

# Light - Particle or Wave?

Diffraction of light played an important historical role.

- **1818**: French Academy held a science competition
- Fresnel proposed the diffraction of light.
- One judge, Poisson, knew light was made of particles, and thought Fresnel's ideas ridiculous; he argued that if Fresnel ideas were correct, one would see a bright spot in the middle of the shadow of a disk.
- Another judge, Arago, decided to actually do the experiment... (our lecture demo)
- **Conclusion:**  
**Light *must* be a wave, since particles don't diffract!**