

The power of Coincidence Imaging Fundamental Physics with small Molecules

A single quantum particle can "be" at two places.

A pair of two quantum particles can show "Spooky action at a distance".

The two key elements of quantum theory, the superposition principle and entanglement both challenge our intuition.

We will present experiments on small molecules in which several fragments are detected in coincidence using the COLTRIMS technique. These experiments performed with lasers, synchrotron radiation and ions explore the quantum nature of small molecules and show how both: the superposition principle and quantum entanglement are omnipresent in molecular physics.

