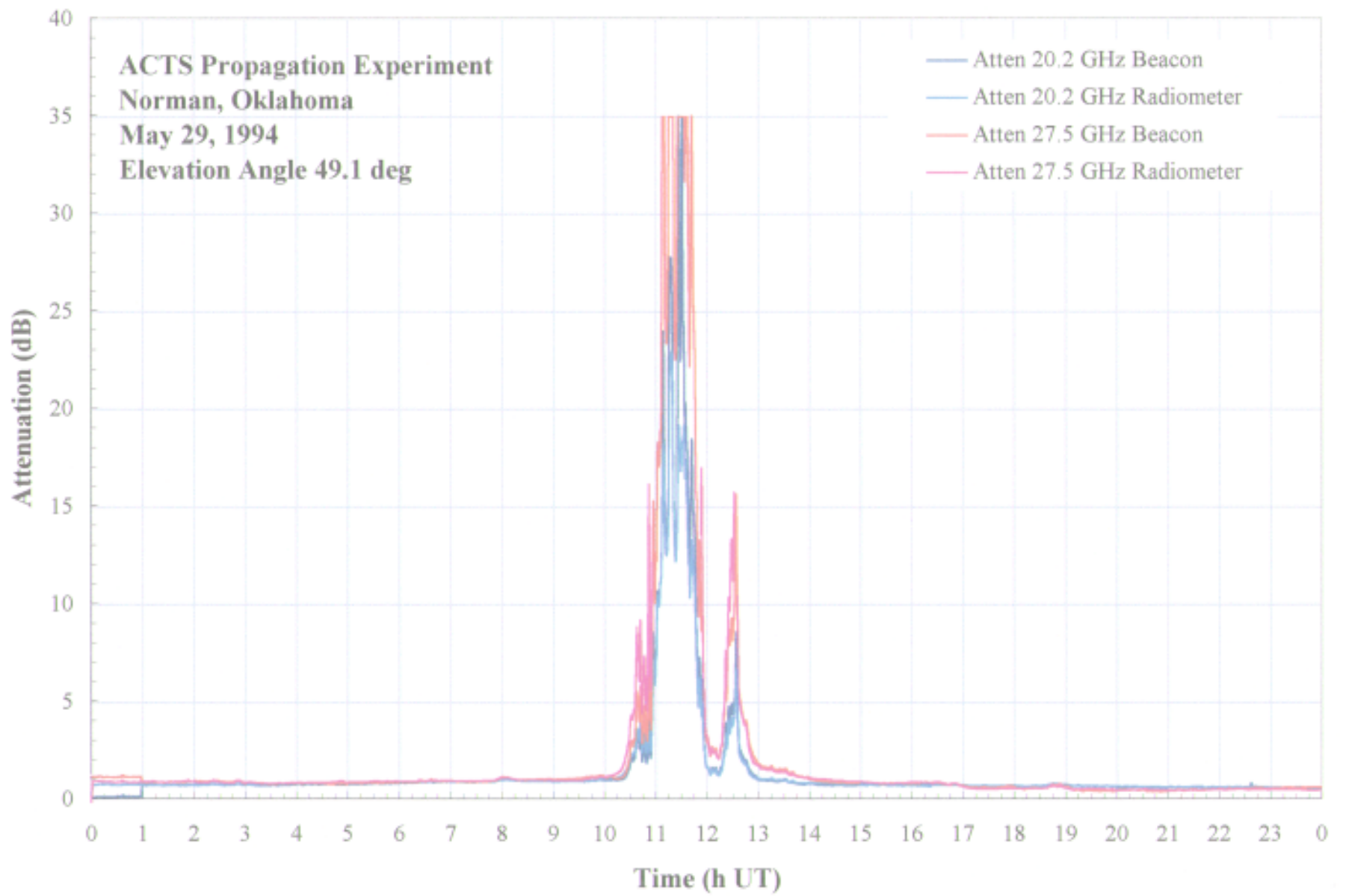
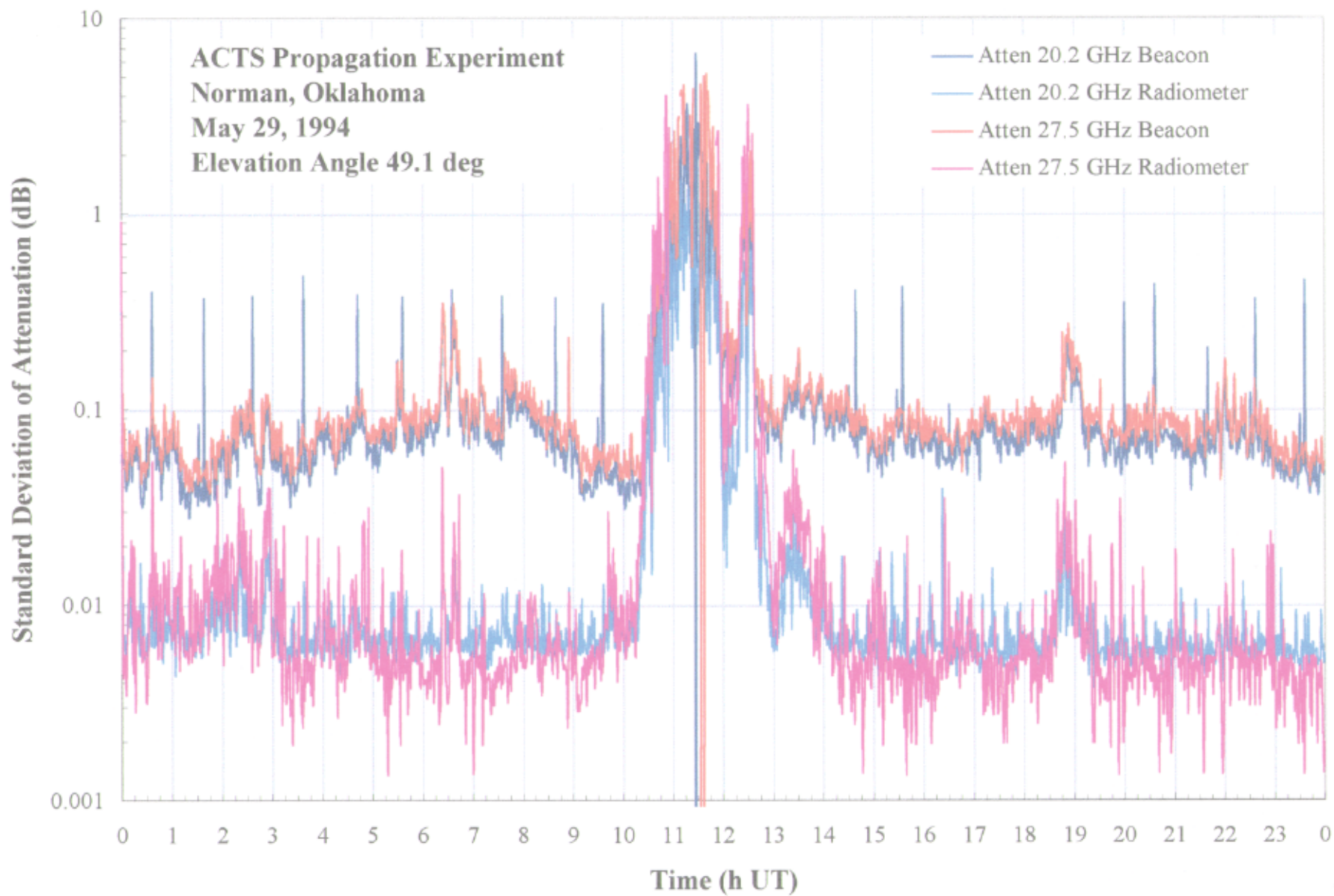
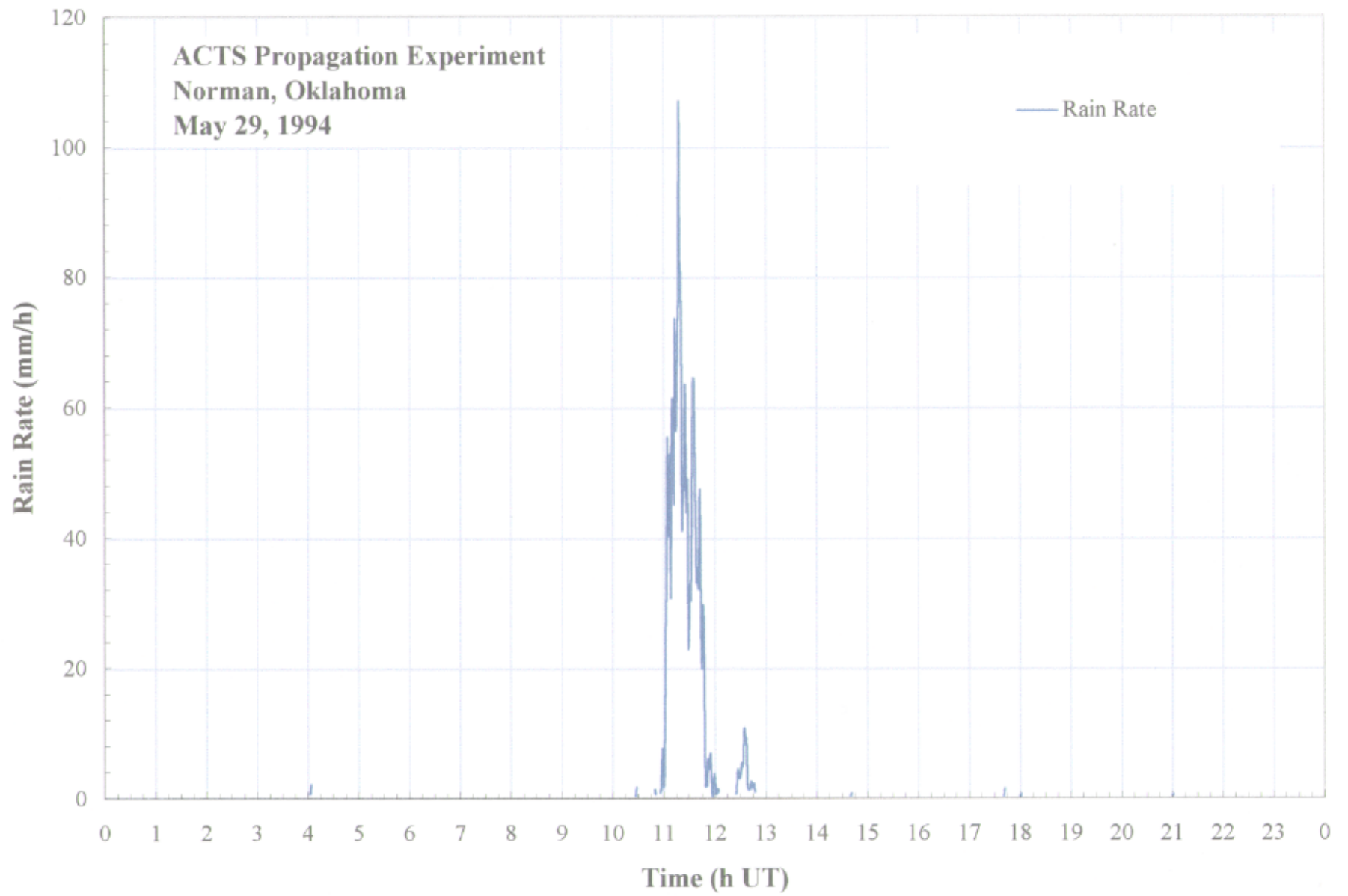


