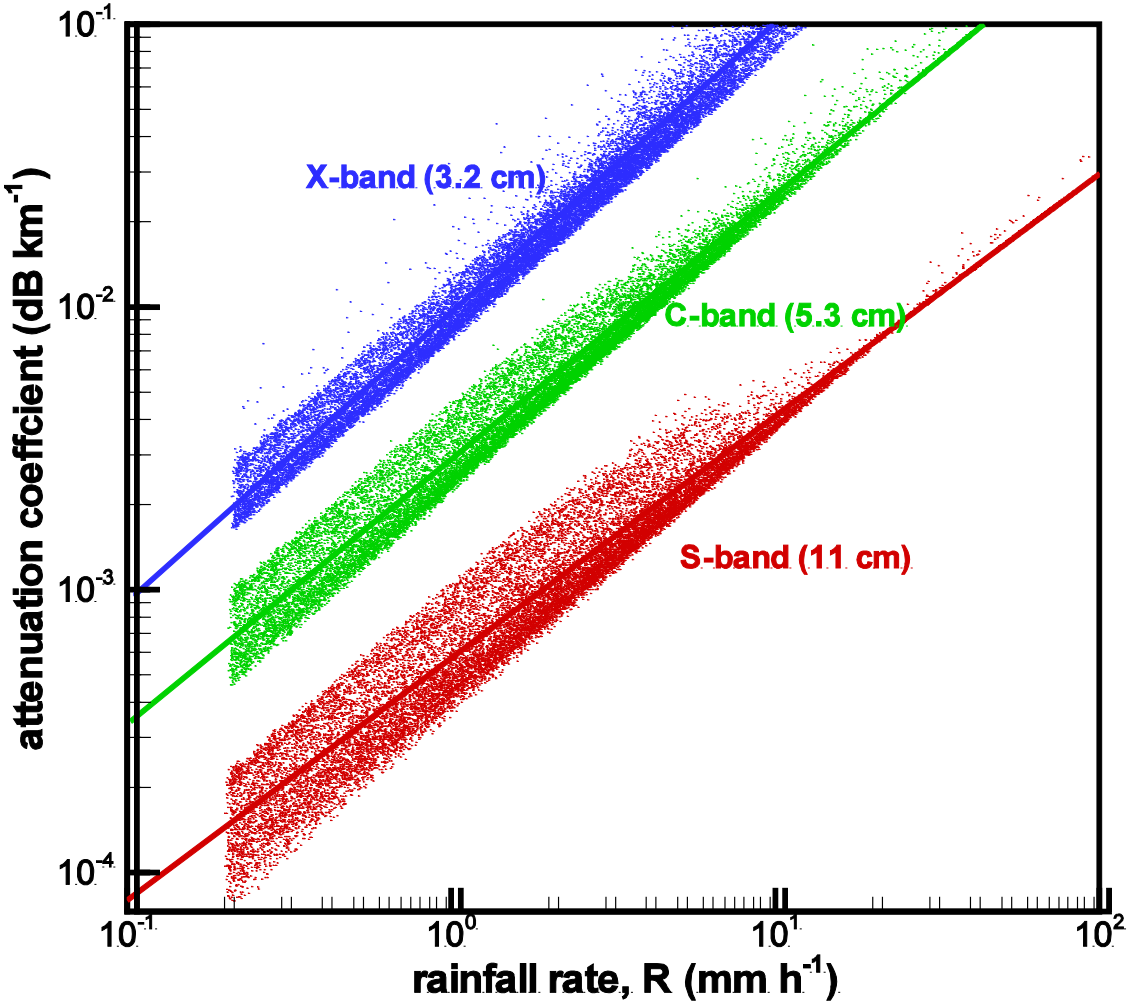
Examples of NOAA X-POL scanning radar measurements

