Review of "Quality control of automated hyperspectral remote sensing measurements from a seaborne platform", by S.P. Garaba and co-authors (ms # osd-8-613)

General appraisal

The paper by Garaba and co-authors presents a set of underway measurements of radiometric quantities from an unmanned platform equipped with radiometers. These radiometers are installed at the bow of a research vessel and they measure the sky radiance, the radiance reflected by the sea surface plus the water-leaving contribution, and the downward irradiance above the surface. This is the usual setup to determine the water-leaving radiance, L_w, from above-water measurements. The goal of the study is to evaluate how sunglint contaminated measurements can be detected and eliminated (because they are inappropriate for a proper derivation of L_w). A new flag is proposed for that purpose.

There are several issues with this work:

1) The problem of contamination by sun glint is totally mixed with the issue of non-zero water-leaving signal in the near infrared. Therefore, I don't see any way to confirm that data of good quality are used in this analysis (contrary to what is said page 623).
2) There is no objective qualification of the quality of this flag. The fact that sunglint contaminated measurements are identified does not mean that the rest of the data set is of good quality. The conclusion that good measurements can be taken for any azimuth angle is actually not supported at all (and it is in strong contradiction with admitted protocols. Why not, but this should be supported by a much stronger evidence).
3) Overall the writing is approximate (language and manuscript organization). It is difficult to extract important information from the reading.

I don't think the material presented in this manuscript is good enough for a publication in OSD. This is, at least for the moment and with the information provided, rather like a technical note. Objectives should be reformulated and the method qualified in a more objective way (for instance through comparison with independent estimates of the water-leaving radiance).

A few detailed comments

- The use of "mask" as a verb is possible but I'm not sure it is really appropriate here.
- Page 614, lines 5-20: it is confusing to merge here the sunglint issue and the black pixel assumption. These two issues should be considered separately.
- Page 614, line 7: "suggest" is not the right term here. Sunglint <u>is</u> caused by reflection at the surface.
- Page 616, line 3: "compliment" should be "complement"
- Table 2: The sign in the equation for Flag 2 should be "<" instead of ">"
- Fig. 3 and elsewhere: replace "with no sunglint" by "without sunglint"
- Figs 5 and 6: "normLw" on vertical axes should be replaced by "Normalized Lw" (same for "normRrs")
- All figures but figure 7 (and images) could be white and black.

Recommendation

Based on the above comments, I recommend rejection.