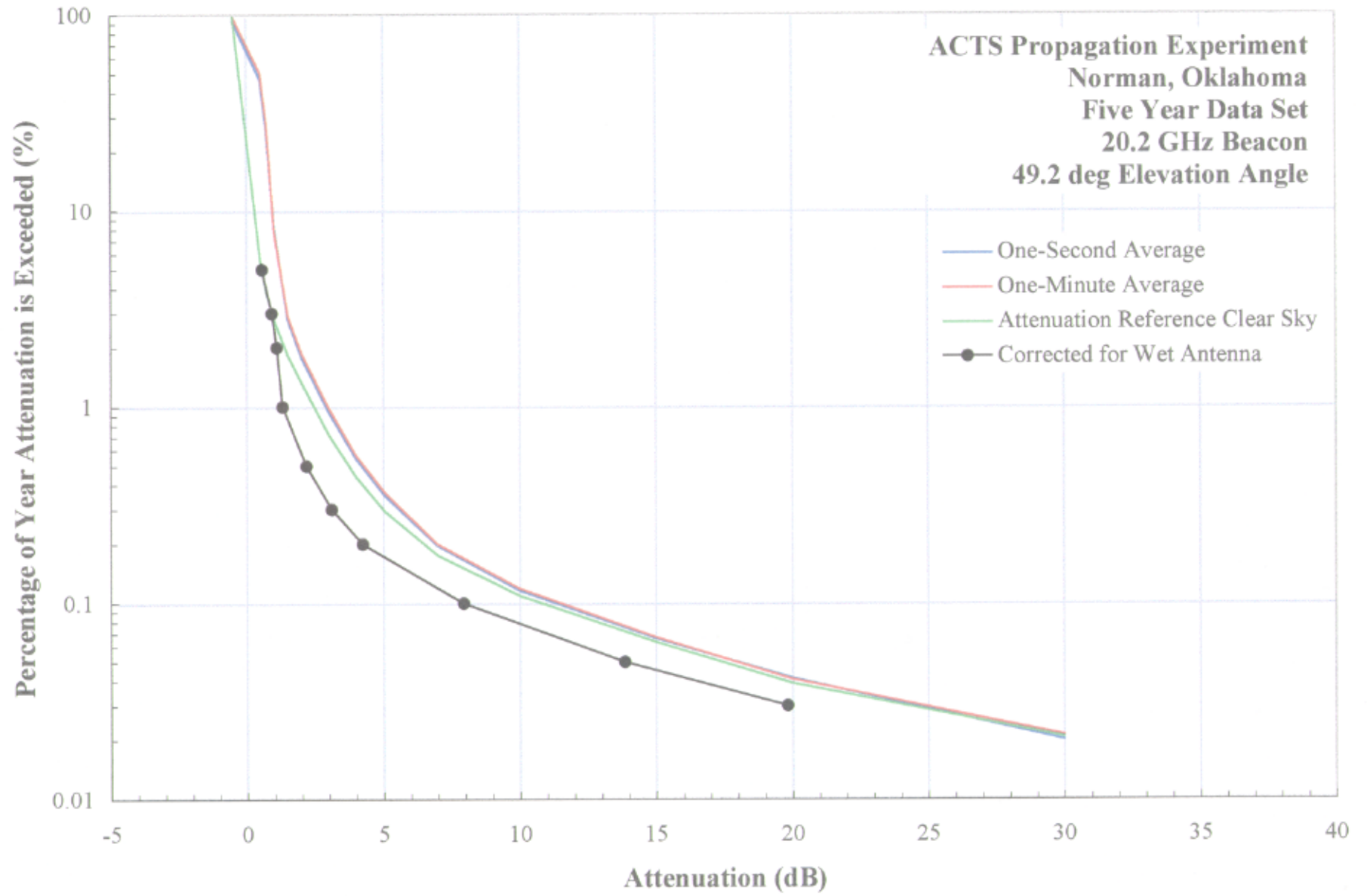
# **Modeling the Effects of Rain at Ka-Band**

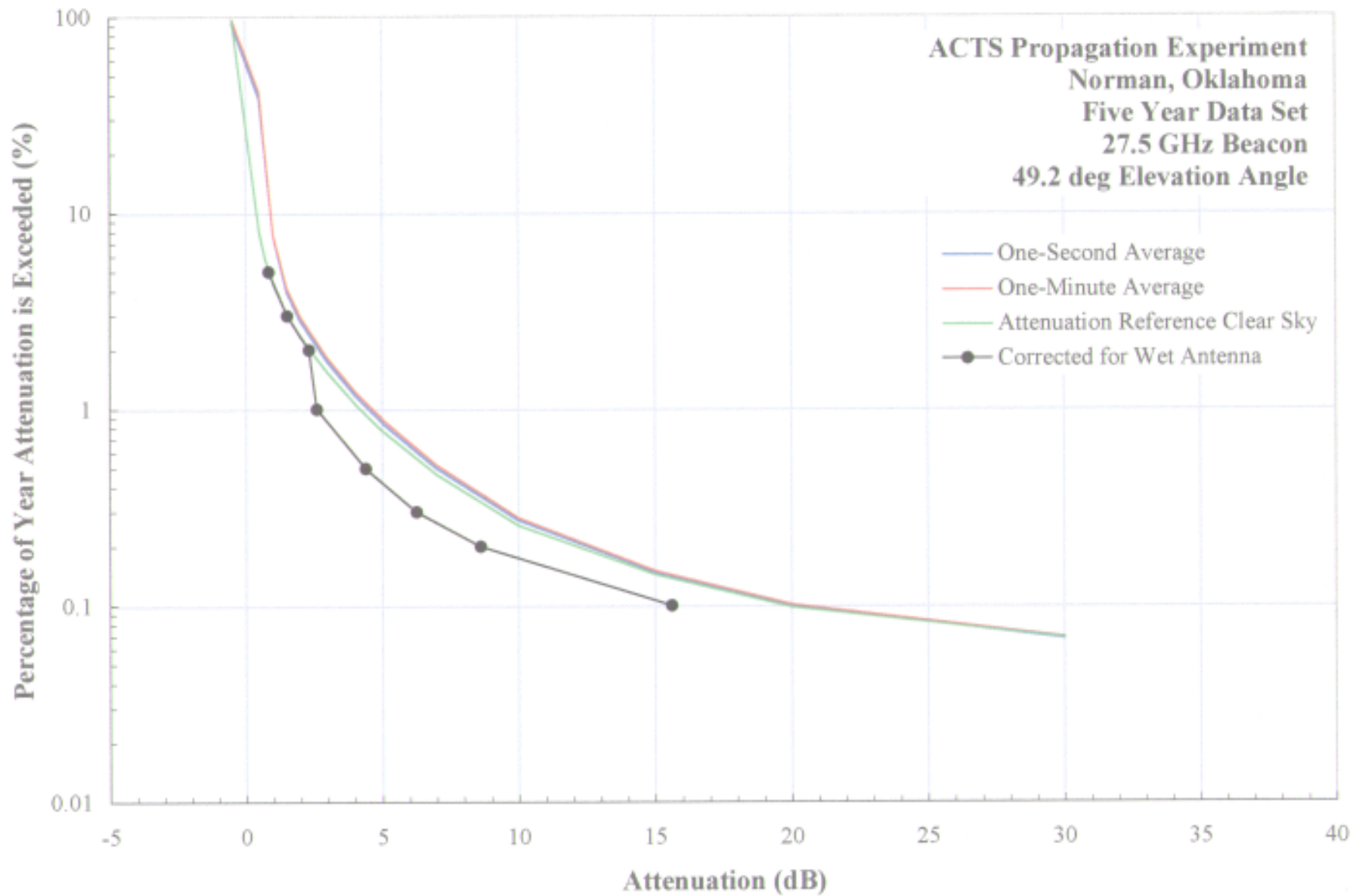
**Robert K. Crane**  
**School