

on aura, en général, une série double. Mais, si cette intégrale est égale à zéro, on aura, pour A_3 aussi, une série simple. C'est ce qui aura lieu, par exemple, si $\Phi(x)$ est une fonction impaire, ou, plus généralement, si, par un choix convenable du nombre α, on peut rendre la fonction $\Phi(\alpha + x)$ impaire.

Si l'on présente le développement de la fonction Φ'' sous la forme

$$\Phi''(x) = \sum_{k=1}^{\infty} C_k \sin\frac{2\pi k(x-\alpha_k)}{\omega},$$

les C_k et les α_k étant des constantes, il viendra

$$A_2 = \frac{C^2\omega^4}{24} - \frac{\omega^4}{16\pi^2}\sum_{k=1}^{\infty}\frac{C_k^2}{k^2}.$$

Quant à l'expression de A_3, sans nous arrêter au cas général, supposons que tous les α_k soient égaux entre eux. Alors, en posant

$$\alpha_1 = \alpha_2 = \alpha_3 = \ldots = \alpha,$$

nous aurons

$$\Phi''(\alpha - x) = -\Phi''(\alpha + x)$$

et, par suite,

$$\Phi(\alpha - x) = -\Phi(\alpha + x).$$

Nous aurons donc

$$\int_0^{\omega}\Phi\Phi'^2\,dx = 0,$$

et la formule ci-dessus donnera

$$A_3 = \frac{C^3\omega^6}{720} - \frac{C\omega^6}{16\pi^4}\sum_{k=1}^{\infty}\left(\frac{\pi^2}{6} - \frac{1}{k^2}\right)\frac{C_k^2}{k^2}.$$

20. Appliquons les considérations que nous avons développées à des exemples.

En premier lieu, considérons l'équation

$$\frac{d^2y}{dx^2} + C(1 + \lambda\cos x + \mu\cos 2x)\,y = 0,$$

C, λ, μ étant des constantes.

Nous avons ici

$$\Phi''(x) = C(\lambda\cos x + \mu\cos 2x),$$

d'où il vient

$$\Phi'(x) = C\left(\lambda\sin x + \frac{1}{2}\mu\sin 2x\right),$$

$$\Phi(x) = -C\left(\lambda\cos x + \frac{1}{4}\mu\cos 2x\right),$$

et nous pouvons prendre $\omega = 2\pi$.

Nous aurons donc

$$\int_0^\omega \Phi'^2\,dx = \pi\left(\lambda^2 + \frac{1}{4}\mu^2\right)C^2,$$

$$\int_0^\omega \Phi^2\,dx = \pi\left(\lambda^2 + \frac{1}{16}\mu^2\right)C^2,$$

$$\int_0^\omega \Phi\Phi'^2\,dx = -\frac{3}{8}\pi\lambda^2\mu\,C^3,$$

et les formules du numéro précédent donneront

$$A_1 = 2\pi^2 C, \qquad A_2 = \frac{2}{3}\pi^4 C^2 - \pi^2\left(\lambda^2 + \frac{1}{4}\mu^2\right)C^2,$$

$$A_3 = \frac{4}{45}\pi^6 C^3 - \frac{2}{3}\pi^4\left(\lambda^2 + \frac{1}{4}\mu^2\right)C^3 + 4\pi^2\left(\lambda^2 + \frac{1}{16}\mu^2\right)C^3 + \frac{3}{4}\pi^2\lambda^2\mu\,C^3.$$

Pour pouvoir appliquer les résultats que nous avons obtenus, nous devons supposer que la fonction

$$p = C\,(1 + \lambda\cos x + \mu\cos 2x)$$

ne peut recevoir que des valeurs positives ou nulles.

A cet effet nous devons supposer $C > 0$ et

$$1 + \lambda\cos x + \mu\cos 2x \geqq 0,$$

quel que soit x.

Cherchons les conditions que doivent remplir λ et μ pour que cela ait lieu.

Tout d'abord, en posant successivement $x = 0$, $x = \frac{\pi}{2}$, $x = \pi$, on trouve ces conditions nécessaires

$$1 + \lambda + \mu \geqq 0, \qquad 1 - \mu \geqq 0, \qquad 1 - \lambda + \mu \geqq 0.$$

On voit donc que μ doit être compris dans l'intervalle $(-1, +1)$, et que λ doit vérifier la condition

$$\lambda^2 \leqq (1 + \mu)^2. \tag{46}$$

Dans le cas de $\mu \leqq 0$ cette condition devient suffisante, puisque, dans ce cas, le minimum de la fonction

$$1 + \lambda\cos x + \mu\cos 2x$$

est égal à la plus petite des deux quantités

$$1+\lambda+\mu, \qquad 1-\lambda+\mu;$$

et la même chose aura lieu dans le cas de $\mu > 0$, si l'on a $\lambda^2 \geqq 16\mu^2$, ce qui, en vertu de (46), exige que l'on ait $\mu \leqq \frac{1}{3}$.

Si, au contraire, μ étant positif, on a $\lambda^2 < 16\mu^2$, le minimum de la fonction ci-dessus sera égal à

$$1-\mu-\frac{\lambda^2}{8\mu},$$

et l'on devra avoir

$$\lambda^2 \leqq 8\mu(1-\mu). \tag{47}$$

Le second membre de cette inégalité est plus petit que le second membre de l'inégalité (46) toutes les fois que μ n'est pas égal à $\frac{1}{3}$. Néanmoins l'inégalité (47) ne représente une nouvelle condition que dans le cas de $\mu > \frac{1}{3}$, car, pour $\mu \leqq \frac{1}{3}$, elle sera remplie en vertu de l'inégalité $\lambda^2 < 16\mu^2$.

En résumé, M étant la fonction de μ définie par les formules

$$M = (1+\mu)^2, \qquad \text{si} \qquad \mu \leqq \frac{1}{3},$$

$$M = 8\mu(1-\mu), \qquad \text{si} \qquad \mu \geqq \frac{1}{3},$$

les conditions requises pourront être exprimées par les inégalités suivantes:

$$-1 \leqq \mu \leqq 1, \qquad \lambda^2 \leqq M. \tag{48}$$

En admettant ces inégalités, nous allons maintenant considérer les plus simples conditions que l'on aura à discuter en appliquant notre méthode.

