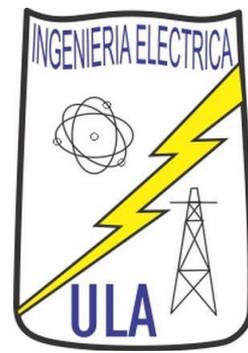




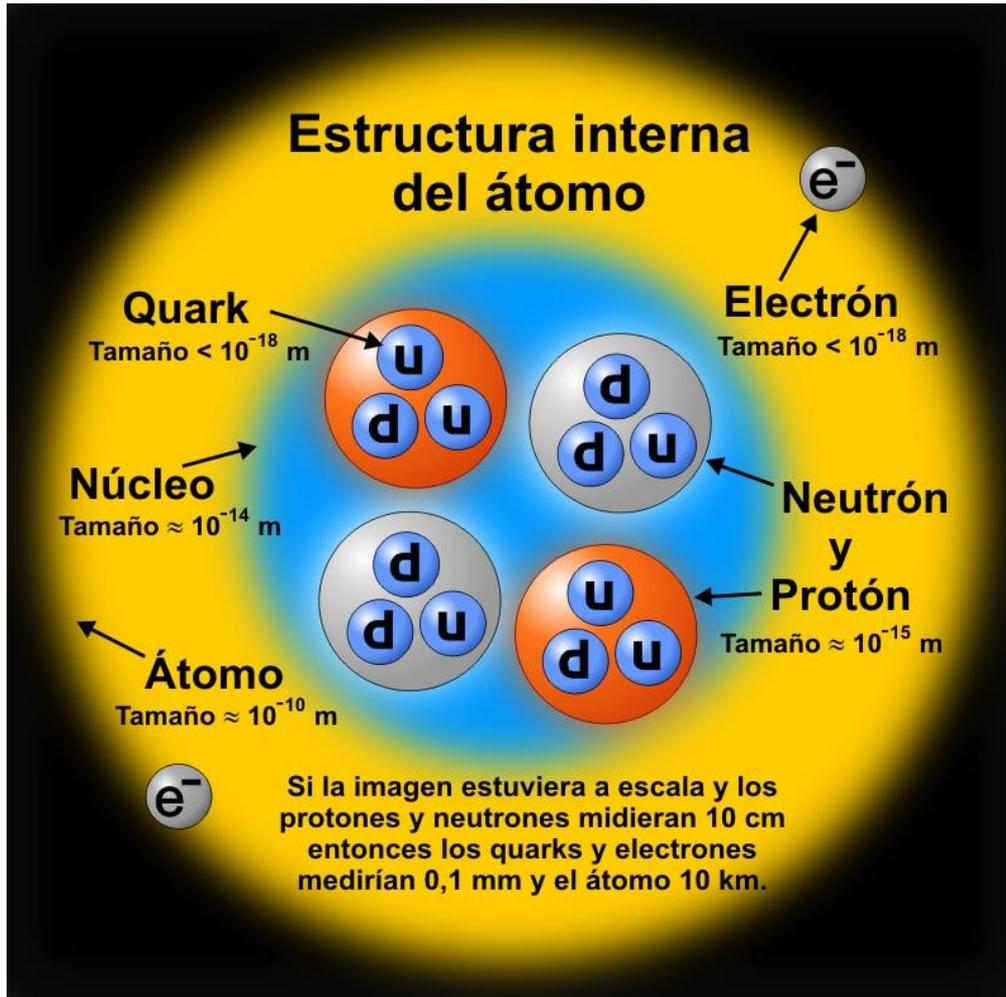
INGENIERIA
UNIVERSIDAD DE LOS ANDES
MÉRIDA VENEZUELA



Información adicional (Conceptos Básicos y Elementos del Circuito)

