Answer to Anonymous Referee 2

The authors would like to thank Anonymous Referee 2 for their general and supportive analysis of the paper, as well as for the detailed comments, which we have taken into account. The reviewer's initial comments are reported in blue, and our answers are written in black.

- line 148: E0 extraterrestrial solar irradiance: which model is used (Thuillier 2003) ?

The EO extraterrestrial solar irradiance is obtained from the 6S model, which uses Neckel and Labs, 1984. We have added the reference line 155 (of the revised version of the manuscript).

- the up/down arrow Tdir(arrow_up or arrow_down) should be a superscript to Tdir (arrow not standing alone) (concerns all equations and in the running text)

The annotations $T_{dir} \downarrow$ and $T_{dir} \uparrow$ have been changed to $T_{dir}^{\downarrow}$ and $T_{dir}^{\uparrow}$ respectively throughout the manuscript.

- line 328: inferior to 2 days better: less than 2 days

Corrected.

- Fig. 4: right side: the Radiance unit W m-1 sr -1 μm-1 $\rightarrow$ W m-2 sr-1 μm-1

Corrected.

Question concerning the visual appearance: the study area is 14 km x 18 km, i.e.46 x 60 pixels, so I would expect more blocky structures. Was a certain histogram-stretch applied to make it look smoother?

We would like to thank the reviewer for this comment as it allowed us to correct a typo in the study area size. The study area size is $\approx 17 \times 20$ km and not $\approx 14 \times 18$ km as stated. This has been corrected in the manuscript. Nevertheless, the image size is similar (58×67 pixels rather than 46×60 pixels). The apparent smoothness of the image in the figure may come from the rendering of the (small) figure in QGIS, as when the image is viewed at 100% it appears more

blocky.

We apologise for this lack of consistency and have modified the unit, that now reads: W m^{-2} sr$^{-1}\mu$ m $^{-1}$.

REFERENCES:
H. Neckel, and D. Labs, The solar radiation between 3300 and 12500, Solar Physics, 90, 205- 258, 1984.