

**Copy of a printed diagram referenced as "Representation of the wave function for the ground state of a hydrogen atom"**

**Contributors**

Fuller, Watson, 1935-

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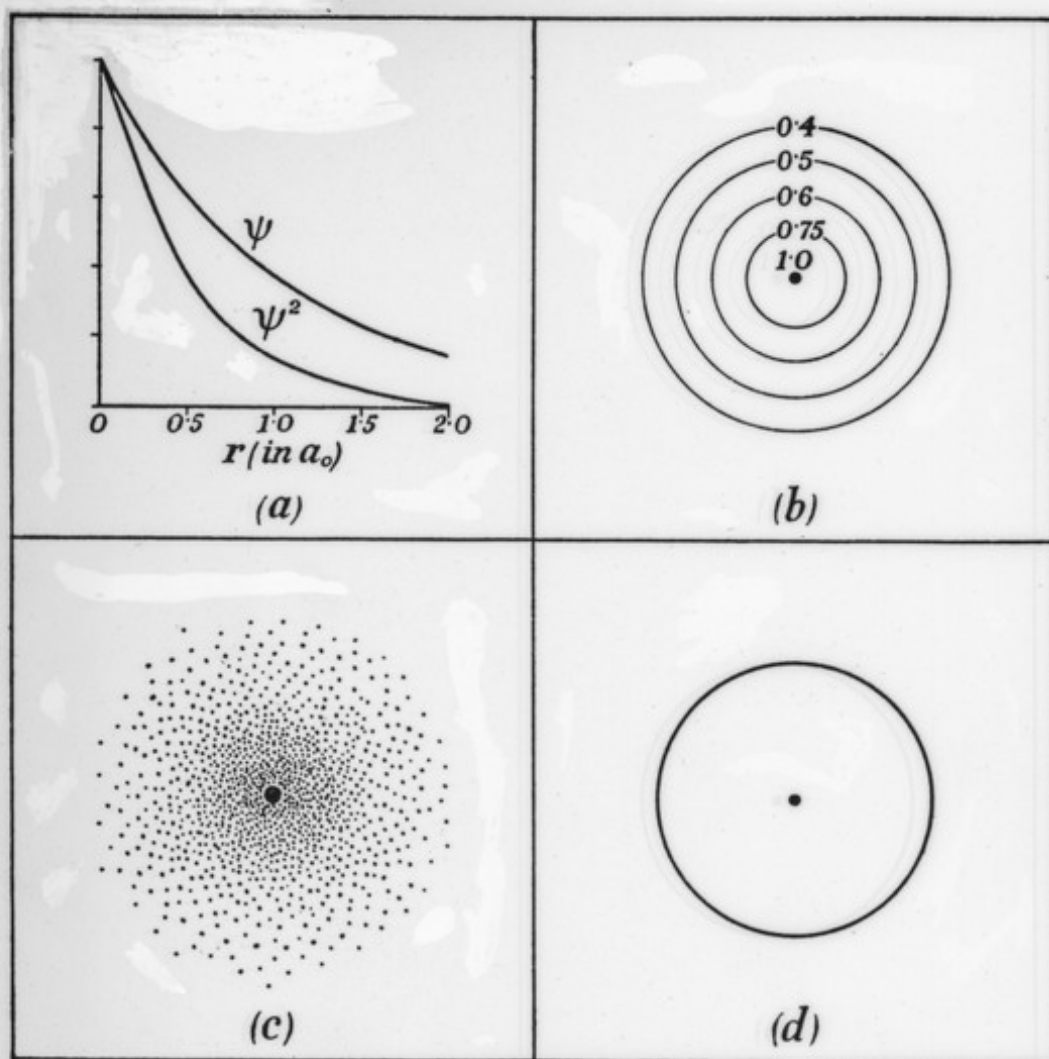
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...adequately pictorial  
 representation of it.  
 The representation of the charge density  
 which is often used for atoms. Instead of plotting the density



Representation of the wave function for the ground state of a hydrogen atom.

(a) graph of  $\psi$  and  $\psi^2$ .  
 (b) contours of  $\psi$ .

(c) charge-cloud.  
 (d) boundary surface.

...plot what is called the radial density  $4\pi r^2\rho(r)$ . Since  
 ...is the volume lying between the two spheres  $r$ ,  $r+dr$ , it  
 follows that  $4\pi r^2\rho(r)dr$  is the total probability that the electron  
 is at a distance between  $r$  and  $r+dr$  of the origin. Fig. 2 shows  
 the graph of this radial density. It is interesting, by way of a