21. La première condition qui se présente, celle $A_1 < 2$, se réduit ici à

$$\pi^2 C \leqq 1.$$

Si cette condition, sous laquelle on aura $A^2 < 1$, n'est pas remplie, on devra examiner celle-ci

$$A_2 \leqq A_1 - 2.$$

Cette nouvelle condition se réduit à

$$\frac{2}{3}\pi^4 C^2 - 2\pi^2 C + 2 \leqq \pi^2\left(\lambda^2 + \frac{1}{4}\mu^2\right) C^2, \tag{49}$$

et toutes les fois qu'elle sera remplie, on pourra conclure $A < -1$.

Voyons, en quels cas la condition (49) pourra-t-elle être vérifiée.

En la présentant sous la forme

$$\pi^2\left(\frac{2}{3} - \frac{2}{\pi^2 C} + \frac{2}{\pi^4 C^2}\right) \leqq \lambda^2 + \frac{1}{4}\mu^2$$

et en remarquant que le minimum du premier membre est égal à $\frac{\pi^2}{6}$, on voit que cette condition ne sera possible que si l'on a

$$\lambda^2 + \frac{1}{4}\mu^2 \geqq \frac{\pi^2}{6}.$$

Quant à cette dernière condition, où λ et μ sont assujettis aux inégalités (48), elle ne pourra être satisfaite que dans le cas où

$$M + \frac{1}{4}\mu^2 \geqq \frac{\pi^2}{6}.$$

Donc, si $\mu < \frac{1}{3}$, on devra avoir

$$\mu^2 + \frac{8}{5}\mu + \frac{4}{5} \geqq \frac{2}{15}\pi^2,$$

ce qui, en tenant compte de l'inégalité $\mu > -1$, donne

$$\mu \geqq \sqrt{\frac{2}{15}\pi^2 - \frac{4}{25}} - \frac{4}{5},$$

et, si $\mu > \frac{1}{3}$, il faudra qu'on ait

$$\mu^2 - \frac{32}{31}\mu \leqq -\frac{2}{93}\pi^2,$$

ce qui exige

$$\mu \leqq \sqrt{\frac{16^2}{31^2} - \frac{2}{93}\pi^2} + \frac{16}{31}.$$

On voit donc que μ doit être compris entre les limites

$$\sqrt{\frac{2}{15}\pi^2 - \frac{4}{25}} - \frac{4}{5} = 0{,}275\ldots, \qquad \sqrt{\frac{16^2}{31^2} - \frac{2}{93}\pi^2} + \frac{16}{31} = 0{,}748\ldots;$$

et que λ doit vérifier les inégalités

$$M \geqq \lambda^2 \geqq \frac{\pi^2}{6} - \frac{1}{4}\mu^2.$$

Ces conditions étant remplies, les racines de l'équation

$$\left[\frac{2}{3} - \frac{1}{\pi^2}\left(\lambda^2 + \frac{1}{4}\mu^2\right)\right] x^2 - 2x + 2 = 0$$

seront réelles, et comme le coefficient du premier terme est ici toujours positif, puisque

$$\lambda^2 + \frac{1}{4}\mu^2 \leqq M + \frac{1}{4}\mu^2 \leqq \frac{64}{31} < \frac{2}{3}\pi^2,$$

on satisfera à la condition (49) en prenant pour $\pi^2 C$ une valeur quelconque, comprise entre lesdites racines.

Quant à ces racines, elles seront toujours comprises entre les nombres $1,548\ldots$ et $2,823\ldots$, représentant les racines de l'équation

$$\left(\frac{1}{3} - \frac{32}{31\pi^2}\right) x^2 - x + 1 = 0,$$

et seront séparées par le nombre 2.

22. Examinons maintenant la condition

$$A_3 \leqq A_2 - A_1 + 2,$$

sous laquelle on aura certainement $A > -1$.

En posant, pour abréger,

$$a = \frac{4}{45}\pi^4 - \frac{2}{3}\pi^2\left(\lambda^2 + \frac{1}{4}\mu^2\right) + \left(4 + \frac{3}{4}\mu\right)\lambda^2 + \frac{1}{4}\mu^2, \qquad b = \frac{2}{3}\pi^2 - \lambda^2 - \frac{1}{4}\mu^2,$$

nous aurons

$$A_2 = \pi^2 b C^2, \qquad A_3 = \pi^2 a C^3,$$

et la condition en question prendra la forme

$$\pi^2 a C^3 - \pi^2 b C^2 + 2\pi^2 C - 2 \leqq 0. \tag{50}$$

Nous allons montrer que, sous les conditions (48), le premier membre est une fonction croissante de C.

A cet effet, en remarquant que la dérivée de cette fonction est égale à

$$\pi^2(3aC^2 - 2bC + 2), \tag{51}$$

il suffit d'établir l'inégalité

$$b^2 - 6a < 0, \tag{52}$$

en vertu de laquelle l'expression (51) sera toujours positive.

Nous avons

$$b^2 - 6a = \lambda^4 + \left(\frac{1}{2}\mu^2 - \frac{9}{2}\mu + \frac{8}{3}\pi^2 - 24\right)\lambda^2 + \frac{1}{16}\mu^4 + \left(\frac{2}{3}\pi^2 - \frac{3}{2}\right)\mu^2 - \frac{4}{45}\pi^4,$$

d'où l'on voit que, pour démontrer l'inégalité (52) en général, il suffit de le faire pour les deux valeurs extrêmes de λ^2: 0 et M.

Or, en posant $\lambda = 0$, on trouve

$$b^2 - 6a = \frac{1}{16}\mu^4 + \left(\frac{2}{3}\pi^2 - \frac{3}{2}\right)\mu^2 - \frac{4}{45}\pi^4,$$

et, comme μ^2 ne surpasse pas 1, il en résulte

$$b^2 - 6a \leqq -\frac{23}{16} + \frac{2}{3}\pi^2 - \frac{4}{45}\pi^4,$$

où le second membre est, évidemment, négatif.

Considérons ensuite l'hypothèse $\lambda^2 = M$.

En supposant d'abord $\mu \leqq \frac{1}{3}$, nous aurons

$$\lambda^2 = (1 + \mu)^2,$$

ce qui donnera

$$b^2 - 6a = \frac{25}{16}\mu^4 + \frac{1}{2}\mu^3 + \left(\frac{10}{3}\pi^2 - 28\right)\mu^2 + \left(\frac{16}{3}\pi^2 - \frac{97}{2}\right)\mu - 23 + \frac{8}{3}\pi^2 - \frac{4}{45}\pi^4.$$

Or il est facile de s'assurer que les coefficients de μ^2 et de μ sont ici positifs. Donc cette expression ne surpassera pas sa valeur pour $\mu = \frac{1}{3}$, ce qui permet de conclure

$$b^2 - 6a \leqq -42 - \frac{311}{16\cdot 81} + \frac{130}{27}\pi^2 - \frac{4}{45}\pi^4,$$

et le second membre est ici négatif.

