



Validation of AURA/MLS water vapor observations using the University of Colorado Cryogenic Frostpoint Hygrometer (CFH)

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AURA/MLS water vapor observations are compared to balloon borne in situ measurements using the University of Colorado Cryogenic Frostpoint Hygrometer (CFH) at Alajuela and Heredia, Costa Rica; Bandung and Biak, Indonesia; Boulder, Colorado; Hilo, Hawaii; and Sodankylä, Finland. These observations show excellent agreement of MLS and the CFH above the tropopause. At the upper tropospheric levels MLS measures dry compared to the in situ instrument. Cloud influences are likely not an issue, since all satellite profiles were screened for possible cloud contamination. Despite the limited vertical resolution, MLS shows good capabilities for studies of tropical tropopause dehydration processes.