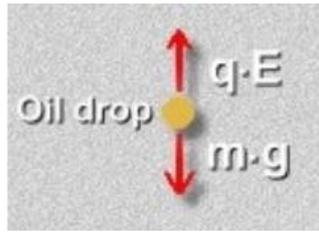
Prof. Gerardo Ceballos

Estructura del átomo



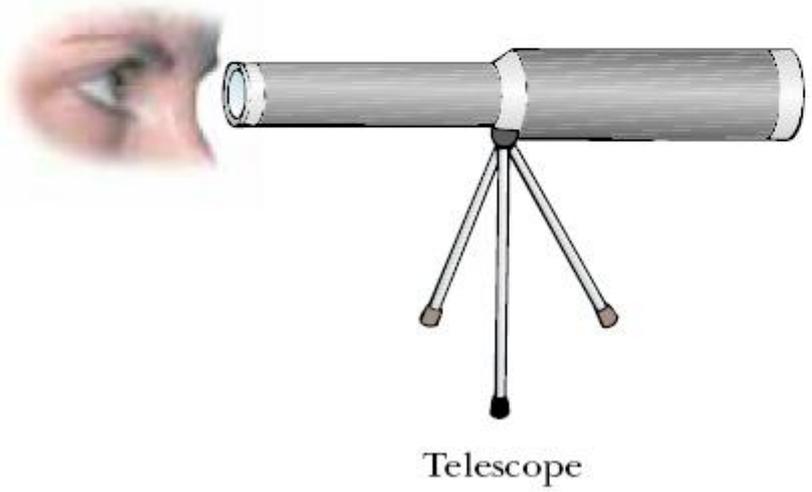
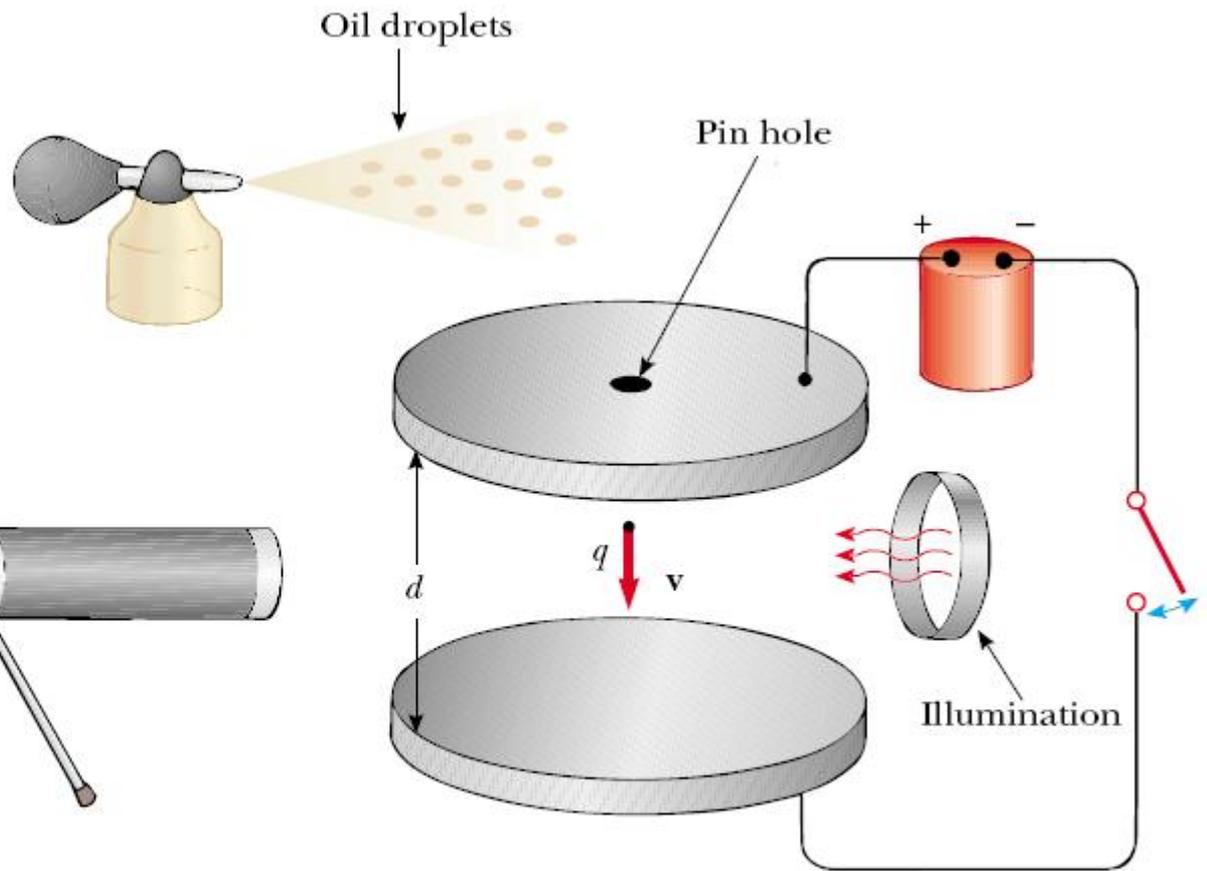


