

## Third workshop on Air-Ice Chemical Interactions (AICI)



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### **On or in? Where does atmospheric ice chemistry occur?**

*Tuesday, 7 June 2011 09:20 (30 minutes)*

Chemical reactions of importance to the atmosphere are generally assumed to take place at the air-ice interface, where a combination of atmospheric deposition and solute exclusion are thought to give rise to high reagent concentrations. Using glancing-angle fluorescence and Raman spectroscopies we have made direct measurements of photochemical and bimolecular kinetics at this interface, and compared the results with those obtained using more traditional techniques. We find that the ice and liquid water surfaces show very different reactive natures. The liquid surface and bulk kinetics are consistent with bulk ice results and the ice surface typically different by up to an order of magnitude. As well, we have shown that solute exclusion to the air-ice interface is neither complete, nor always well predicted by the relevant phase diagram.

#### **Please list some keywords**

chemical kinetics, heterogeneous chemistry, ice surface, photochemistry

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