

Abstract Submitted
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Modelling Positron Transport in Biological Media – Towards a Positron Dosimetry¹ Z. PETROVIC, Institute of Physics, Belgrade, Serbia, G. GARCIA, CSIC, Madrid, Spain, R. WHITE, CAMS, James Cook University, Australia, M. BRUNGER, CAMS, Flinders University, Australia, J. SULLIVAN, S. BUCKMAN, CAMS, Australian National University — We have a combined program of measurement, analysis and modeling for positron interactions with biologically relevant molecules. The measurement involves direct determination of positron scattering cross sections including, most importantly, positronium formation, which are then combined into a set of cross sections and, together with energy loss spectra, serve as the input to a number of modeling approaches. These include both Monte Carlo and Boltzmann approaches and, ultimately, they aim to model interactions in liquid systems in order to best approximate tissue equivalents. Results for the archetypical system, water, will be presented as well as preliminary studies on other biologically relevant molecules.

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