Experimento de Millikan

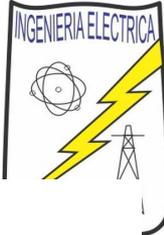


$$q \cdot E = m \cdot g$$

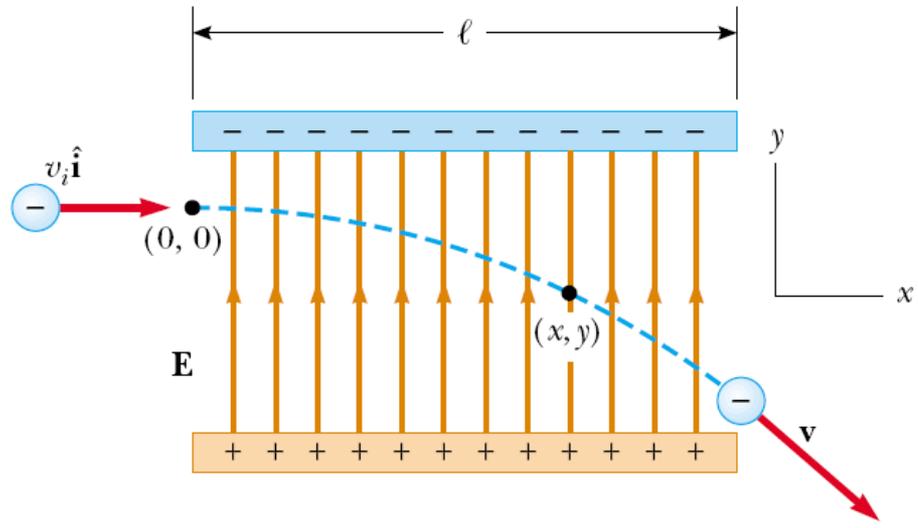
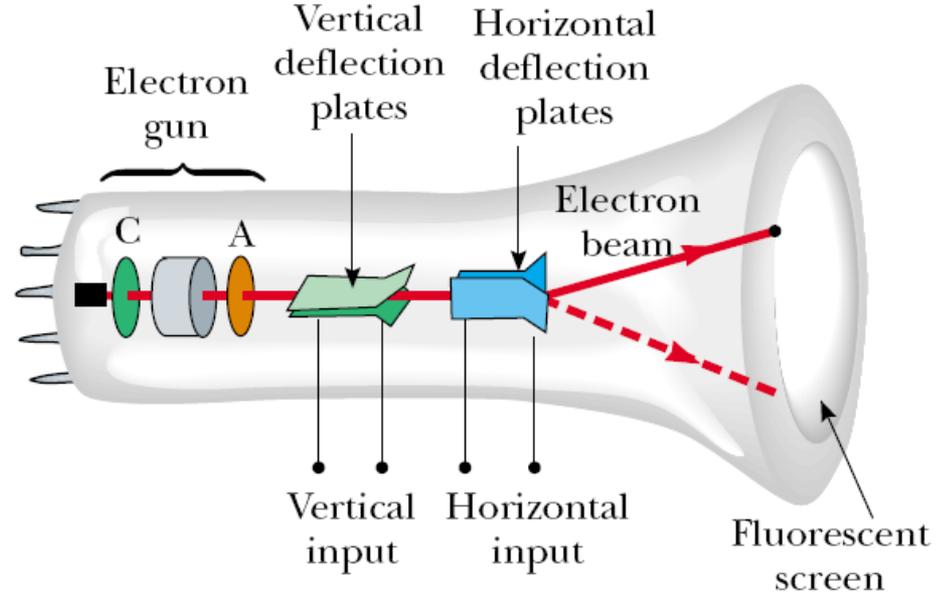
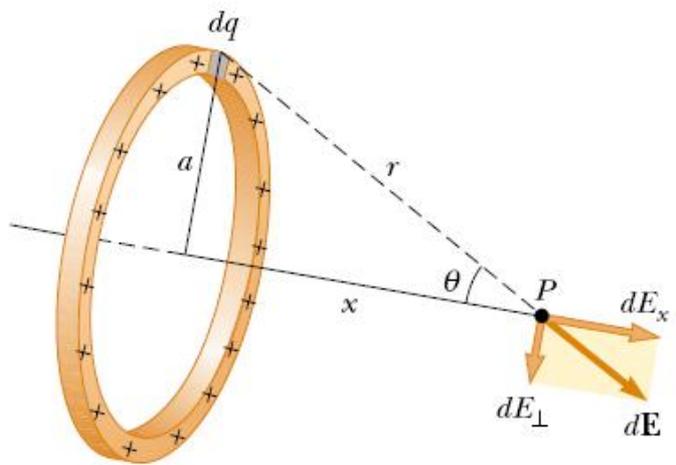
$$q = \frac{m \cdot g}{E}$$



