**Atmospheric
Chemistry
and Physics
Discussions**

Interactive comment on "Photoinduced oxidation of sea salt halides by aromatic ketones: a source of halogenated radicals" *by* A. Jammoul et al.

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Referee 4:

We thank the reviewer for the comments and suggestions. We took all comments into consideration and give below our corrections and/or answers to them.

1) This sentence will be rephrased as:

Such a complex chemical mixture is naturally reactive with a variety of functional groups, such as carbonyl and carboxylic acids [Sempere and Kawamura, 2003]

2) This sentence will be rephrased as:

Different halogen atom sources have been suggested, involving heterogeneous chemistry of NOy or O3 on sea-salt aerosols, in sunlit snowpack, or the photolysis of halogenated organics. The photochemical reactions of ozone at the air-sea interface may also be a significant source of molecular chlorine

3) Page 7686 line 10: The unit will be corrected..

4) Page 7687: we added a new reference which includes the spectrum and the total irradiance of our UV-A lamps. The spectrum is shown in the figure below.

Spectral irradiance of the UV-A lamps used in the flow tube experiments tube. The total irradiance in the 300-420 nm range is 1.8′1015 photons cm-2 s-1.

5) Page 7686, line6: the measurements used for the halogen atoms detection in the present study is an indirect method, for this reason we replaced "crude" by "indirect".

6) The following sentence will be added in section 3.2:

It must be underlined that no transient species were observed in the absence of the photosensitizer.

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Interactive comment on Atmos. Chem. Phys. Discuss., 9, 7681, 2009.
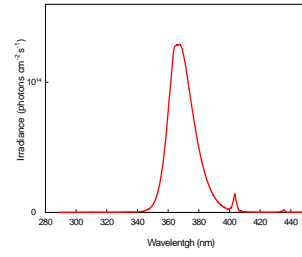
Spectral irradiance of the UV–A lamps used in the flow tube experiments tube. The total irradiance in the 300-420 nm range is 1.8×10^{15} photons cm^{-2} s^{-1}.

Fig. 1.

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