Soit maintenant $\mu > \frac{1}{3}$, cas où il faudra poser

$$\lambda^2 = 8\mu(1-\mu).$$

En le faisant et en remarquant que nous aurons une limite supérieure pour $b^2 - 6a$ en remplaçant dans son expression π^2 par 10 et π^4 par 97, nous obtenons l'inégalité suivante :

$$b^2 - 6a < 60\mu^4 - 88\mu^3 + 12\mu^2 + 21\mu - 8$$
$$+ \frac{1}{16}\mu^4 - \frac{1}{6}\mu^2 + \frac{1}{3}\mu - \frac{28}{45}.$$

Or, μ étant plus petit que 1, l'expression qui figure à la deuxième ligne est, évidemment, négative. Nous aurons donc à plus forte raison

$$b^2 - 6a < 60\mu^4 - 88\mu^3 + 12\mu^2 + 21\mu - 8,$$

et le second membre se réduit ici à

$$-3\mu^3 - (1-\mu)\left[(60\mu + 28)\left(\mu - \frac{1}{2}\right)^2 + 7\mu^2 + 1\right]$$

et, par suite, est négatif.

Donc l'inégalité (52) est établie.

Ayant ainsi démontré que le premier membre de la condition (50) est une fonction croissante de C, nous pouvons conclure que cette condition est équivalente à celle-ci

$$\pi^2 C \leqq x,$$

où x désigne la racine réelle unique de l'équation

$$ax^3 - \pi^2 b x^2 + 2\pi^4 x - 2\pi^4 = 0. \tag{53}$$

Il est facile de s'assurer que x est toujours plus petit que 2.

En effet, le premier membre de l'équation (53) étant désigné par $f(x)$, on trouve

$$f(2) = \frac{2}{45}\pi^4 - \left(\frac{1}{3}\pi^2 - 2\right)\mu^2 + \left(32 + 6\mu - \frac{4}{3}\pi^2\right)\lambda^2,$$

et cette expression, pour les valeurs considérées de μ, est toujours positive. On a donc $f(2) > 0$, et de là, $f(x)$ étant une fonction croissante, on conclut bien $x < 2$

Ainsi on voit que, sous la condition (50), on aura toujours $\pi^2 C < 2$, et que, par suite, A_1 sera plus petit que 4.

De là, eu égard à ce qui a été remarqué au n° 11, il résulte que sous la condition considérée on aura non-seulement $A > -1$, mais encore $A < 1$.

23. La quantité $\varkappa$ est une fonction de λ et μ, et nous allons maintenant chercher les valeurs extrêmes de cette fonction, λ et μ étant toujours assujettis aux conditions (48).

En ce qui concerne la plus grande valeur de $\varkappa$, il est facile d'établir qu'elle correspond à la supposition

$$\lambda = 0, \qquad \mu = \pm 1.$$

En effet, soient $f_1(x)$ et $\varkappa_1$ ce que divienuent dans cette supposition $f(x)$ et $\varkappa$. Nous aurons

$$f(x) = f_1(x) + \left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)x\right]\lambda^2 x^2 + \frac{1}{4}\left[\left(\frac{2}{3}\pi^2 - 1\right)x - \pi^2\right](1-\mu^2)\,x^2,$$

et, comme on a $f_1(\varkappa_1) = 0$, il en résultera

$$f(\varkappa_1) = \left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)\varkappa_1\right]\lambda^2\varkappa_1^2 + \frac{1}{4}\left[\left(\frac{2}{3}\pi^2 - 1\right)\varkappa_1 - \pi^2\right](1-\mu^2)\,\varkappa_1^2.$$

Or nous venons de voir que $\varkappa$ est toujours plus petit que 2. Donc on aura $\varkappa_1 < 2$, et en vertu de cela le terme en λ^2 dans la formule obtenue sera toujours positif.

D'autre part, on peut établir que

$$\left(\frac{2}{3}\pi^2 - 1\right)\varkappa_1 - \pi^2 > 0.$$

A cet effet, la fonction $f_1(x)$ étant croissante, il n'y a qu'à établir l'inégalité

$$f_1\left(\frac{\pi^2}{\frac{2}{3}\pi^2 - 1}\right) < 0;$$

et on le fera aisément en remarquant que

$$f_1(x) = \left(\frac{4}{45}\pi^4 - \frac{1}{6}\pi^2 + \frac{1}{4}\right)x^3 - \pi^2\left(\frac{2}{3}\pi^2 - \frac{1}{4}\right)x^2 + 2\pi^4(x-1),$$

d'où il vient

$$\left(\frac{2}{3}\pi^2 - 1\right)^3 f_1\left(\frac{\pi^2}{\frac{2}{3}\pi^2 - 1}\right) = -\frac{2\pi^4}{3}\left(\frac{4}{45}\pi^6 - \pi^4 + 3\pi^2 - 3\right).$$

D'après cela l'expression ci-dessus de $f(\varkappa_1)$ permet de conclure

$$f(\varkappa_1) > 0,$$

et cette inégalité fait voir que l'on aura toujours $\varkappa \leqq \varkappa_1$, ce qui prouve bien notre assertion.

Donc la plus grande valeur de $\varkappa$ coïncidera avec la racine réelle unique de l'équation

$$\left(\frac{4}{45}\pi^4 - \frac{1}{6}\pi^2 + \frac{1}{4}\right)x^3 - \left(\frac{2}{3}\pi^4 - \frac{1}{4}\pi^2\right)x^2 + 2\pi^4 x - 2\pi^4 = 0.$$

En faisant le calcul, on trouve pour cette racine la valeur 1,910... .

Passons à la recherche de la plus petite valeur de $\varkappa$.

A cet effet, en entendant par x un nombre positif donné, plus petit que

$$\frac{\pi^2}{\frac{2}{3}\pi^2 - 1},$$

nous commencerons par la recherche de la plus grande valeur que puisse atteindre, sous les conditions (48), la quantité $f(x)$, considérée comme fonction de λ et μ.

Nous avons

$$ax - \pi^2 b = \frac{4}{45}\pi^4 x - \frac{2}{3}\pi^4 + \left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)x\right]\lambda^2 + \frac{1}{4}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 1\right)x\right]\mu^2.$$

Or, en vertu de la supposition

$$x < \frac{\pi^2}{\frac{2}{3}\pi^2 - 1},$$

le coefficient de λ^2 est ici toujours positif.

