

## ***Interactive comment on “Assessment of Sun photometer Langley calibration at the high-elevation sites Mauna Loa and Izaña” by Carlos Toledano et al.***

**Carlos Toledano et al.**

toledano@goa.uva.es

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Dear editor,

Concerning the editor comment: "You need to strengthen more the "physical processes" part of the paper and make sure that the main overall conclusions are not limited to the accuracy and stability criteria. At this stage this could be achieved with some clear alignment of the focus of the article as this is reflected in the title, the abstract and the last paragraphs of the introduction and summary/conclusion sections. Please be prepared to elaborate further on the factors that affect the Langley plots validity and the estimation of the relevant uncertainties, during the 8 weeks provided for

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the full review. "

We have elaborated the physics behind the Langley plot performance, by including several sentences throughout the text, as well as two paragraphs in sections 4.2 and 4.3 that describe in detail the processes that can change the atmospheric transmission during the Langley plot calibration: aerosols, pressure, ozone, air mass calculation, etc. Several references have been also added to reinforce the analysis.

Please also note that a new author, Alberto Berjón, has been added (it was missing by mistake in the first submission).

Best regards,

Carlos Toledano

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