of Meteorology**  
**University of Oklahoma**

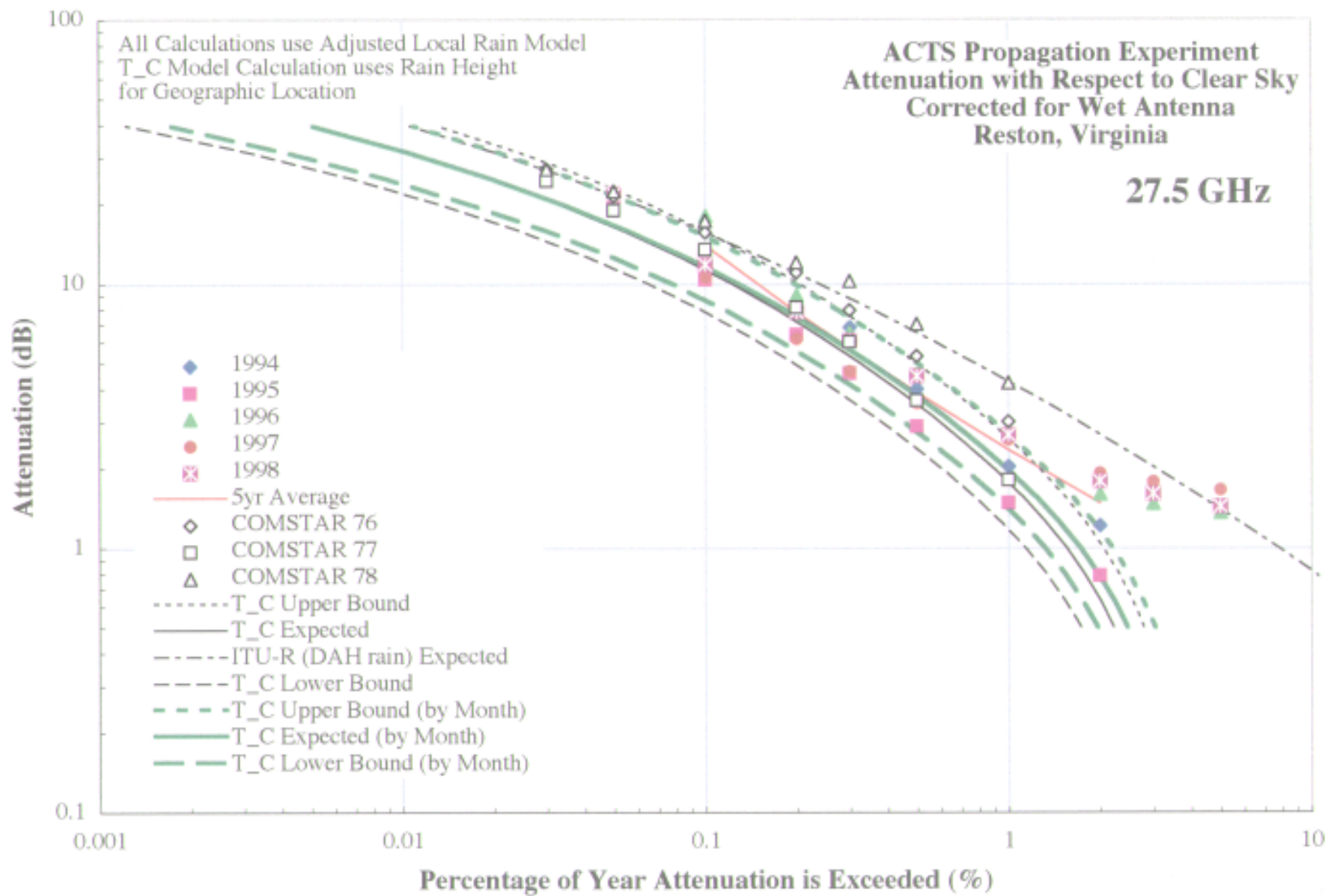


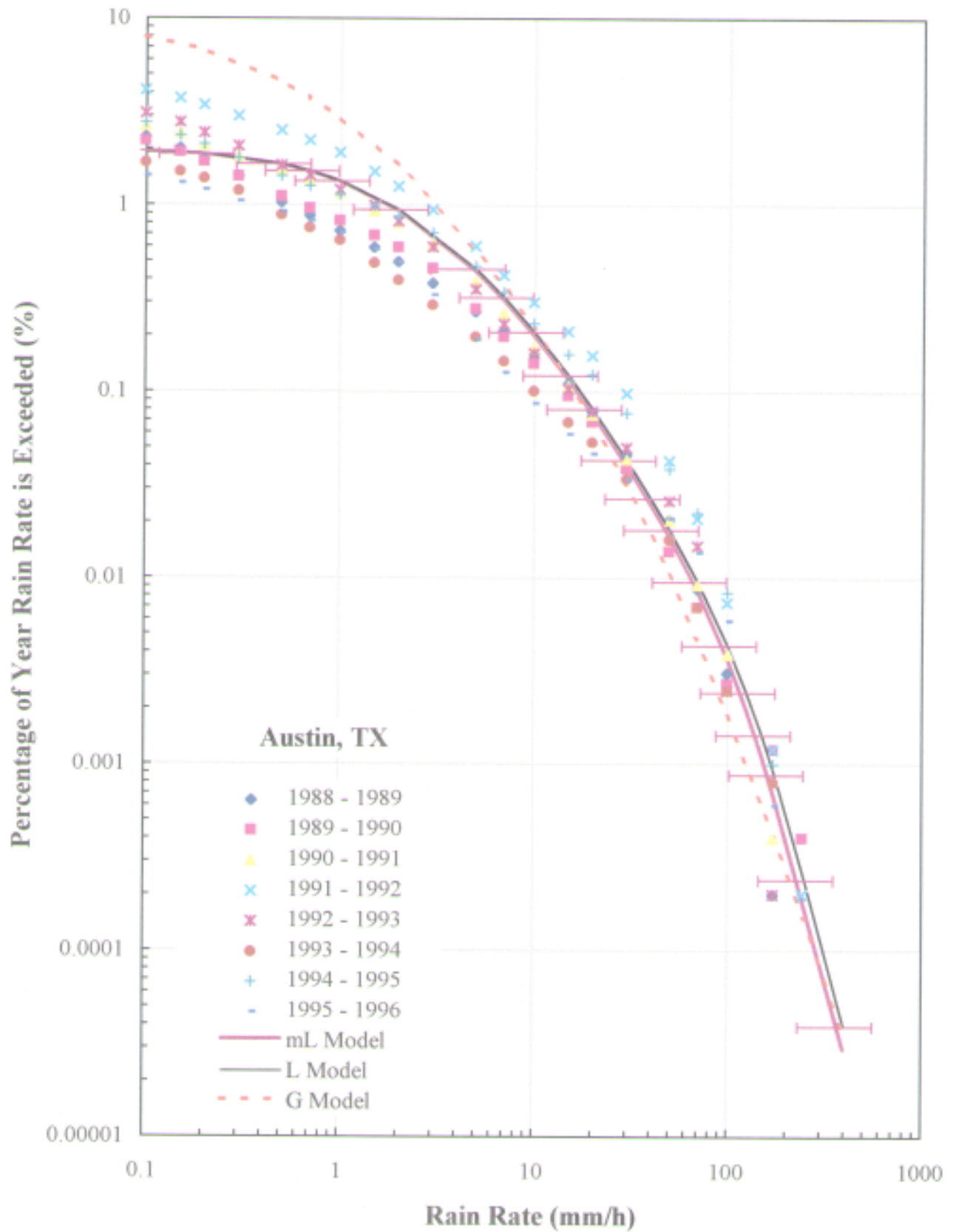




