

Abstract Submitted
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Dipolar OH dynamics in a magnetic trap and electric field¹ GOULVEN QUÉMÉNER, Laboratoire Aimé Cotton, CNRS, Orsay (FRANCE), JOHN BOHN, JILA, University of Colorado, Boulder (USA) — Recently, evaporative cooling of OH radicals have been achieved in a magnetic trap [1]. To understand the dynamics of the gas of molecules inside the trap as it cools down, and/or to understand the loss of molecules when an additional external electric field is turned on, we have to perform a full dynamics calculation using Monte Carlo simulation types. Before this step, we need to know in which directions the molecules are scattered after a collision. For this purpose we will present a calculation of the elastic and inelastic differential cross sections of OH + OH collisions at low and ultralow energies, for different configurations of electric and magnetic fields, and if time, include them in a Monte Carlo simulation to describe the overall dynamics.

[1] Benjamin K. Stuhl, Matthew T. Hummon, Mark Yeo, Goulven Quéméner, John L. Bohn, Jun Ye, *Nature* **492**, 396 (2012).

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