Active Figure 25.27 Schematic drawing of the Millikan oil-drop apparatus.



Tubo de rayos catódicos

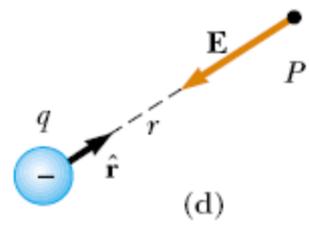
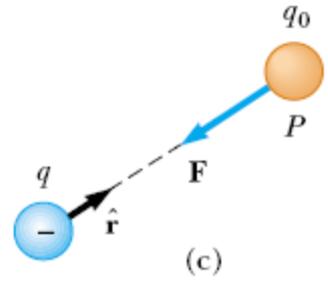
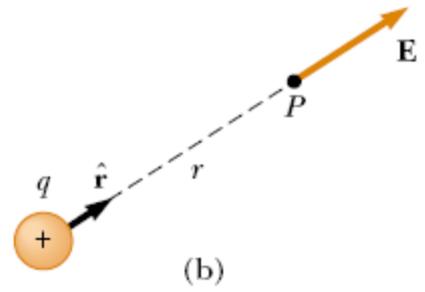
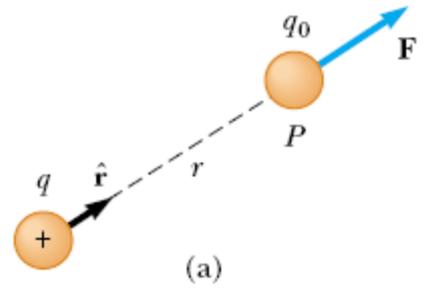


