

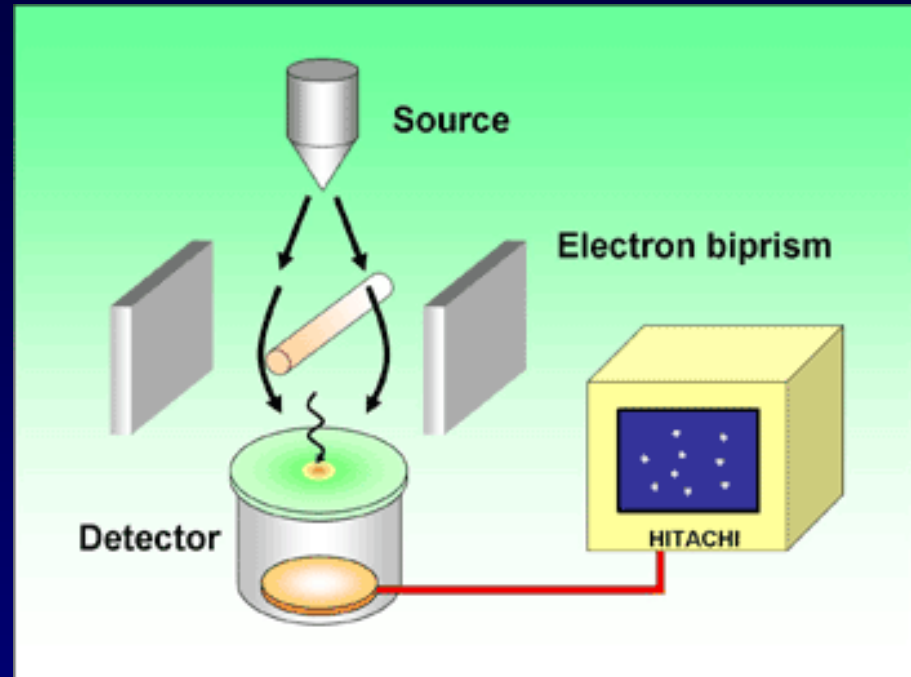
"Double-slit" Experiment for Electrons

Electrons are accelerated to 50 keV
→ $\lambda = 0.0055$ nm

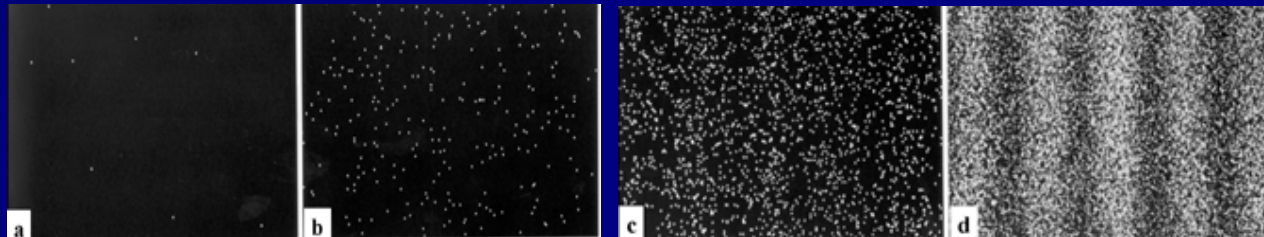
Central wire is positively charged → bends electron paths so they overlap.

A position-sensitive detector records where they appear.

<< 1 electron in system at any time



Video by A. TONOMURA (Hitachi) --pioneered electron holography.
<http://www.hqrd.hitachi.co.jp/rd/moviee/doubleslite.wmv>



Exposure time: 1 s

10 s

5 min

20 min

See also this Java simulation: <http://www.quantum-physics.polytechnique.fr/index.html>