Ps-Ps scattering via the correlated Gaussian hyperspherical method[1] KEVIN DAILY, Purdue University, JAVIER VON STECHER, University of Colorado, CHRIS GREENE, Purdue University — There is renewed interest in systems of electrons and positrons since it may be possible to create a Bose-Einstein condensate of spin-triplet positronium atoms [P. M. Platzman and A. P. Mills, Jr., Phys. Rev. B **49**, 454 (1994)]. We study the four-body system consisting of two positrons and two electrons. Using a basis of correlated Gaussians at fixed hyperradius, we utilize a new technique [K. M. Daily and C. H. Greene, Phys. Rev. A **89**, 012503 (2014)] to efficiently calculate the adiabatic potentials and non-adiabatic couplings as a function of the hyperradius. The R-matrix is propagated to large hyperradius and scattering properties are derived.

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Date submitted: 31 Jan 2014   Electronic form version 1.4