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Interactive comment on “Meteosat SEVIRI Fire Radiative Power (FRP) products from the Land Surface Analysis Satellite Applications Facility (LSA SAF) – Part 1: Algorithms, product contents and analysis” by M. J. Wooster et al.

Anonymous Referee #2

Received and published: 10 September 2015

In this manuscript the authors describe a refined active fire detection and characterization algorithm applied to MSG SEVIRI data. The study is scientifically robust and adds to the existing literature; the authors conveyed the information clearly and thoroughly. My only criticism involves the length of the manuscript, which is excessive. In particular, Section 8 may be better suited as part of an online document (e.g., Algorithm Theoretical Basis Document) in which data access links and file format/content could be regularly updated. Similarly, Section 9.1 provides little useful information without any reference data to confirm the additional detections generated by the FRP

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algorithm (and specially in light of the companion paper addressing the algorithm validation and product inter-comparison analyses). By making the manuscript shorter the authors will likely improve the readers' experience. This recommendation involves cosmetic changes to the manuscript which I thereby leave at the authors discretion. Some specific comments are listed below:

Some acronyms lack proper description. See for example line 79, line 103, among others.

Line 85: replace "plaid" with "played"

Line 156: I believe you meant to say "Earth images"?

Lines 183-185: If HRV data are not used I suggest you delete this statement.

Lines 185-194: I suggest you shorten this passage eliminating information that may be easily found elsewhere (online, previous publications). Specifically, information on the scanning cycle and on data reception/distribution systems may be irrelevant to most readers.

Line 248: delete duplicate "in" in the sentence.

Line 299: Do you meant to say Figure 5b?

Line 333: Despite being informative, I believe Fig 7 may be deleted without prejudice to the discussion. It may suffice to use words to describe the situation (as you already did).

Equation 7: The use of "P = " appears unnecessary

Line 399: Use of "true fire pixel" can be misleading - the resulting fire classification is still subject to false alarms. Please consider using a different terminology (same for lines 473 and 493)

Line 463: Please verify signal - also make sure this is consistent with the definition of

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day/night listed in line 348

Line 533: replace "lhs" with "left hand side". Same for line 545 (rhs = right hand side)

Line 553: Correct sentence: "... this is not fully appropriate ..."

Line 704: Fix typo: "To quantify this effect..."

Line 711: delete "which"

Line 798: Correct typo: "FRP-GRID"

Line 816: It would be nice to see the adjusted FRP-PIXEL data plotted in Fig 18.

Line 1111: Correct: "the same heights as was seen..."

Tables 2, 3 and 5: Like Section 8, I believe all three tables belong to the product's online documentation/user manual.

Line 1543: Fix typo: "Figure 1". Also, having scale bars and legend (indication of brightness temperature range) would make this figure more informative. Some citations are missing in the caption (lines 1561, 1562, 1564).

Figure 2: The authors should consider deleting this figure to preserve space. This is a generic figure that applies to the whole SEVIRI program - readers should be able to easily find that information in other publications/online material.

Figure 4: Please double check the orientation of the arrows in the diagram. For example, "Background analysis" appears to lead to an end point, whereas "If passed" + "N" seems to lead to an endless loop.

Figure 5a: Please specify what the x/y axes labels describe.

Figure 6: I would encourage the authors to try and combine Fig 5 & 6 into one to conserve space. maybe find an case exemplifying both situations discussed in the text?

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Figure 7: As listed above, I recommend deleting this figure to conserve space. A citation is also missing in the caption (line 1651).

Line 1747: Correct: "are not shown due to ..."

Interactive comment on Atmos. Chem. Phys. Discuss., 15, 15831, 2015.

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