

Interactive comment on “Iodine-mediated coastal particle formation: an overview of the Reactive Halogens in the Marine Boundary Layer (RHaMBLe) Roscoff coastal study” by G. McFiggans et al.

Anonymous Referee #1

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This manuscript presents an overview of the instrumentation and observations made during the 2006 Rhamble field campaign along the northern coast of France as part of a special issue to be published in ACP. The focus of the campaign was the measurement and interpretation of a number of trace species, iodine oxides, and new particle formation analogous to activities performed in the past at Mace Head station. Many, but not all, of the individual instruments in this campaign have been previously field tested and described in detail in the literature.

The paper is well organized and written but is extremely long. I found the paper to

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contain too much detail relating to the individual measurements without providing a coherent synthesis of the results from the campaign. The paper would be more useful to the atmospheric community if it would just provide a roadmap to the individual measurements and focused on synthesizing the results from the campaign. The manuscript is publishable in its present form but I recommend the authors consider some revision to the manuscript to improve the focus on the critical elements of the campaign leaving the details to the individual papers to the other articles in the special issue.

The three primary objectives of the campaign are outlined on page 26428. The explanation of the objectives for this campaign is not very compelling for such a major campaign. It reads as if the campaign was based on curiosity rather than scientific objectives. I am sure this was not the case and highly recommend re-writing this paragraph. A clearer picture of the campaign objectives will also help formulate the conclusions drawn from this study.

The overall length of the paper could be shortened by not providing as much detail on the individual components of the project. Many of the individual studies have already had papers published describing the details of the apparatus and therefore don't require repeating. I presume the other papers in the special issue will also provide details about their work.

Minor details: Page 26423, Line 2: delete “that were” Page 26423, Line 4: Add the dates of the campaign here. Page 26423, Line 12: What does “apparent” particle emission fluxes mean? Also, I don't think the particles are emitted but rather are formed in the atmosphere. Page 26423, Line 17-19: The qualitative statements such as “probably” and “reasonable” need to be better quantified. Page 26423, Line 24: Is it correct to refer to “aerosol particles” or is this redundant? Page 26428, Line 25: What does “area of hard-standing” mean? Page 26428-9: Give the dates of the campaign as well as the location. Page numbers for citations are given in reference list and should be deleted.