

Abstract Submitted  
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**Positron scattering from tetrahydrofuran**<sup>1</sup> M.J. BRUNGER, L. CHIARI, CAMS, Flinders University, Adelaide, Australia, W. TATTERSALL, CAMS, James Cook University, Townsville, Australia, E. ANDERSON, J. MACHACEK, C. MAKOCHEKANWA, J. SULLIVAN, S.J. BUCKMAN, CAMS, Australian National University, Canberra, Australia — We present recent experimental results for positron scattering from tetrahydrofuran. Being a model for the deoxyribose sugar rings in the nucleic acids backbone, tetrahydrofuran is of particular interest for investigating radiation damage in biomolecular systems. The measurements on this species were carried out using the atomic and molecular trap-based positron beamline at The Australian National University with an energy resolution of  $\sim 60$  meV. Total cross sections and integral cross sections for the positronium formation, elastic and inelastic (direct ionization and electronic excitation) scattering channels are presented over the energy range of 1-190 eV. Low-energy elastic differential cross sections are also presented at selected energies between 1 eV and 25 eV. A fairly good agreement is found with the total cross section results from the only existing previous experimental investigation on this target species by the Trento group.

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