

Interactive comment on “Modeling the possible role of iodine oxides in atmospheric new particle formation” by S. Pechtl et al.

Anonymous Referee #2

Received and published: 12 December 2005

Modelling the possible role of iodine oxides in atmospheric new particle formation:

1. This is a nice detailed study into iodine oxide nucleation over the ocean. I just have a few general comments for the authors to address.
2. the model seems to not include coagulation – the authors should provide a better estimate if the potential error due to this omission.
3. There is considerable evidence that the shape of the iodine oxide particles are fractal – what impact has this one the modelling simulations.
4. From various modelling study analysis of the Mace Head nucleation events, the

S4414

Full Screen / Esc

Print Version

Interactive Discussion

Discussion Paper

EGU

source rate of the condensable vapour/s was of the order of 5×10^7 /cc/s whereas in this study the model simulations use a source rate about 1 order of magnitude lower. What is the surface flux of I₂ and iodocarbons and give the short life of these species compared to DMS what is the volumetric flux gradient. In other words, is the flux used an average flux per cc per second throughout the boundary layer or is there a higher flux (per volume) nearer the surface. I would expect the latter given the short life of I₂.

5. How do the nucleation rates compare to previous studies? They look somewhat smaller than previous estimates.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 9907, 2005.

[Full Screen / Esc](#)[Print Version](#)[Interactive Discussion](#)[Discussion Paper](#)