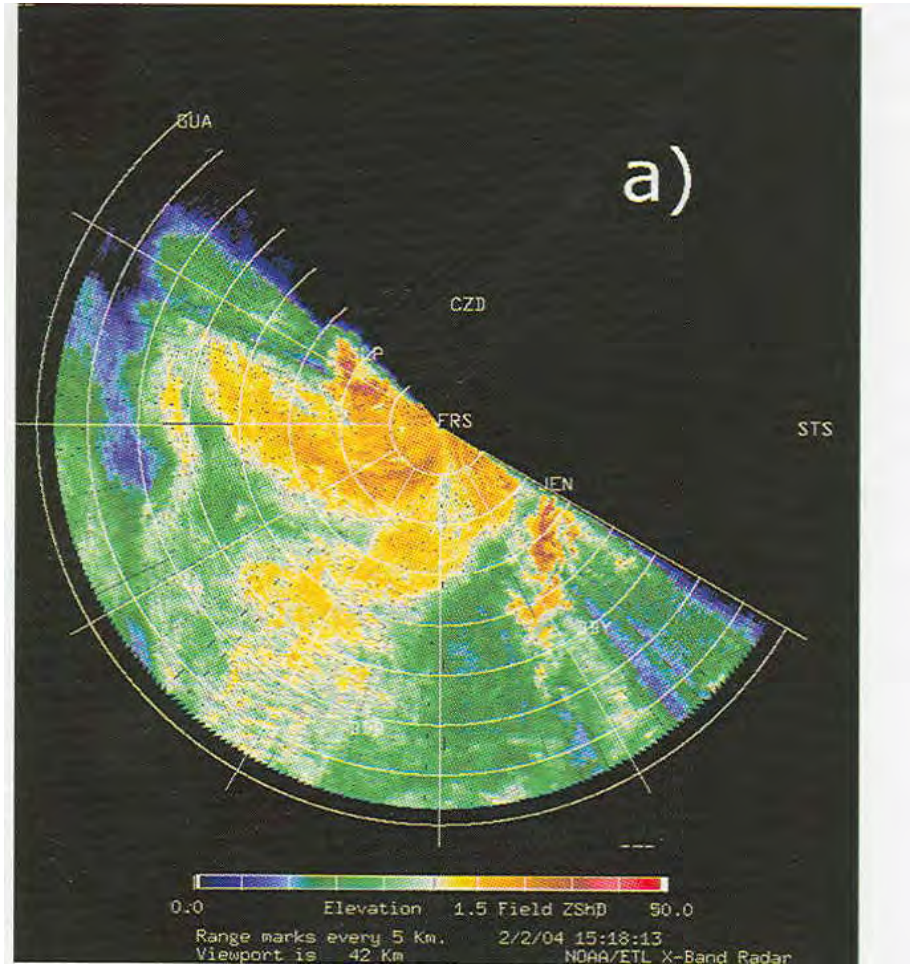
Attenuation is the main problem for X-band radar measurements in rainfall
Polarimetry allows correcting for attenuation effects

