

On The Elementary Electrical Charge

Robert Millikan

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The experiments herewith reported were undertaken with the view of introducing certain improvements into the oil-drop method of determining the elementary electrical charge, e , and the number of molecules per gram molecule, N , and thus obtaining a higher accuracy than had before been possible in the evaluation of these most fundamental constants. This is a recording of the original paper published in the Physical Review, Vol. II, No. 2.

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Run time.: 01:30:05

Chapters.: 13 sections in three audio segments

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elementaryelectricalcharge_01_millikan... –
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TABLE XXI.

Elementary electrical charge.....	$e = 4.774 \pm .009 \times 10^{-10}$
Number of molecules per gram molecule.....	$N = 6.062 \pm .012 \times 10^{23}$
Number of gas molecules per c.c. at 0° 76.....	$n = 2.705 \pm .005 \times 10^{19}$
Kinetic energy of a molecule at 0° C.....	$E_0 = 5.621 \pm .010 \times 10^{-14}$
Constant of molecular energy.....	$\epsilon = 2.058 \pm .004 \times 10^{-16}$
Constant of the entropy equation.....	$k = 1.372 \pm .002 \times 10^{-16}$
Elementary "Wirkungsquantum".....	$h = 6.620 \pm .025 \times 10^{-27}$
Constant of the Wien displacement law.....	$c_2 = 1.4470 \pm .0030$

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