

INTERIM FINDINGS OF ACTS Ka-Band PROPAGATION CAMPAIGN

Nasser Golshan, Ph.D.
JPL, 4800 Oak Grove Drive M/S 161-260
Pasadena, Ca 91109-8099
Tel; 818-354-0459
FAX; 818-393-4643
E-Mail: Nasser. Golshan@JPL.NASA. Gov

ABSTRACT

The ACTS Propagation campaign has entered the fourth year of Ka-Band data collection at seven sites in North America. The ACTS propagation campaign is focusing on two broad areas: 1) Rain/signal attenuation data collection at seven sites in North America, 2) theoretical and empirical considerations for a global model to predict first & second order temporal and spatial statistics on attenuation, scintillation, coherence bandwidth, and depolarization due to weather (precipitation and atmospheric including interaction of weather with the antenna) for satellite systems at Ka-band, Interim results provide a wealth of information on the long term statistics for designing Ka-Band satellite communications links. Through this effort, NASA is making a major contribution to growth of satcom services by providing timely data and models for performance prediction of Ka-Band satcom systems.