Donc, en posant

$$\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)x\right]M + \frac{1}{4}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 1\right)x\right]\mu^2 = \theta(\mu),$$

nous aurons

$$ax - \pi^2 b \leqq \frac{4}{45}\pi^4 x - \frac{2}{3}\pi^4 + \theta(\mu).$$

Voyons comment varie la fonction $\theta(\mu)$ dans l'intervalle $(-1, +1)$.

Si $\mu \leqq \frac{1}{3}$, on a $M = (1+\mu)^2$, et la dérivée $\theta'(\mu)$ de cette fonction sera donnée par l'expression

$$\theta'(\mu) = 2\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)x\right](1+\mu) + \frac{3}{4}(1+\mu)^2 x + \frac{1}{2}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 1\right)x\right]\mu.$$

De là il vient

$$\theta'(-1) = -\frac{1}{2}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 1\right)x\right],$$

$$\theta'\left(\frac{1}{3}\right) = \frac{17}{6}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - \frac{77}{17}\right)x\right].$$

On a donc

$$\theta'(-1) < 0, \qquad \theta'(\tfrac{1}{3}) > 0,$$

ce qui fait voir que l'équation $\theta'(\mu) = 0$, qui est du second dégré en μ, a une racine dans l'intervalle $\left(-1, +\frac{1}{3}\right)$, et que, cette racine étant désignée par μ_0, on a

$$\theta'(\mu) < 0, \qquad \text{si} \qquad -1 < \mu < \mu_0,$$

$$\theta'(\mu) > 0, \qquad \text{si} \qquad \mu_0 < \mu < \frac{1}{3}.$$

Soit maintenant $\mu \geqq \frac{1}{3}$.

Nous aurons $M = 8\mu(1-\mu)$ et, par suite,

$$\theta'(\mu) = 8\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 4 - \frac{3}{4}\mu\right)x\right](1-2\mu) + 6\mu(1-\mu)x + \frac{1}{2}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 1\right)x\right]\mu.$$

Pour $\mu = \frac{1}{3}$ on en déduira la même valeur que précédemment, ce que l'on voit immédiatement par l'identité

$$(1+\mu)^2 - 8\mu(1-\mu) = (1-3\mu)^2.$$

On aura donc $\theta'(\frac{1}{3}) > 0$, et l'on trouve

$$\theta'(1) = -\frac{15}{2}\left[\pi^2 - \left(\frac{2}{3}\pi^2 - 5\right)x\right],$$

ce qui est une quantité négative.

Donc l'équation $\theta'(\mu) = 0$, qui, dans la nouvelle supposition, sera encore du second dégré, admet une racine dans l'intervalle $\left(\frac{1}{3}, 1\right)$, et, si l'on désigne cette racine par μ_1, on aura

$$\theta'(\mu) > 0, \qquad \text{si} \qquad \frac{1}{3} < \mu < \mu_1,$$

$$\theta'(\mu) < 0, \qquad \text{si} \qquad \mu_1 < \mu < 1.$$

Par suite de cela on arrive à la conclusion que la fonction $\theta(\mu)$, qui varie toujours continûment avec μ,

décroît, quand μ croît de -1 à μ_0,

croît, » » » de μ_0 à μ_1,

décroît, » » » de μ_1 à 1.

Comme on a

$$\theta(-1) = \theta(1),$$

il en résulte que la plus grande valeur de $\theta(\mu)$ dans l'intervalle $(-1, 1)$ correspond à $\mu = \mu_1$.

Donc nous aurons

$$ax - \pi^2 b \leq \frac{4}{45}\pi^4 x - \frac{2}{3}\pi^4 + \theta(\mu_1),$$

d'où l'on voit que la plus grande valeur cherchée de $f(x)$ correspondra à la supposition

$$\lambda^2 = 8\mu_1(1-\mu_1), \qquad \mu = \mu_1.$$

Soit $F(x)$ cette valeur.

Considérant x comme une inconnue, nous allons montrer que l'équation $F(x) = 0$ a une racine dans l'intervalle $\left(0, \frac{\pi^2}{\frac{2}{3}\pi^2 - 1}\right)$, et qu'elle n'en a d'ailleurs qu'une seule.

Tout d'abord, il est facile de voir que, x croissant de 0 à $\frac{\pi^2}{\frac{2}{3}\pi^2 - 1}$, la fonction $F(x)$ croît constamment.

En effet, en vertu de ce que nous avons montré au numéro précédent, on a

$$f'(x) > 0,$$

quelle que soit la valeur réelle de x, pourvu que λ et μ vérifient les conditions (48). Or, $f(x, \mu)$ étant ce que devient $f(x)$ en posant

$$\lambda^2 = 8\mu(1-\mu),$$

et x étant compris dans l'intervalle $\left(0, \frac{\pi^2}{\frac{2}{3}\pi^2 - 1}\right)$, on a

$$F(x) = f(x, \mu_1),$$

d'où il vient

$$F'(x) = \frac{\partial f(x, \mu_1)}{\partial x} + \frac{\partial f(x, \mu_1)}{\partial \mu_1}\frac{d\mu_1}{dx};$$

et cette expression se réduit à

$$F'(x) = \frac{\partial f(x, \mu_1)}{\partial x},$$

puisque l'équation $\theta'(\mu) = 0$, à laquelle satisfait μ_1, est équivalente à celle-ci

$$\frac{\partial f(x, \mu)}{\partial \mu} = 0.$$

Donc on obtiendra $F'(x)$, en posant dans la dérivée $f'(x)$

$$\lambda^2 = 8\mu_1(1-\mu_1), \qquad \mu = \mu_1,$$

et, par conséquent, on aura

$$F'(x) > 0$$

pour toutes les valeurs de x dans l'intervalle considéré.

