

Interactive comment on “Thermal remote sensing from Airborne Hyperspectral Scanner data in the framework of the SPARC and SEN2FLEX projects: an overview” by J. A. Sobrino et al.

Anonymous Referee #2

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Title: Thermal remote sensing from Airborne Hyperspectral Scanner data in the framework of the SPARC and SEN2FLEX projects: an overview Author(s): J. A. Sobrino et al. MS No.: hess-2009-55 Special Issue: Advances in land surface hydrological processes - field observations, modeling and data assimilation

General comments This is a synthetic review of works previously done on the use of airborne multispectral measurements for the retrieval of land-surface temperature (LST), emissivity (LSE) and daily evaporation (ET). The presentation is dense and well summarized, but obliging the reader to consult the referred articles in order to have

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a deeper and clear comprehension of the problems. The thermal part (LST and LES retrieval) of the paper is clear, however it is true for the part on ET retrieval, which is more in the principal subject of the journal. One can thus regret that this part is too shortened. For example, Eq. 10 is really unclear without a better explanation of the TH and TS terms. I think that the reader should understand the basic of the method without consulting another paper for understanding basic equations. Few sentences added here could improve the understanding of the proposed approach (page 4120, lines 18-20).

Specific remarks - Introduction. It would be relevant to mention the actual and future satellites/missions with multispectral thermal bands such as MODIS (NASA), NPOESS (NOAA-NASA), or Sentinel (ESA). - P 4109 Lines 1-4: Another important applications of the thermal radiometry are climate applications (soil thaw/freeze cycle characterization, drought monitoring...), thermal anomalies (urban heat island) and high temperature events detection (detection of forest fires, coal seam fires, burning oil spills or natural phenomena such as volcanoes...). - P4112 Line 9 : add a reference for TES - I strongly suggest adding a Table for the spectral band description. This will make the reading easier. For example, P4114, Line 15: bands 72, 73, 75... ? - P4116 L 14-16: results are given for which type of surface (and/or for which value of emissivity)? - P4117 and 41118 Config1, 2 and 3: add a reference to the suggested Table for the band identification. - P4119 L16: which Table 6 ? - P4119 L 18-20: see the comment above - P4119 L 23: add the reference to Figure 2 which illustrates the result.

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