Abstract Submitted
for the DAMOP16 Meeting of
The American Physical Society

Towards the full quantum description of low-energy reactive collisions of O^- with H_2 KAREL HOUFEK, MARTIN CIZEK, Charles Univ — In this contribution we present preliminary results for reactive collisions of O^- anions with hydrogen molecules at low energies. The three lowest potential energy surfaces for the anion are calculated for large number of geometries where the electron is bound. The conical intersections of these three states are located together with the intersections with the potential energy surface of the neutral molecule. In the autodetachment region where electron can escape leaving the neutral molecule behind we performed the fixed-nuclei electron scattering calculations using the UK R-matrix codes to obtain input data for construction of the nonlocal resonance model for full quantum description of nuclear dynamics. Classical trajectory calculations of the dynamics are also presented.

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Date submitted: 29 Jan 2016 Electronic form version 1.4