Radioactive Transfer Algorithm Validation using NAST-M

Methodology: NAST-M Calibration, Atmospheric Corrections, and Data Co-location

The discrepancies at the warmest Tb is attributed to the difficulty of identifying precipitating pixels from the NAST-M data and simulations that still underestimated the cloud radiance. The RTA parameter values that were selected to ensure the NAST-M data are consistent with the LLGrid system's simulation results are shown in the table below. These values are in agreement with the results obtained by other studies, indicating the reliability of the NAST-M data.

Progress

Progress

Figure C gives an example from one of NAST-M's channels, which represents the progress of the RTA parameter optimization. The histogram curve was used to determine the optimal parameters for each channel. The width of the peak was found to be 1.0 Kelvin.

Recent Campaigns and Results

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The two datasets are co-located by projecting the satellite data onto the NAST-M collection. The overlapping data is then downsampled by applying temporal and spatial requirements. The NAST-M data is then analyzed further to remove gaps and to reassemble the corresponding satellite data.

Acknowledgments

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References

References