



Satellite latent heating retrieval: Where are we?

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A study of the performance of a group of Tropical Rainfall Measuring Mission (TRMM) latent heating retrieval algorithms is nearing completion and is in the early publication stages. The name of the research project under which the study is being conducted is the TRMM Latent Heating Algorithm Intercomparison and Validation Project (TLHA-IVP). The intercomparisons of the algorithms has been carried out at three separate spatiotemporal scales: (1) high - 5 km / instantaneous, (2) medium - 0.5 deg / 2-week, and (3) low - 5 deg / monthly. Five different algorithms were examined, each addressing the retrieval problem along different physical lines of approach. The results suggest that the algorithms are in reasonable agreement with one another at the medium and low scales, with some similarities and at times significant differences at the high scale. It was also possible to compare algorithm performance against diagnostic calculations (radiosonde-based) at the medium scale. These results were mixed, partly because of insufficient sampling by the TRMM satellite. However, when satellite sampling of 6-hour intervals representing the radiosonde sampling period exceeded 50%, the satellite algorithm results were in reasonable agreement with the diagnostic results – recognizing that the diagnostic results themselves contain unknown uncertainties. The most salient results from the TLHA-IVP will be presented at the symposium.