Cela étant, pour justifier notre assertion, nous n'avons qu'à montrer que les valeurs

$$F(0) \qquad \text{et} \qquad F\left(\frac{\pi^2}{\frac{2}{3}\pi^2-1}\right)$$

ont des signes opposés, et, comme on a

$$F(0) = f(0) = -2\pi^4,$$

il ne reste qu'à établir l'inégalité

$$F\left(\frac{\pi^2}{\frac{2}{3}\pi^2-1}\right) > 0.$$

A cet effet, nous remarquons que

$$\frac{1}{\pi^4}\left(\frac{2}{3}\pi^2-1\right)^3 f\left(\frac{\pi^2}{\frac{2}{3}\pi^2-1}, \mu\right) = -\frac{8}{135}\pi^6 + \frac{2}{3}\pi^4 - 2\pi^2 + 2$$
$$+ 6\pi^2\mu(1-\mu)(4+\mu),$$

et que l'équation $\theta'(\mu) = 0$, qui définit μ_1, si l'on y pose

$$x = \frac{\pi^2}{\frac{2}{3}\pi^2-1},$$

se réduit à

$$3\mu^2 + 6\mu - 4 = 0.$$

Or, en vertu de cette équation, on trouve

$$\mu(1-\mu)(4+\mu) = \frac{14}{3}\mu - \frac{4}{3},$$

et, comme la racine que nous avons à considérer surpasse $\frac{1}{2}$, il en résulte

$$\mu(1-\mu)(4+\mu) > 1.$$

Nous obtenons donc

$$\frac{1}{\pi^4}\left(\frac{2}{3}\pi^2-1\right)^3 F\left(\frac{\pi^2}{\frac{2}{3}\pi^2-1}\right) > -\frac{8}{135}\pi^6+\frac{2}{3}\pi^4+4\pi^2+2,$$

et le second membre est, évidemment, positif.

Cela posé, soit $\varkappa_0$ la racine de l'équation

$$F(x)=0,$$

dont l'existence vient d'être établie.

Comme on a

$$f(x) \leqq F(x)$$

pour toutes les valeurs de x dans l'intervalle $\left(0, \frac{\pi^2}{\frac{2}{3}\pi^2-1}\right)$, il s'ensuit

$$f(\varkappa_0) \leqq 0,$$

et de là on peut conclure $\varkappa \geqq \varkappa_0$.

Donc $\varkappa_0$ est la plus petite valeur cherchée de $\varkappa$.

Si l'on a

$$\pi^2 C \leqq \varkappa_0,$$

la condition (50) sera remplie, et l'on aura $A^2 < 1$, quels que soient λ et μ satisfaisant aux inégalités (48). Il est donc intéressant de connaître une valeur approchée de $\varkappa_0$, et nous allons former les équations dont dépend l'évaluation de $\varkappa_0$ avec la valeur correspondante de μ.

Nous avons

$$f(x,\mu)=\pi^4\left(\frac{4}{45}x^3-\frac{2}{3}x^2+2x-2\right)+\theta(\mu)x^2,$$

et l'équation $\theta'(\mu)=0$, dans l'hypothèse $\mu > \frac{1}{3}$, se réduit à

$$(54) \qquad \left[(62\pi^2-309)\mu-108\mu^2-32(\pi^2-6)\right]x = 3\pi^2(31\mu-16).$$

En substituant la valeur de x, tirée de cette équation, dans l'expression de $\frac{1}{x}\theta(\mu)$, on trouve

$$\frac{3\mu^2(31\mu^2-64\mu+28)}{31\mu-16}.$$

Donc, en égalant $f(x,\mu)$ à zéro, il vient

$$(55) \qquad \frac{4}{45}x^3-\frac{2}{3}x^2+2x-2=-\frac{3\mu^2(31\mu^2-64\mu+28)}{\pi^4(31\mu-16)}x^2.$$

Les équations (54) et (55) sont celles qu'il fallait obtenir. On pourrait en déduire une équation du 6-ème dégré en x, mais elle serait trop compliquée, et il est préférable de traiter directement les équations précédentes.

Par ces équations, x et μ étant assujettis aux inégalités

$$0 < x < \frac{\pi^2}{\frac{2}{3}\pi^2 - 1}, \qquad \mu > \frac{1}{3},$$

on trouve

$$\mu = 0{,}524071\ldots, \qquad x = 1{,}3859\ldots,$$

et la valeur de x est celle de $\varkappa_0$.

Donc, si l'on a

$$\pi^2 C \leqq 1{,}3859,$$

on pourra conclure $A^2 < 1$, quels que soient λ et μ choisis conformément aux conditions (48).

24. Parmi les conditions, où ne figurent que les trois premiers termes de la suite

$$A_1, \quad A_2, \quad A_3, \quad A_4, \quad \ldots,$$

et qui conduisent à des conclusions décisives à l'égard du signe de $A^2 - 1$, il y en a encore une, celle

$$A_3 \leqq A_2 - A_1,$$

sous laquelle on aurait $A > 1$.

Mais on s'assure aisément que cette condition est impossible pour l'équation considérée.

En effet, le premier membre de la condition (50) étant une fonction croissante de C, et C étant un nombre positif, on a

$$\pi^2 a C^3 - \pi^2 b C^2 + 2\pi^2 C > 0,$$

et cette inégalité n'est autre chose que

$$A_3 > A_2 - A_1.$$

Donc, si pour l'équation considérée on avait $A > 1$, on ne pourrait le constater que par la considération des termes qui suivent A_3.

25. Pour un autre exemple, nous prendrons l'équation

$$\frac{d^2y}{dx^2} + \lambda \cos^{2n} x\, y = 0,$$

où n est un entier positif et λ une constante positive quelconque.

Comme on a

$$2^{2n-1}\cos^{2n} x = \cos 2nx + \frac{2n}{1}\cos(2n-2)x + \frac{2n(2n-1)}{1\cdot 2}\cos(2n-4)x$$
$$+ \ldots + \frac{2n(2n-1)\ldots(n+2)}{1.2.3\ldots(n-1)}\cos 2x + \frac{1}{2}\,\frac{2n(2n-1)\ldots(n+1)}{1.2.3\ldots n},$$

ce qu'on peut présenter sous la forme

$$\cos^{2n} x = \frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n}\left\{1 + 2\sum_{k=1}^{n}\left(1-\frac{k}{n+1}\right)\left(1-\frac{k}{n+2}\right)\ldots\left(1-\frac{k}{n+k}\right)\cos 2kx\right\},$$

nous aurons, avec les notations du n° 19,

$$C = \frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n}\lambda,$$

$$\Phi''(x) = 2C\sum_{k=1}^{n}\left(1-\frac{k}{n+1}\right)\left(1-\frac{k}{n+2}\right)\ldots\left(1-\frac{k}{n+k}\right)\cos 2kx.$$

De là il vient

$$\int_0^{\pi}\Phi'^2\,dx = \frac{\pi}{2}C^2\sum_{k=1}^{n}\left(1-\frac{k}{n+1}\right)^2\left(1-\frac{k}{n+2}\right)^2\ldots\left(1-\frac{k}{n+k}\right)^2\frac{1}{k^2}.$$

