

Interactive comment on “Inter-channel uniformity of a microwave sounder in space” by Martin Burgdorf et al.

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This is a reply to the comments of referee Dr. Berg.

Thank you for your instructive and helpful comments on manuscript amt-2017-405

We agree with you that our conclusion that radio frequency interference causes the bias in channel 20 of AMSU-B on NOAA-16 cannot be proven beyond all doubt by means of observations of the Moon alone. We shall try to provide supporting evidence for the RFI hypothesis in the revised version of the manuscript from an investigation of how certain transmitters affect the bias of the instrument in flight, using simultaneous nadir overpasses with other satellites.

We shall also add a subsection that discusses the alternative explanation of the bias,

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which you brought forward in your report, viz emission of the reflector. Our main argument against this possibility is that its impact should largely cancel out in the ratios of the different sounding channels that we considered, but this will be supported by a careful estimate of the impact this effect can have. Anyway we have to acknowledge that the emissive reflector does not affect the Moon intrusions.

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