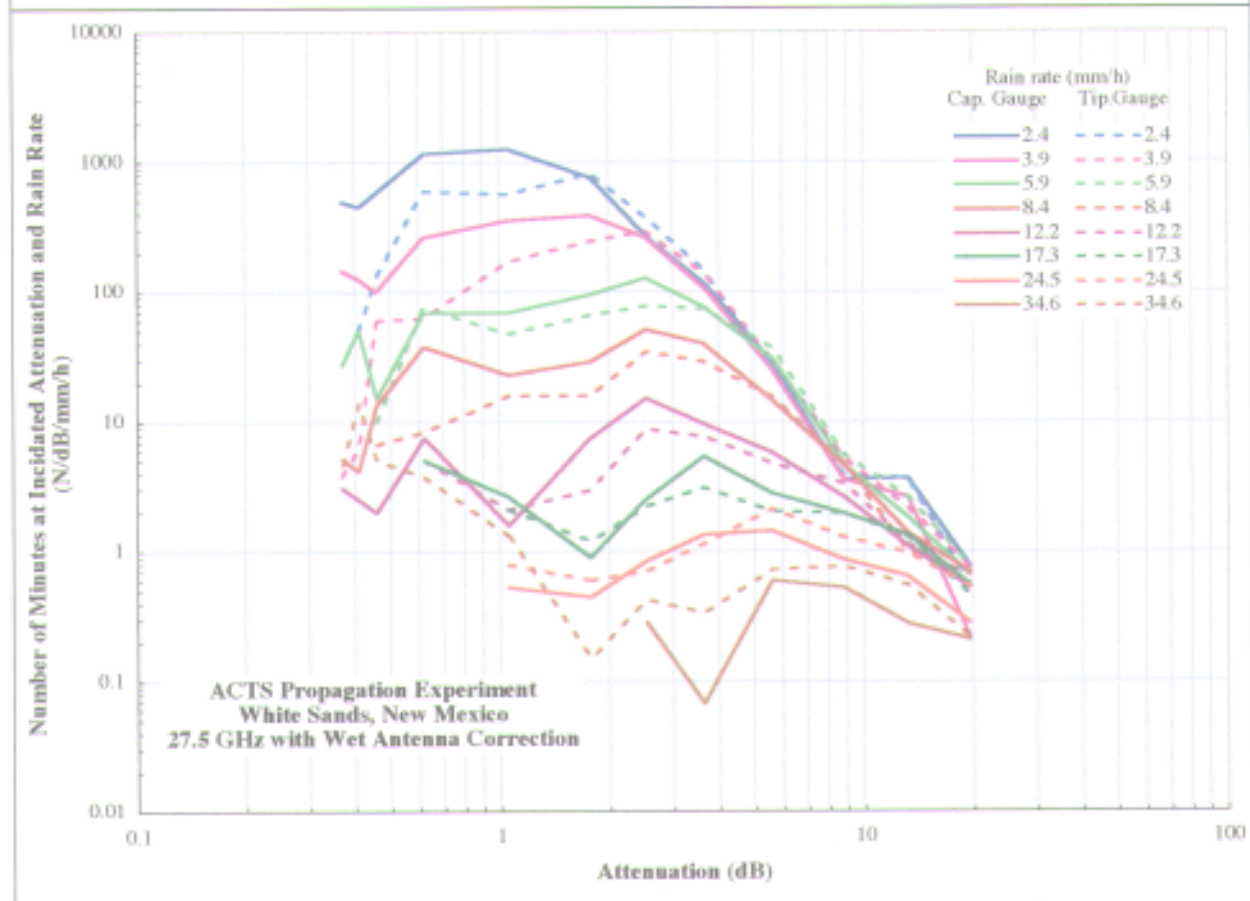
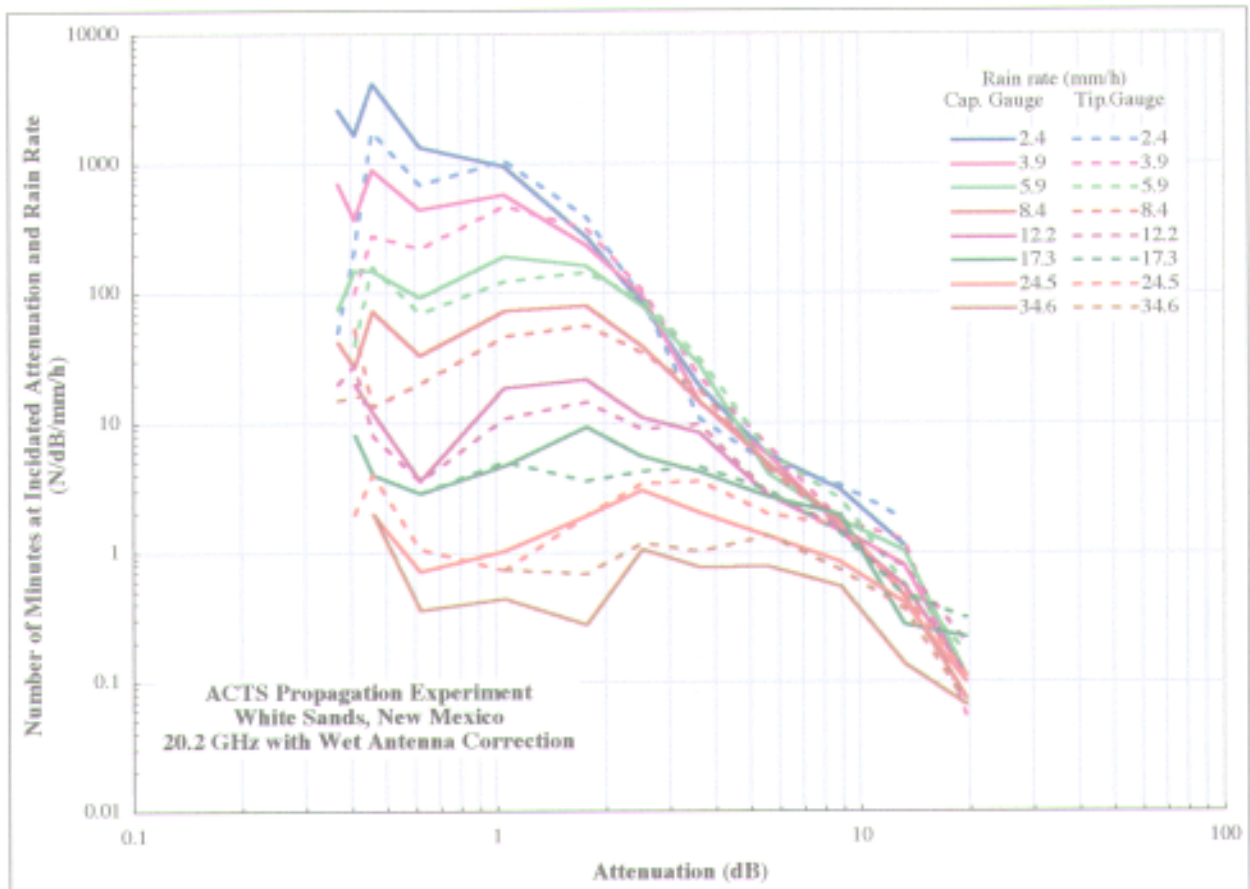






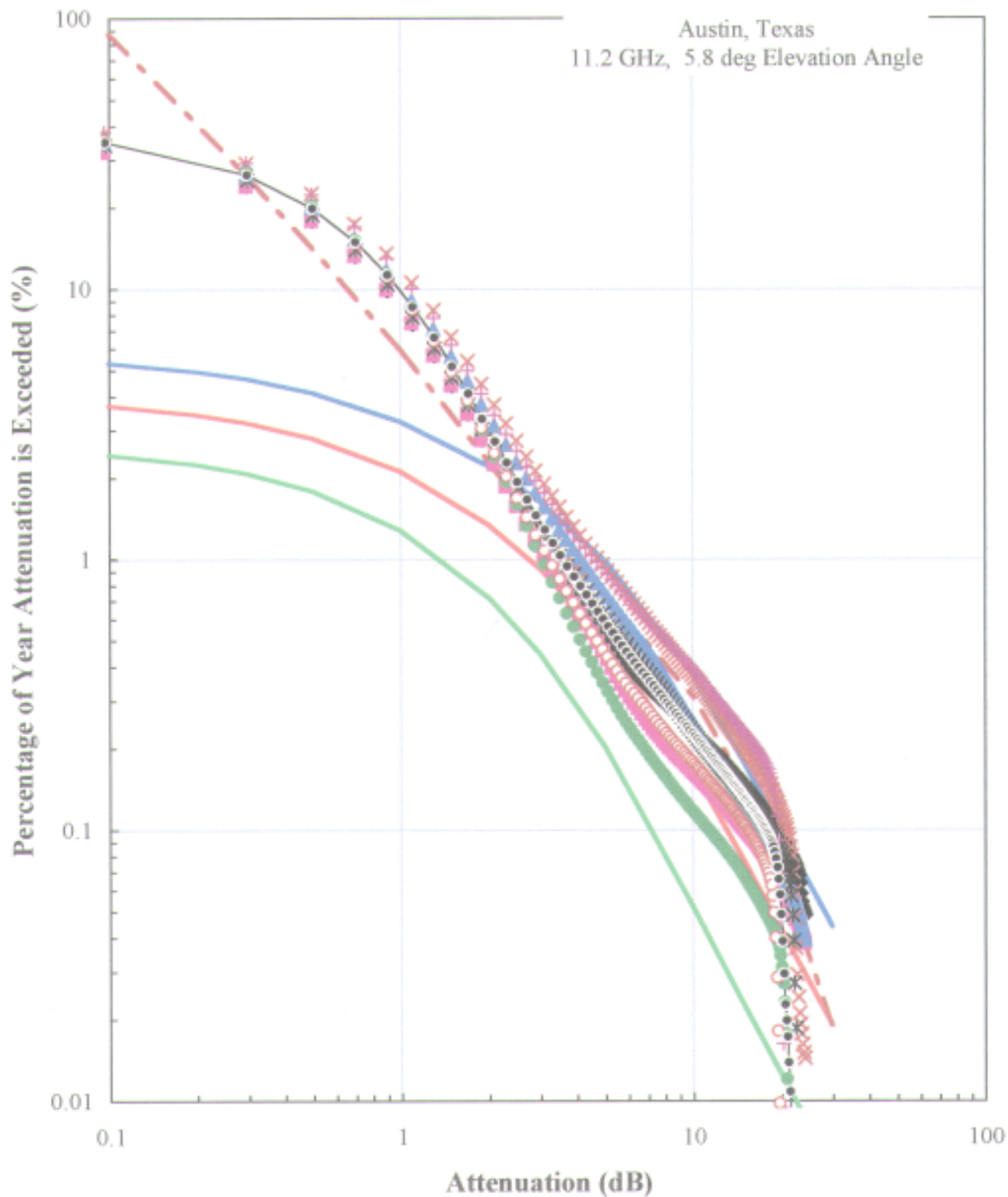




