

Recent Measurements of Low Energy Positronium-Gas Scattering using Age-Momentum Correlation

A new Age-Momentum Correlation apparatus has been built for the purpose of studying Positronium-Gas scattering. This apparatus uses a HPGe detector to perform time-resolved Doppler Broadening Studies on positronium in a gas environment. With this information, energy as a function of time since positronium formation can be extracted and used to calculate a momentum transfer cross-section. This method has significantly improved both data rate and energy resolution over previous measurements that also used Doppler broadening methods. More importantly, the simultaneous acquisition of both time and energy spectra allow for systematic checks that were not available to previous experiments. Recent results will be presented.