Atmos. Chem. Phys. Discuss., 5, S231–S232, 2005
www.atmos-chem-phys.org/acpd/5/S231/
European Geosciences Union

Atmospheric Chemistry and Physics Discussions

Interactive comment on "Comparison of microwave satellite humidity data and radiosonde profiles: a survey of European stations" *by* V. O. John and S. A. Buehler

Anonymous Referee #2

Received and published: 23 March 2005

This paper describes an interesting application of using the satellite radiances to validate the radiosonde measurements. This kind of study should be extended to global radiosonde datasets so that a wider range of different airmasses are sampled. If this was done then airmass dependent biases may be seen.

The AMSU-B instrument on NOAA-15 is subject to RFI which results in biases in the measured radiances. The authors do not explain how they corrected for this and I believe they should do as this may explain the reason for the 1K bias seen between the 2 satellites. It is a complex pro-

cess removing the effects of RFI from AMSU-B on NOAA-15. The bias of 1K between satellites is not seen in the global NWP monitoring statistics of UKMO (see http://www.metoffice.com/research/nwp/satellite/radiance/atovs/main.html for plots) which casts doubt on the AMSU-B calibration done for this study.

This study allows an estimate of the error in UTH from radiosonde data to be estimated. The authors should include this in the paper.

Interactive comment on Atmos. Chem. Phys. Discuss., 5, 1529, 2005.