Dipolar OH dynamics in a magnetic trap and electric field[1] GOUL-
VEN QUÉMÉNER, Laboratoire Aimé Cotton, CNRS, Orsay (FRANCE), JOHN
BOHN, JILA, University of Colorado, Boulder (USA) — Recently, evaporative cool-
ing 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 under-
stand 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 ener-
gies, 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).

Goulven Quéméner
Laboratoire Aimé Cotton, CNRS, Orsay (FRANCE)