Atmospheric Measurement Techniques Discussions

Interactive comment on "Ground-based remote sensing of thin clouds in the Arctic" by T. J. Garrett and C. Zhao

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The caption of Figure 8 contains an error regarding the bands where the brightness temperature at cloud base is calculated. It should read as follows:

Three steps are used to determine cloud transmittance in a 1038 - 1042 cm^{-1} microwindow. First (top), the brightness temperature T_{cb} at cloud base is calculated on both sides of the ozone band (960-975 cm^{-1} and 1070-1085 cm^{-1}), from which the cloud brightness temperature T_{cb} within the P and R branches of the ozone band is obtained using linear interpolation. Second (middle), the background radiance I_{bkg} from non-ozone sources is calculated from the estimated brightness temperatures. Third (bottom), the transmittance t in the P and R brances of the ozone band is calculated

based on the measured downwelling radiance I_{sky}, corrected for precipitation contributions, from $t = (I_{sky} - I_{bkg})/I_{clear}$, where I_{clear} is the clear sky radiance. Transmittance values within the Q branch between 1040 cm^{-1} and 1048 cm^{-1} are estimated by interpolating from the two regions delimited by dashed lines. The data shown is from measurements at ARM NSA-AAO on July 15, 2000.