

Abstract Submitted
for the DAMOP10 Meeting of
The American Physical Society

Cold three-body collisions of H with alkali atoms¹ YUJUN WANG,
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B.D. ESRY, Department of Physics, Kansas State University — We have studied
three-body collisions involving some commonly used alkali atoms. In particular, for
spin-polarized H+H+Li, H+H+Na, H+H+K, H+H+Rb, and H+H+Cs systems, we
have calculated the three-body recombination rates, elastic atom-diatom cross sec-
tions, and three-body bound state energies. We solved the three-body Schrödinger
equation in the hyperspherical adiabatic representation using realistic two-body po-
tentials to build the three-body interactions. The calculations cover energies up to
0.5 Kelvin and partial wave contributions up to $J=5$.

¹Supported by the National Science Foundation and Air Force Office of Scientific
Research.

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Date submitted: 22 Jan 2010

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