

Abstract Submitted
for the DAMOP08 Meeting of
The American Physical Society

High resolution positron scattering from helium JAMES SULLIVAN, PETER CARADONNA, ADRIC JONES, STEPHEN BUCKMAN, RSPHYSSE, Australian National University, CASTEN MAKOCHEKANWA, RSPHYSSE, ANU and Flinders University, CENTRE FOR ANTIMATTER-MATTER STUDIES COLLABORATION — High resolution positron scattering measurements have commenced at the Australian Positron Beamline Facility. A positron beam with an energy resolution of 60 meV has been used to make total cross section measurements of positron scattering from helium below the positron formation threshold, in particular in the region of previously reported resonance features between 1 and 3 eV scattering energy [1]. No evidence of any resonances was found in the measurements which agree well with theoretical calculations, as well as previous experiments made with a substantially worse energy resolution. Measurements of low energy elastic differential cross sections will also be presented and compared to theoretical calculations, with the goal of establishing a benchmark for positron scattering. [1] Karwasz et al., NIM B **240**, (2005) 666

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Date submitted: 31 Jan 2008

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