



## **Advancements in Measurement of Precipitation from GEO and LEO Satellites**

Eric A. Smith

NASA/Goddard Space Flight Center, Laboratory for Atmospheres (Code 613.1), Greenbelt,  
MD 20771, USA [301-614-6286 / [eric.a.smith@nasa.gov](mailto:eric.a.smith@nasa.gov)]

Recent advances have made possible, within the next decade, the use of advanced Doppler precipitation radars at K-band frequencies for flight on both GEO and LEO satellite platforms. This talk examines how such radar systems could be used for frequent time sequenced data acquisition of stationary or mobile severe weather systems, particularly tropical cyclones. Applications are discussed of how the radar observations could be used to improve the physical interpretation of development and maintenance of weather systems and how assimilation of both Doppler and reflectivity observations could improve forecasting of weather system track, intensity, and precipitation production.