

- 38 In a television programme to illustrate scientific models, a presenter fires a gun many times at a bale of hay. Two small cannon balls are embedded within the hay some distance apart from each other.

The hay bale measures approximately $2\text{ m} \times 2\text{ m} \times 2\text{ m}$ and the cannon balls are made of iron, approximately spherical, and about 5 cm in diameter.

What might the presenter be illustrating?

- A α -particle scattering
- B β^- decay
- C conservation of momentum
- D double-slit interference

- 39 A certain nuclide, uranium-235, has nucleon number 235, proton number 92 and neutron number