Review of Wan et al.:

The paper presents a thorough report on the observation of a new group of aerosol organic species in coastal new iodine particles. Further effort is directed towards identifying the nature of such organic compounds, and their different contribution to size-resolved aerosol samples. The paper is very detailed and very well written, although some language editing may be beneficial. This paper fits well within the scope of ACP. I would like to congratulate the authors for this novel iodine research and I recommend publication after the comments below are addressed:

- The authors argue the source of the reported organics is likely the same as for iodine emissions (i.e. algae exposed to the atmosphere at low tide). However, they should elaborate more about this since the results shown in the paper are not clear on this regard. For instance, do they see similar levels of OC at high tide when no iodine emissions occur?; have the authors conducted air mass back trajectories to track the origin and exposure levels of the samples air masses?; is there any anthropogenic influence on the levels of OC measured in iodine particles?. Overall, the paper would benefit from a some more detailed discussion on the possible sources of OC and the potential anthropogenic influence. This is important to be able to extrapolate their results to other iodine-rich coastal locations.
- At low tide, the instrument is between 40 and 200 m from the coastal line and the emission area. Can the authors comment on the effect of this distance on their measurements?, can they see gradual differences in aerosols composition as the water recedes?
- Line 49, beginning of paragraph. It would be useful for the reader to clarify that organic iodine is not the main source of the iodine oxide precursors that lead to the formation of I-NPF. This was shown in the past for coastal regions:

  A. Saiz-Lopez and J. M. C. Plane, Novel iodine chemistry in the marine boundary layer. *Geophys. Res. Lett.* **31**, L04112 (2004).

  and for opean ocean conditions:

  A. S. Mahajan *et al.*, Measurement and modelling of tropospheric reactive halogen species over the tropical Atlantic Ocean. *Atmos. Chem. Phys.* **10**, 4611-4624 (2010).

  A. S. Mahajan et al., Latitudinal distribution of reactive iodine in the Eastern Pacific and its link to open ocean sources, *Atmospheric Chemistry and Physics*, **12**, 11609-11617 (2012).

- Final comment. I would suggest to add a sentence to the Conclusions about the potential relevance of extrapolating the results of this location to other coastal locations, based on the questions above.