

2017-Ph-H1-Q19

Section: Particles and Waves

Topic: Wave-Particle Duality

| Which observation supports the **particle nature** of light?

Key Concept:

- **Photoelectric effect** shows that:
 - Light delivers energy in **packets (photons)**
 - No electrons are emitted if photon energy $<$ work function

So:

 **Final Answer: D — Photoelectric emission of electrons**

Revision Tips:

- Photon energy: $E = hf$
- Wave model couldn't explain threshold frequency