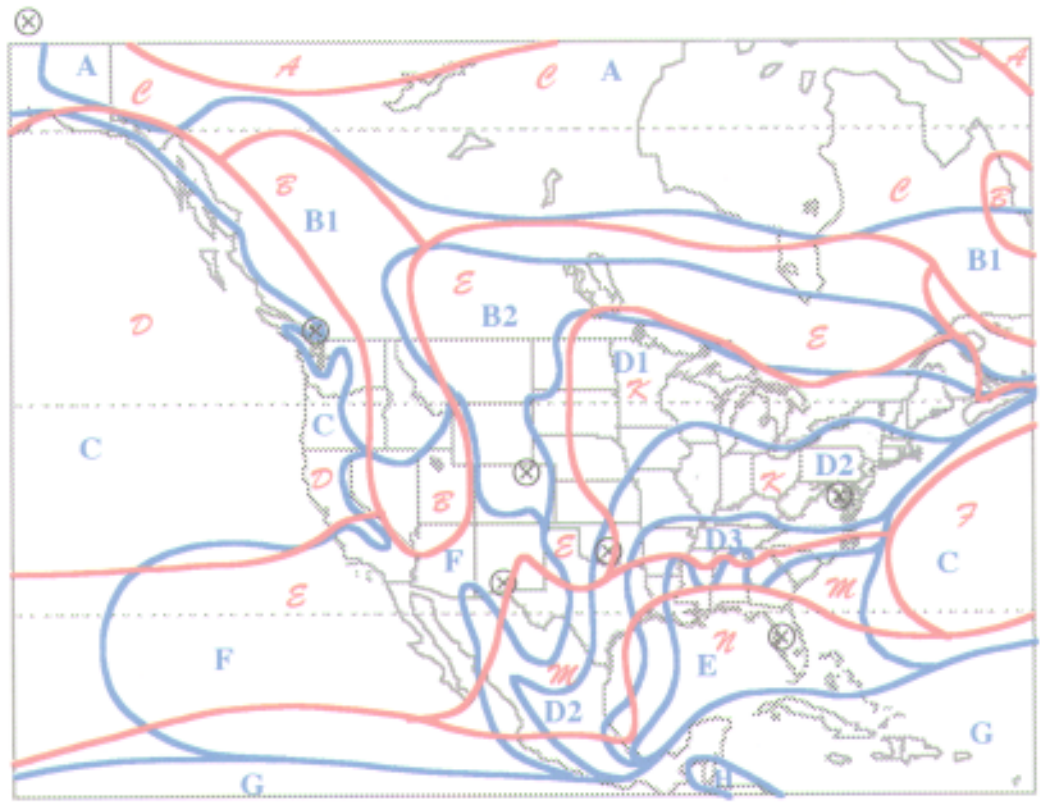


### Annual Attenuation Relative to Clear Sky

- |                  |           |                       |
|------------------|-----------|-----------------------|
| ◆ 88 - 6         | ■ 89 - 6  | ▲ 90 - 6              |
| × 91 - 6         | ✱ 92 - 6  | ● 93 - 6              |
| + 94 - 6         | ○ 95 - 6  | — U Bound             |
| — Model          | — L Bound | - - - ITU-R Rain Only |
| —●— exp(avg(Ln)) |           |                       |



GLOBAL RAIN CLIMATE ZONES — A  
 ITU-R RAIN CLIMATE ZONES — A



⊗ ACTS Propagation Sites

