

Interactive comment on “A large-area blackbody for inflight calibration of an infrared interferometer deployed on board a long-duration balloon for stratospheric research” by Friedhelm Olschewski et al.

Anonymous Referee #2

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The manuscript describes the technical solution for calibrating a balloon-borne Fourier Transform Spectrometer during its mission, including laboratory testing of the calibration hardware and procedure. The manuscript is well written, and the description meets scientific and academic standards, being understandable, repeatable, and with sufficient quantitative detail. I do agree with the very reasonable comments by the anonymous reviewer #1 and by Anne Kleinert. I recommend that the authors implement these in the final version and subsequently, I recommend the manuscript's acceptance.

I urge the authors to make a conscious decision on whether temperatures should be

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given in K, in degrees Celsius, or both. They may consider using K throughout, which would presumably be the most systematic solution. Perhaps it is worthwhile to add the Celsius value in parentheses in certain cases. Celsius (Centigrade) are now used on p. 4 in Table 1, p. 5 line 2 and Table 2, p. 6 Figure 4 a), b) and figure caption, lines 4, 6, and 16, and Figure 7. The use of Celsius instead of K does not seem necessary in any of these cases, except perhaps in Tables 1 and 2, which give manufacturer specifications and may be given to whole Celsius values, but not the apparent 0.01 K precision that might result from calculation. I leave this to the authors to consider, but recommend that the choice is not made “by accident” in each individual case.

p. 2 l. 29/30. Given the field of view of about 4 degrees x 4 degrees, it seems impossible not to include stars, galaxies or other in the “deep space” calibration point, which might degrade the uniformity of the temperature field. Please add a comment of explanation.

typos:

p. 2 l. 14 consider "as an imaging FTS..."

p. 2 l. 16 consider "... the chemistry mode, respectively."

Interactive comment on Atmos. Meas. Tech. Discuss., doi:10.5194/amt-2017-417, 2018.

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