



Contribution ID: 218

Type: Oral presentation

Precise Predictions for Atomic Ionisation from the Migdal Effect

Tuesday 19 July 2022 14:30 (20 minutes)

We revisit and improve on previous calculations of the Migdal effect, the excitation and ionisation of atoms after a neutral particle scatters off the nucleus. We present results for the noble elements, and also carbon and fluorine. Our improved calculations are particularly important for neutron scattering experiments, which aim to test the Migdal effect in the laboratory. In this case, deviations from the dipole approximation and secondary ionisation processes have a significant effect on the size of the Migdal effect.

Author: Dr MCCABE, Christopher (King's College London)

Presenter: Dr MCCABE, Christopher (King's College London)

Session Classification: Parallel 2C - Direct detection II