Abstract Submitted
for the 4CF15 Meeting of
The American Physical Society

What is solvation: How many waters does it take to dissociate an acid? JOE YOUSSEF, SCOTT SAYRES, Arizona State University — Strong acids dissociate completely in liquid water. However, the situation is very different when only a few water molecules are present, such as in gas phase or atmospheric conditions. I will present an update on our progress in exploring how electron dynamics in small clusters depend on the addition or subtraction of a single water molecule. Water molecules are introduced into a vacuum chamber through a home-built supersonic expansion nozzle and passed through a skimmer to prepare a molecular beam. This cluster distribution enters into the extraction region of our newly constructed Wiley-McLaren type time-of-flight mass spectrometer where it encounters an ultrafast laser pulse that serves as the ionization source for characterization. This undergraduate research project explores how the water cluster distribution changes with the addition of various acids

Scott Sayres
Arizona State University

Date submitted: 15 Sep 2015 Electronic form version 1.4