Donc, en prenant $\omega = \pi$ et en posant, pour abréger,

$$\sum_{k=1}^{n}\left(1-\frac{k}{n+1}\right)^2\left(1-\frac{k}{n+2}\right)^2\ldots\left(1-\frac{k}{n+k}\right)^2\frac{1}{k^2} = J_n,$$

nous aurons

$$A_1 = \frac{\pi^2}{2}C, \qquad A_2 = \frac{\pi^2}{4}\left(\frac{\pi^2}{6} - J_n\right)C^2,$$

ce qui donne

$$A_2 = \frac{1}{\pi^2}\left(\frac{\pi^2}{6} - J_n\right)A_1^2.$$

En nous bornant à ces formules et en remarquant que la condition $A_1 \leqq 2$ ne demande aucune discussion, passons à celle-ci

$$A_2 \leqq A_1 - 2.$$

Cette condition se réduit à

$$\left(\frac{\pi^2}{6} - J_n\right) A_1^2 - \pi^2 A_1 + 2\pi^2 \leqq 0 \tag{56}$$

et d'abord exige que les racines de l'équation

$$\left(\frac{\pi^2}{6} - J_n\right) x^2 - \pi^2 x + 2\pi^2 = 0 \tag{57}$$

soient réelles, ce qui s'exprime par l'inégalité

$$J_n > \frac{\pi^2}{24}. \tag{58}$$

Or, en se reportant à l'expression de J_n, on voit que c'est une fonction croissante de n. Donc l'inégalité (58), si elle se trouve remplie pour une valeur donnée quelconque de n, le sera encore pour toutes les valeurs plus grandes.

Pour $n = 1$ cette inégalité n'est pas remplie, puisqu'on a

$$J_1 = \frac{1}{4} < \frac{\pi^2}{24}.$$

Mais pour $n = 2$ on la trouve déjà satisfaite, car

$$J_2 = \frac{65}{144} \quad \text{et} \quad \frac{\pi^2}{24} < \frac{10}{24} = \frac{60}{144};$$

et, par suite, elle sera satisfaite pour toutes les valeurs de n à partir de $n = 2$.

Ainsi, sauf le cas de $n = 1$, les racines de l'équation (57) seront réelles, et, si on les désigne par x_1 et x_2, en supposant $x_1 < x_2$, la condition (56) se réduira à

$$x_1 \leqq A_1 \leqq x_2.$$

Voyons en quelles limites peuvent varier les valeurs de x_1 et x_2, le nombre n étant plus grand que 1.

Pour $n = 2$ l'équation (57) devient

$$\left(\frac{\pi^2}{6} - \frac{65}{144}\right) x^2 - \pi^2 x + 2\pi^2 = 0,$$

et, en la résolvant, on trouve

$$x_1 = \frac{24\pi}{6\pi + \sqrt{130 - 12\pi^2}} = 3,3886\ldots,$$

$$x_2 = \frac{24\pi}{6\pi - \sqrt{130 - 12\pi^2}} = 4,8805\ldots.$$

Ces formules donnent la plus grande valeur de x_1 et la plus petite valeur de x_2, car, J_n étant une fonction croissante de n, x_2 le sera aussi et x_1 sera une fonction décroissante.

On voit d'ailleurs que x_1 sera toujours plus grand que 2.

On aura donc

$$2 < x_1 \leqq 3,3886\ldots, \qquad x_2 \geqq 4,8805\ldots.$$

D'ailleurs, n croissant indéfiniment, x_1 tendra vers 2 et x_2 croîtra indéfiniment.

Cela résulte de ce que

$$\lim_{n=\infty} J_n = \frac{\pi^2}{6},$$

comme on le voit par l'expression de J_n, qui donne

$$J_n < \sum_{k=1}^{n} \frac{1}{k^2} \qquad \text{et} \qquad J_n > \left(1 - \frac{m}{n+1}\right)^{2m} \sum_{k=1}^{m} \frac{1}{k^2},$$

m étant un entier quelconque plus petit que n.

Donc, en faisant le nombre n assez grand, on pourra rendre la racine x_1 aussi voisine de 2 qu'on voudra et la racine x_2 aussi grande qu'on voudra.

Cela posé, si nous considérons A_1 comme une quantité donnée et indépendante du nombre n, ce qui est permis à cause de la présence du facteur λ dans la formule

$$A_1 = \frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n} \frac{\pi^2}{2} \lambda,$$

nous pouvons faire la conclusion suivante.

Quelle que soit la valeur donnée de A_1, pourvu qu'elle soit supérieure à 2, la condition (56) sera remplie, dès que n sera assez grand.

Par suite, si $A_1 > 2$, on aura toujours $A < -1$ pour des valeurs assez grandes de n. Si d'ailleurs la valeur de A_1 se trouve entre les nombres

$$3,3886\ldots \qquad \text{et} \qquad 4,8805\ldots,$$

on aura $A < -1$ pour toutes les valeurs de n à partir de $n = 2$.

26. Arrêtons-nous au cas de n très grand.

En se servant de la formule de Stirling, on peut obtenir pour J_n des expressions approchées, où l'approximation pourra être poussée jusqu'à des termes de l'ordre voulu par rapport à $\frac{1}{n}$.

Telle est, par exemple, l'expression

$$\frac{\pi^2}{6} - \frac{\sqrt{2\pi}}{\sqrt{n}} + \left(1 + \frac{11}{48}\frac{\sqrt{2\pi}}{\sqrt{n}}\right)\frac{1}{n},$$

qui diffère de J_n d'une quantité du second ordre.

Nous nous bornerons ici à une expression plus simple, celle

$$\frac{\pi^2}{6} - \frac{\sqrt{2\pi}}{\sqrt{n}},$$

pour laquelle l'erreur est du premier ordre.

A l'égard de cette expression on peut établir qu'elle représente une limite inférieure pour J_n, de sorte qu'on aura

$$\frac{\pi^2}{6} - J_n < \frac{\sqrt{2\pi}}{\sqrt{n}}, \tag{59}$$

quel que soit n.

On peut aussi établir l'inégalité suivante

$$\frac{\pi^2}{6} - J_n > \frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}, \tag{60}$$

qui est également exacte pour toutes les valeurs de n.

