CHAPTER OVERVIEW

10: Scattering Theory

Almost everything we know about nuclei and elementary particles has been discovered in scattering experiments, from Rutherford's surprise at finding that atoms have their mass and positive charge concentrated in almost point-like nuclei, to the more recent discoveries, on a far smaller length scale, that protons and neutrons are themselves made up of apparently point-like quarks.

Thumbnail: Collimated homogeneous beam of monoenergetic particles, long wavepacket which is approximately a planewave, but strictly does not extend to infinity in all directions, is incident on a target and subsequently scattered into the detector subtending a solid angle. The detector is assumed to be far away from the scattering center. (Department of Physics Wiki @ Florida State University).