Resistivities and Temperature Coefficients of Resistivity for Various Materials

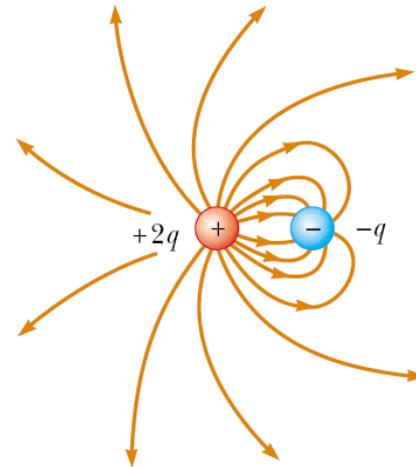
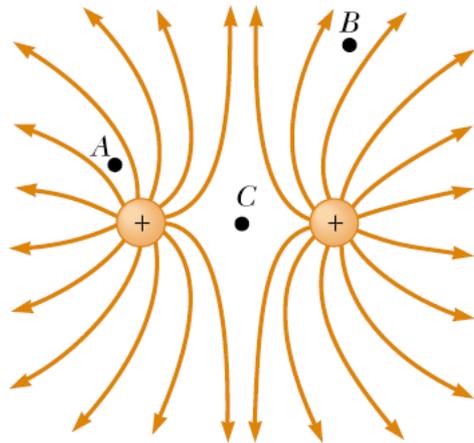
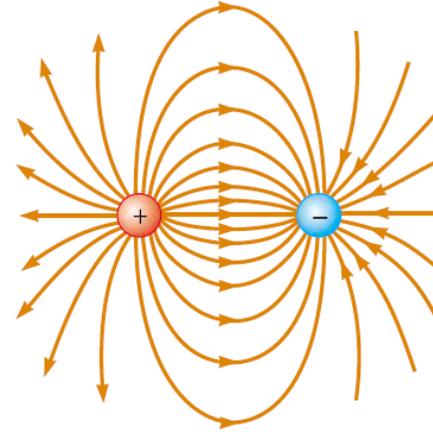
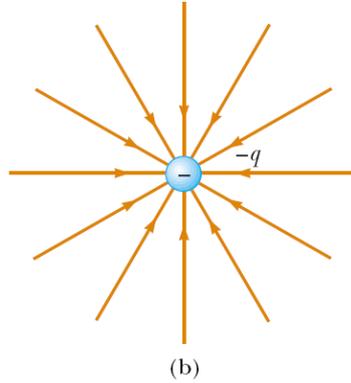
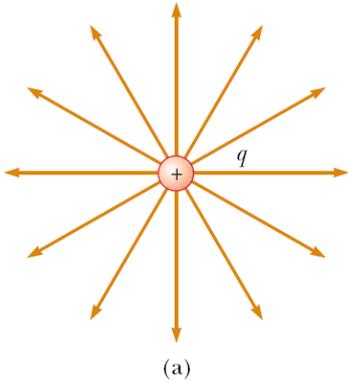
Material	Resistivity ^a ($\Omega \cdot m$)	Temperature Coefficient ^b $\alpha[(^{\circ}C)^{-1}]$
Silver	1.59×10^{-8}	3.8×10^{-3}
Copper	1.7×10^{-8}	3.9×10^{-3}
Gold	2.44×10^{-8}	3.4×10^{-3}
Aluminum	2.82×10^{-8}	3.9×10^{-3}
Tungsten	5.6×10^{-8}	4.5×10^{-3}
Iron	10×10^{-8}	5.0×10^{-3}
Platinum	11×10^{-8}	3.92×10^{-3}
Lead	22×10^{-8}	3.9×10^{-3}
Nichrome ^c	1.50×10^{-6}	0.4×10^{-3}
Carbon	3.5×10^{-5}	-0.5×10^{-3}
Germanium	0.46	-48×10^{-3}
Silicon	640	-75×10^{-3}
Glass	10^{10} to 10^{14}	
Hard rubber	$\sim 10^{13}$	
Sulfur	10^{15}	
Quartz (fused)	75×10^{16}	

Conductores T \uparrow R \uparrow
 Semiconductores T \uparrow R \downarrow
 Aislantes T \uparrow R \downarrow

Ca | ca



Líneas de Campo Eléctrico



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