Sans nous arrêter à la démonstration de ces résultats, remarquons seulement que nous les avons obtenus en partant des inégalités

$$1.2.3\ldots n < \sqrt{2\pi n}\ n^n\, e^{-n + \frac{1}{12n}},$$

$$1.2.3\ldots n > \sqrt{2\pi n}\ n^n\, e^{-n + \frac{1}{12n} - \frac{1}{360n^3}}.$$

Par l'inégalité (59) on voit que la condition (56) sera satisfaite toutes les fois que l'on a

$$\frac{\sqrt{2\pi}}{\sqrt{n}} A_1^2 - \pi^2 A_1 + 2\pi^2 \leqq 0. \tag{61}$$

Or cette dernière condition se réduit à

$$n \geqq \frac{2}{\pi^3} \frac{A_1^4}{(A_1 - 2)^2}$$

et donne ainsi une limite inférieure des valeurs de n, pour lesquelles on aura $A < -1$, A_1 ayant une valeur donnée plus grande que 2.

Supposons maintenant qu'au lieu de A_1 l'on donne le nombre n.

Pour que la condition (61) soit possible, ce nombre doit être choisi conformément à l'inégalité

$$\frac{8\sqrt{2}}{\pi\sqrt{\pi n}} < 1,$$

laquelle exige que n ne soit pas inférieur à 5.

Cela étant, si nous posons, pour abréger,

$$\frac{2\sqrt{2}}{\pi\sqrt{\pi n}} = \varepsilon,$$

la condition (61) pourra être remplacée par celle que A_1 doit être compris entre les limites

$$\frac{1-\sqrt{1-4\varepsilon}}{\varepsilon} \quad \text{et} \quad \frac{1+\sqrt{1-4\varepsilon}}{\varepsilon}.$$

Ces limites, pour de grandes valeurs de n, représentent des expressions approchées de x_1 et x_2, et il est facile de voir qu'avec la même précision relativement à l'ordre de l'erreur les quantités x_1 et x_2 seront aussi données par ces expressions plus simples

$$2 + 2\varepsilon \quad \text{et} \quad \frac{2}{\varepsilon},$$

ou bien par celles-ci

$$2 + 2\varepsilon + 24\varepsilon^2 \quad \text{et} \quad \frac{2}{\varepsilon} - 4.$$

Nous nous arrêterons à ces dernières, dont la première représente une limite supérieure pour x_1 et la deuxième une limite inférieure pour x_2, comme on le voit par les inégalités

$$\sqrt{1-4\varepsilon} > 1 - 2\varepsilon - 2\varepsilon^2 - 24\varepsilon^3, \qquad \sqrt{1-4\varepsilon} > 1 - 4\varepsilon,$$

qui donnent

$$2 + 2\varepsilon + 24\varepsilon^2 > \frac{1-\sqrt{1-4\varepsilon}}{\varepsilon} > x_1,$$

$$\frac{2}{\varepsilon} - 4 < \frac{1+\sqrt{1-4\varepsilon}}{\varepsilon} < x_2.$$

Nous parvenons ainsi à la conclusion que, si l'on a

$$2+2\varepsilon+24\varepsilon^2 \leqq A_1 \leqq \frac{2}{\varepsilon}-4, \tag{62}$$

on aura certainement $A < -1$.

Maintenant, au lieu de A_1, introduisons λ.

Nous avons

$$A_1 = \frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n}\frac{\pi^2}{2}\lambda.$$

Or, en partant des inégalités

$$1.2.3\ldots n < \sqrt{2\pi n}\, n^n e^{-n+\frac{1}{12n}-\frac{1}{360n^3}+\frac{1}{1260n^5}},$$

$$1.2.3\ldots n > \sqrt{2\pi n}\, n^n e^{-n+\frac{1}{12n}-\frac{1}{360n^3}},$$

on parvient à celles-ci

$$\frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n} < \frac{1}{\sqrt{\pi n}};$$

$$\frac{1.3.5\ldots(2n-1)}{2.4.6\ldots 2n} > \frac{1}{\sqrt{\pi n}}e^{-\frac{1}{8n}} > \frac{1}{\sqrt{\pi n}}\left(1-\frac{1}{8n}\right).$$

Il viendra donc

$$\frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda > A_1 > \left(1-\frac{1}{8n}\right)\frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda,$$

d'où l'on voit que les inégalités (62) seront satisfaites, si λ vérifie celles-ci

$$\frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda \leqq \frac{2}{\varepsilon}-4,$$

$$\left(1-\frac{1}{8n}\right)\frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda \geqq 2+2\varepsilon+24\varepsilon^2;$$

et ces dernières, si l'on substitue au lieu de ε sa valeur, se réduisent à

$$\frac{4\sqrt{n}}{\pi\sqrt{\pi}}+\frac{8\sqrt{2}}{\pi^3}+\frac{N}{\sqrt{n}} \leqq \lambda \leqq \sqrt{2}\,n-\frac{8\sqrt{n}}{\pi\sqrt{\pi}},$$

où

$$N = \frac{4n}{(8n-1)\pi\sqrt{\pi}}+\frac{8\sqrt{2n}}{(8n-1)\pi^3}+\frac{384\cdot 8n}{(8n-1)\pi^4\sqrt{\pi}}.$$

On peut d'ailleurs simplifier cette condition en remplaçant N par 3, car il est facile de s'assurer que l'on a toujours $N < 3$.

Par suite, nous pouvons énoncer la conclusion suivante:

Toutes les fois que λ vérifie la condition

$$\frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} + \frac{3}{\sqrt{n}} \leqq \lambda \leqq \sqrt{2}\, n - \frac{8\sqrt{n}}{\pi\sqrt{\pi}},$$

on aura $A < -1$.

Remarquons que, pour la possibilité de cette condition, il suffit qu'on ait $n \geqq 5$.

Il est utile de rapprocher ce résultat de celui qui découle de la considération de la condition $A_1 \leqq 2$, et qui peut être énoncé ainsi:

Si λ ne surpasse pas la quantité

$$\frac{4\sqrt{n}}{\pi\sqrt{\pi}},$$

on aura $A^2 < 1$.

On voit donc que, pour des valeurs de λ qui ne surpassent pas le nombre

$$\sqrt{2}\, n - \frac{8\sqrt{n}}{\pi\sqrt{\pi}}$$

(n n'étant pas inférieur à 5), le signe de $A^2 - 1$ ne reste incertain que dans l'intervalle

$$\text{de} \quad \frac{4\sqrt{n}}{\pi\sqrt{\pi}} \quad \text{à} \quad \frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} + \frac{3}{\sqrt{n}},$$

et l'on verra tout de suite que cet intervalle se réduit considérablement, si l'on tient compte de ce qui a été montré au n° 14.

27. Nous avons vu que sous la condition (32), à savoir,

$$A_2^2 - 2A_1A_2 + 2A_1(A_1 - 2) \leqq 0$$

on aura toujours $A^2 < 1$.

