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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Coastal measurements of short-lived reactive iodocarbons and bromocarbons at Roscoff, Brittany during the RHaMBLe campaign" *by* C. E. Jones et al.

Anonymous Referee #2

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This manuscript describes atmospheric concentrations of a suite of iodinated and brominated volatile organic compounds at a coastal site. The data show how the atmospheric concentrations of these compounds vary with tidal height, seaweed distributions and site topography. A comparison with simulatneous measurements suggests that the major source of I atoms to the atmosphere was I2 and not the reactive iodocarbons.

This manuscript is well written and reports interesting results that will be of interest to both atmospheric chemists and marine biogeochemists studying iodine cycling between the oceans and the atmosphere. I could find no typographical errors and thought

that the data are well-presented. Overall I could find little wrong with the manuscript but do have a few comments that I think need to be addressed before it is accepted for publication. These are detailed below:

1) The samples for seawater analysis were stored at 3oC before analysis. As purge-efficiencies are temperature dependent I would like to know if this was accounted for in the calibrations and, if so, how ? I find it difficult to believe that sparge efficiencies for compounds such as CHBr3 and CH2I2 were > 95 % at a flow rate of 50 ml/min unless they were purged for a long period of time.It would be helpful if the authors could provide information on the purge duration. For example, at such a low temperature the purge efficiency for CH2I2 would only be 30-40 % at this flow rate and a 20 min purge duration.

2) Although the seawater samples were filtered before storage - the 0.45 um filter used would not remove all of the bacteria. Can the authors comment on how the concentrations may have changed during storage ? Were any storage tests carried out ?

3) The authors measure CH2I2 and CH2BrI in the air samples during the day-time at low tide (Figure 4). It would be interesting if the authors could calculate what the required flux rates are to mainatin these concentrations given the rapid photolysis of these compounds in the atmosphere. Are these fluxes realistic in terms of observed emission rates from seaweeds ?

Interactive comment on Atmos. Chem. Phys. Discuss., 9, 17125, 2009.