

Kinetic Transfer of Energy Between Colliding Massive Particles

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A Look at Baryonic Collisions

The Neutron and Target Nucleus

In an event where we find a neutron colliding with a nucleus we can observe the inelastic scattering effect seen by noting energy transfer from the neutron to the nucleus leaving an excited state of the nucleus in most cases. There will always be an angle generated by the collision with calculable degrees proportionate to energy deposit. The scattering in some ways is similar to the Compton effect of electrons and photons. Yet in the neutron/nuclei event we do not see a massless particle the photon colliding with a massive particle but two massive particles. The effects with the photon interaction are different in the way that there is not only a transfer of energy and deminishment of angle of the incident particle. In the Compton effect we see a frequency alteration also.

To return focus to the scattering of the two massive particles one electrically neutral the other the nucleus containing both protons and neutrons with positive charge, we may refer ourselves to a simplistic graph of this kinetic impact between nucleons. Interestingly we can discern that due to the masses of the particles we may not see the data showing the line beginning at 0 degrees. The particles would have to be practically not there to get that data we imagine.

Energy Transfer of Neutron/Nucleus Scatter Event with Respect to Angle at Post Incident