Appliquons ce résultat à l'équation considérée, en nous bornant au cas de n très grand.

En vertu de l'inégalité (60) on trouve

$$A_2 > \frac{1}{\pi^2}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right) A_1^2.$$

Par suite, tant que $A_2 < A_1$, on aura

$$A_2^2 - 2A_1A_2 < \frac{1}{\pi^4}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right)^2 A_1^4 - \frac{2}{\pi^2}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right) A_1^3,$$

et la condition considérée sera remplie, si

$$\frac{1}{\pi^4}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right)^2 A_1^3 - \frac{2}{\pi^2}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right) A_1^2 + 2A_1 - 4 \leqq 0. \tag{63}$$

Or on voit immédiatement que cette dernière condition, comme celle (32), n'est possible que si A_1 est plus petit que 4, ce qui entraîne l'inégalité $A_2 < A_1$.

Donc, sous la condition (63), celle (32) sera toujours remplie, et nous aurons $A^2 < 1$.

Cela posé et en faisant, pour abréger,

$$\frac{1}{\pi^2}\left(\frac{\sqrt{2\pi}}{\sqrt{n}} - \frac{2}{n}\right) = \eta,$$

considérons l'équation

$$\eta^2 x^3 - 2\eta x^2 + 2x - 4 = 0.$$

Cette équation n'a, évidemment, qu'une seule racine réelle, et, si l'on désigne cette racine par x_0, la condition (63) se réduira à

$$A_1 \leqq x_0.$$

Développons la racine x_0 suivant les puissances ascendantes de η, ce qui donnera

$$x_0 = 2 + 4\eta + 12\eta^2 + \ldots,$$

et arrêtons-nous à la valeur approchée $2 + 4\eta$.

En substituant cette valeur dans l'équation, on trouve que le premier membre se réduit à

$$-8\eta^2(3 - 2\eta - 12\eta^2 - 8\eta^3),$$

et il est aisé de voir que c'est une quantité négative.

En effet, l'égalité

$$\frac{1}{4\pi} - \eta = \frac{1}{\pi}\left(\frac{\sqrt{2}}{\sqrt{\pi n}} - \frac{1}{2}\right)^2$$

montre que l'on a $\eta < \frac{1}{4\pi}$, d'où l'on voit que

$$2\eta + 12\eta^2 + 8\eta^3 < 3.$$

Par suite, on peut conclure l'inégalité

$$x_0 > 2 + 4\eta,$$

en vertu de laquelle la condition (63) sera remplie, toutes les fois qu'on aura

$$A_1 \leqq 2 + 4\eta. \tag{64}$$

Or nous avons

$$A_1 < \frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda,$$

ce qui fait voir que la condition (64) sera satisfaite, si λ vérifie celle-ci

$$\frac{\pi\sqrt{\pi}}{2\sqrt{n}}\lambda \leqq 2 + 4\eta;$$

et cette dernière condition, en remplaçant η par sa valeur, se réduit à

$$\lambda \leqq \frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} - \frac{16}{\pi^3\sqrt{\pi n}}.$$

Donc nous pouvons conclure que, si λ ne surpasse pas la quantité

$$\frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} - \frac{16}{\pi^3\sqrt{\pi n}},$$

on aura certainement $A^2 < 1$.

Ainsi l'intervalle dont nous avons parlé s'est réduit en

$$\left(\frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} - \frac{16}{\pi^3\sqrt{\pi n}},\quad \frac{4\sqrt{n}}{\pi\sqrt{\pi}} + \frac{8\sqrt{2}}{\pi^3} + \frac{3}{\sqrt{n}}\right),$$

où les limites diffèrent l'une de l'autre par une quantité tendant vers zéro, lorsque n croît indéfiniment.

Dans cet intervalle, l'équation

$$A + 1 = 0,$$

n étant considéré comme un nombre donné et λ comme une inconnue, admet une racine et, d'après une proposition générale que nous avons publiée, il y a trois années, dans les *Comptes rendus* (t. CXXVIII, 10 avril et 1 mai 1899), elle n'en admet qu'une seule *).

Pour cette racine, qui est la plus petite parmi les racines de l'équation $A+1=0$ (n'ayant que des racines réelles), nous obtenons ainsi une valeur approchée, savoir,

$$\frac{4\sqrt{n}}{\pi\sqrt{\pi}}+\frac{8\sqrt{2}}{\pi^3},$$

avec une erreur qui est inférieure à $\frac{3}{\sqrt{n}}$.

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*) En vertu de cette proposition, l'équation transcendante $A^2-1=0$ (où le premier membre est une fonction entière de λ), quel que soit l'entier positif n, admet, outre la racine évidente $\lambda=0$, une infinité d'autres, qui sont toutes réelles et positives, et ne peuvent être que simples ou doubles. Ces racines, rangées dans l'ordre croissant, étant désignées par

$$\lambda_1', \quad \lambda_1'', \quad \lambda_2', \quad \lambda_2'', \quad \lambda_3', \quad \lambda_3'', \quad \ldots,$$

à condition que chaque racine double, s'il y en a de telles racines, soit répétée, dans cette suite, deux fois, les termes λ_i', λ_i'' à indice i impair seront des racines de l'équation $A+1=0$, et ceux à indice pair, des racines de l'équation $A-1=0$.

D'après cela, si l'on entend par λ_0 et par λ_1 les valeurs de λ pour lesquelles on a respectivement $A_1=x_0$, $A_1=x_1$, le nombre n étant supposé plus grand que 1, l'intervalle (λ_0, λ_1) ne pourra contenir qu'une seule racine de l'équation $A^2-1=0$. En effet, pour $\lambda=\lambda_0$ et $\lambda=\lambda_1$, la fonction A^2-1 a des signes opposés. Par suite, l'intervalle (λ_0, λ_1) contient un nombre impair de racines (toute racine double étant comptée pour deux), et, comme dans cet intervalle on a $A_1<x_1<4$, parmi ces racines, il ne se trouve point qui appartiennent à l'équation $A-1=0$. Donc l'intervalle considéré ne peut contenir qu'une seule racine, celle λ_1', et l'intervalle qui nous intéresse est compris dans celui (λ_0, λ_1).

ERRATA.

Pages	Lignes	*Au lieu de:*	*Lisez:*
18	4 (en remontant)	$\alpha_l + \delta\alpha_l > m + n$	$\alpha_l + \delta\alpha_l - 1 > m + n$
20	9	$\mu_{2l} = \lambda_1$	$\mu_{2l} = \lambda_1'$
35	2 (en remontant)	A_3	A_3