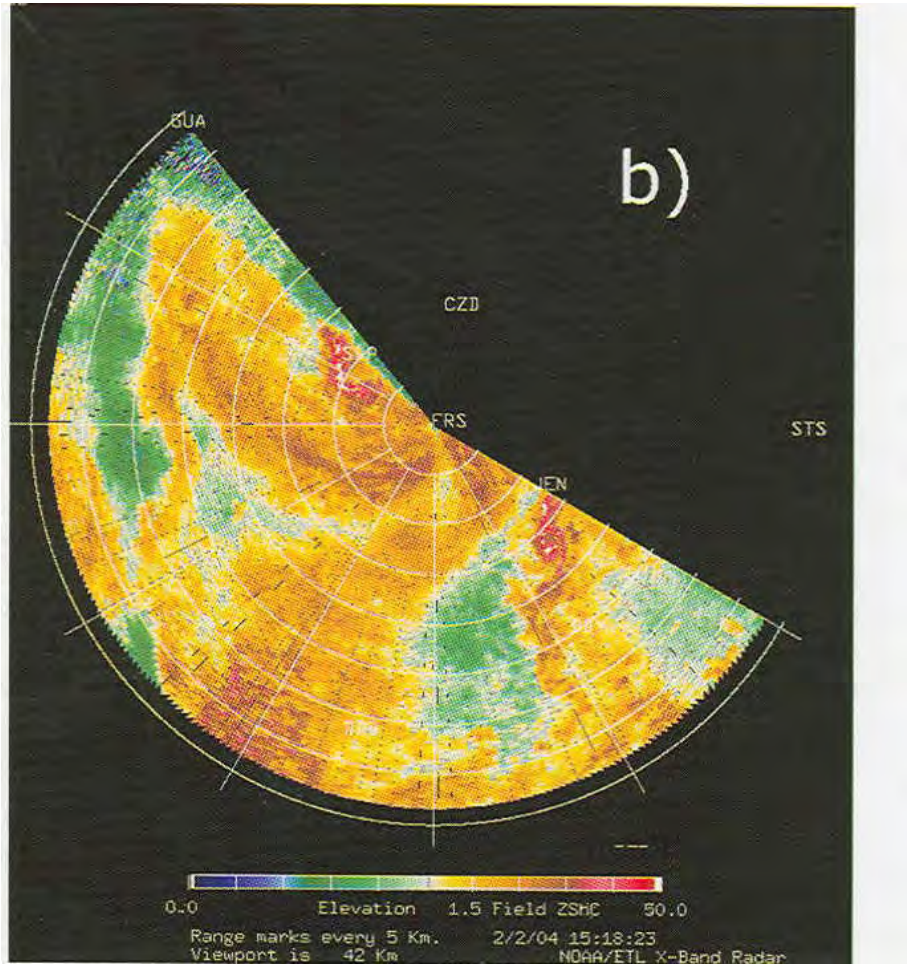


atten.*

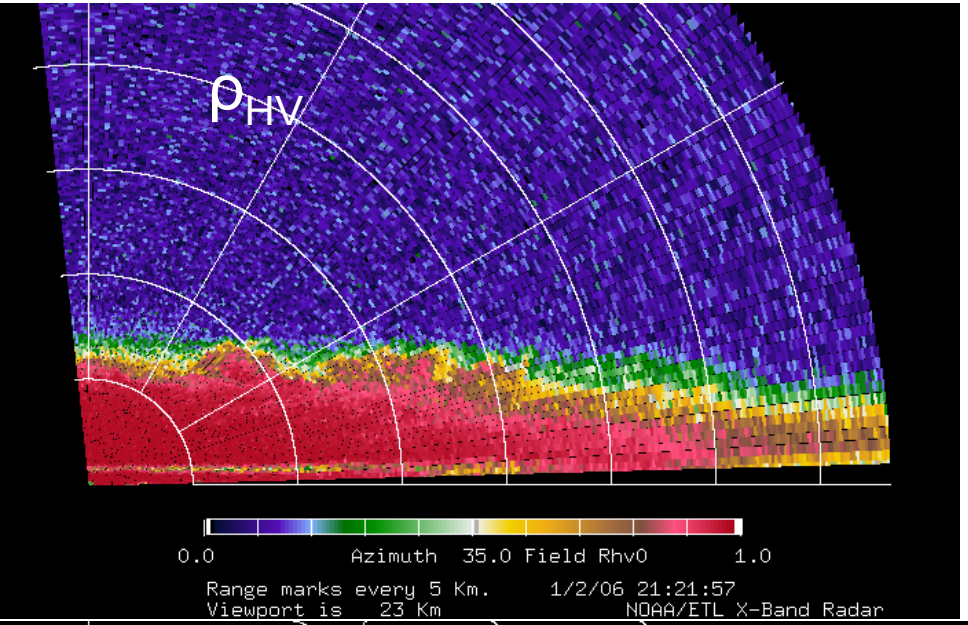
Importance of attenuation correction of X-band radar measurements in rain

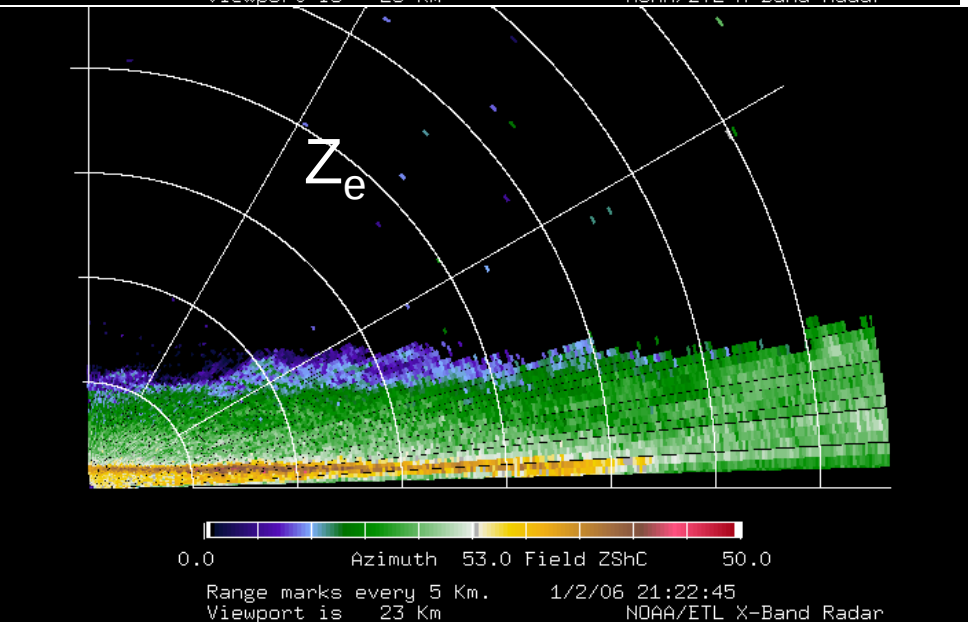
a) observed (i.e., attenuated) X-band radar reflectivity in rain
b) for the same scene attenuation – corrected reflectivity
max range is 40 km in this example

