

Interactive comment on “Radiometric calibration of the in-flight blackbody calibration system of the GLORIA interferometer” by C. Monte et al.

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Thank you for your comments, please find below the answer to your questions and planned actions.

Yes in general the target requirements are met. Only the long term stability of some PRTs meet only the minimum requirements. We will add a statement at p 5264, l21 that here the target requirements are met. We will add a statement in the summary that in general the target requirements are met and just in the case for the long term stability of part of the PRTs of one blackbody only the minimum requirements are met. We think an additional table to illustrate this is not necessary.

According to table 4 the largest uncertainty is 107 mK the average value for GBB-C ist
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104 mK. The value in the abstract will be corrected to 110 mK. The difference from the obtained 107 mK or rounded 110 mK to the requested 100 mK is negligible. However the statement in the summary will be modified to: from "...therefore reliably fullfil ..." to "...therefore practically fullfil ..."

This is a worst case assumption if the uncertainties of both blackbodies add equally and have to be added squared. So the 1% has to be divided by $\sqrt{2}$ for an individual BB. We will add a short note describing this.

On page 5257 it is stated that each blackbody has 24 PRTs, 10 in the optical surface which have to be calibrated with respect to radiance temperature and 14 more for additional monitoring purposes.

The examples belong to the last campaign. These measurement were also performed during the earlier campaigns. They are representative because no significant deviation or aging was found when comparing these results with the ones obtained earlier. We will state this in the text.

Because this paper is not a calibration report in our opinion only representative illustrating examples should be shown. This is done here by showing the smallest and larges deviation.

The figures showing the spline interpolated temperature distribution are important because they reveal the pyramid structure of the blackbody, which is not visible when looking at the raw plots. The measurement was performed over an area of 110 by 110 mm and the interpolation was done over the same area. Shown here is an area 80 by 80 mm which slightly largere than the area observed by the GLORIA spectrometer. Hence the "blue corners" or "red corners" in the plot are no interpolation artefacts but show a rising or dropping of the temperatur close to the blackbody walls, these features are also not visible in the other plot.

We will consider the minor issues.

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