

Interactive Comment

145 It was with great interest that I read the manuscript amt-2018-252 and
the referee's knowledgeable comments. Radiometric correction of mi-
crowave sounders is certainly an important task. One result presented
by the authors particularly caught my attention, viz. the failure of
the intercalibration coefficients to remove the bias between NOAA-16
150 and -17 for channel 5 after 2006. As I did not find an explanation
for this anomaly in the manuscript, I take the liberty of offering
one myself: radio frequency interference (RFI) in combination with a
strongly decreasing gain (see amt-11-4005- 2018). As RFI has got noth-
ing to do with the scene temperature, it cannot be corrected with the
coefficients calculated by the authors.
155 They list many other possible sources of bias as well, so I suggest to
add a discussion of why a linear function of brightness temperature is
considered sufficient to deal with all of them.

We really appreciate the short comment by the independent reviewer and his interest in the
manuscript. However, it seems that the comment is referring to Figure 6 which includes the uncor-
160 rected data. The intercalibrated data are provided in Figure 7 where the biases are mostly removed.
We still agree that none of the intercalibration techniques can completely remove all of the biases.
Among NOAA satellites, NOAA-15 experienced a significant RFI issue but once the RFI was real-
ized, NOAA developed several tables that can be used to correct the NOAA-15 measurements for the
RFI issue. We have used these tables in our calibration from counts to radiances, yet there is some
165 possibility for the RFI contamination. NOAA-16 and NOAA-17 AMSU-B instruments were prop-
erly shielded to avoid the RFI issues faced by NOAA-15. Thanks to this comment, we have updated
the manuscript to include the corrections we have applied to the data before being inter-calibrated
which includes RFI and Antenna Pattern Corrections.