

17.2.5 The electron coincidence spectroscopies

In a coincidence spectroscopy two or three particles (electrons, photons or ions) originating from a single event are detected. This event may be an excitation or ionization process initiated by electrons or photons. Sophisticated timing electronics capable of nanosecond resolution and up to three electron energy analyzers are required.

There are three classes of electron coincidence spectroscopy applicable to the gas phase, namely: *electron-electron*, *electron-photon*, and *electron-ion*.