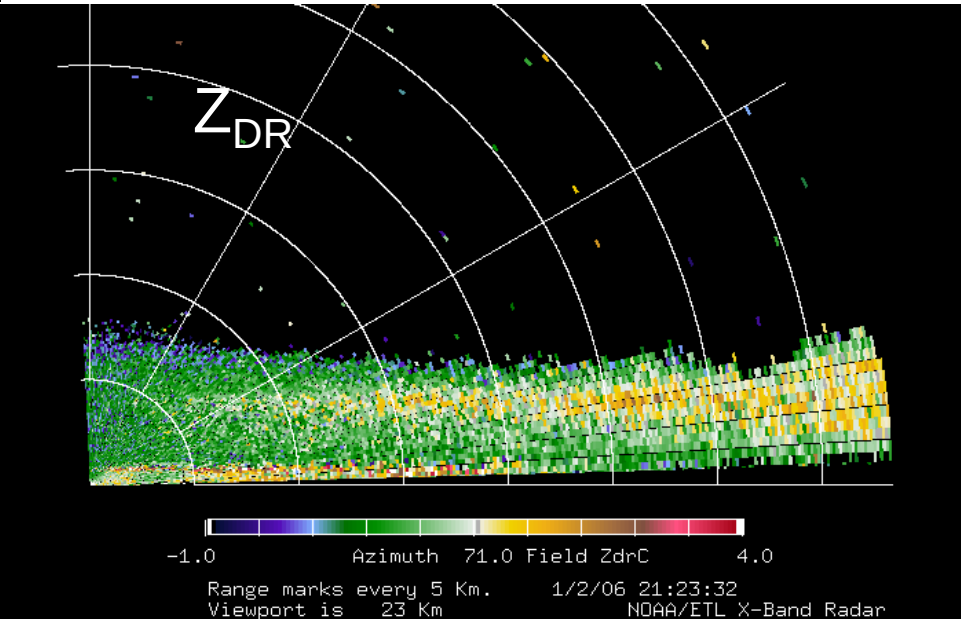




Examples of X-Pol RHIs in precipitation

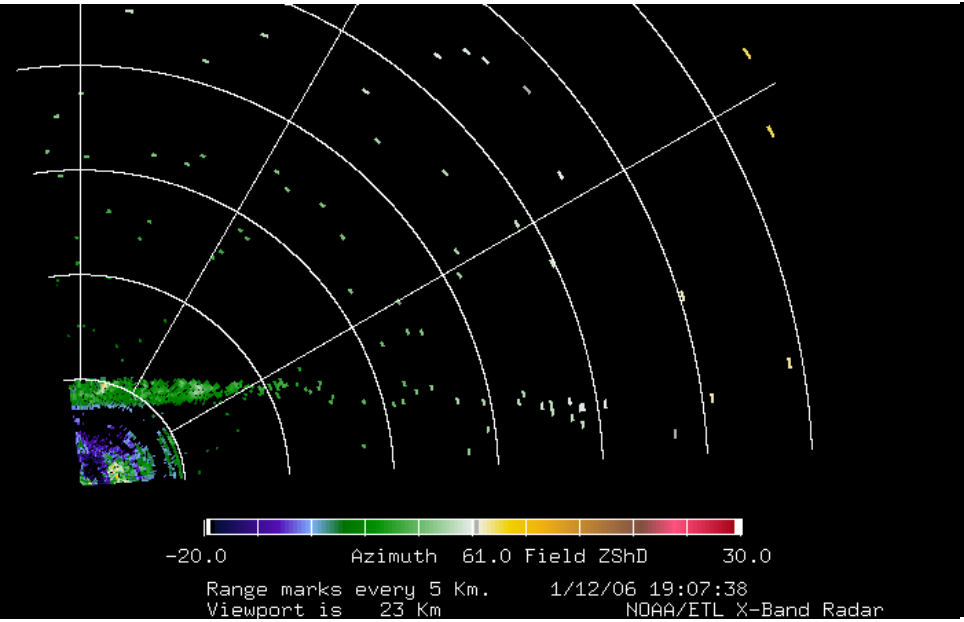




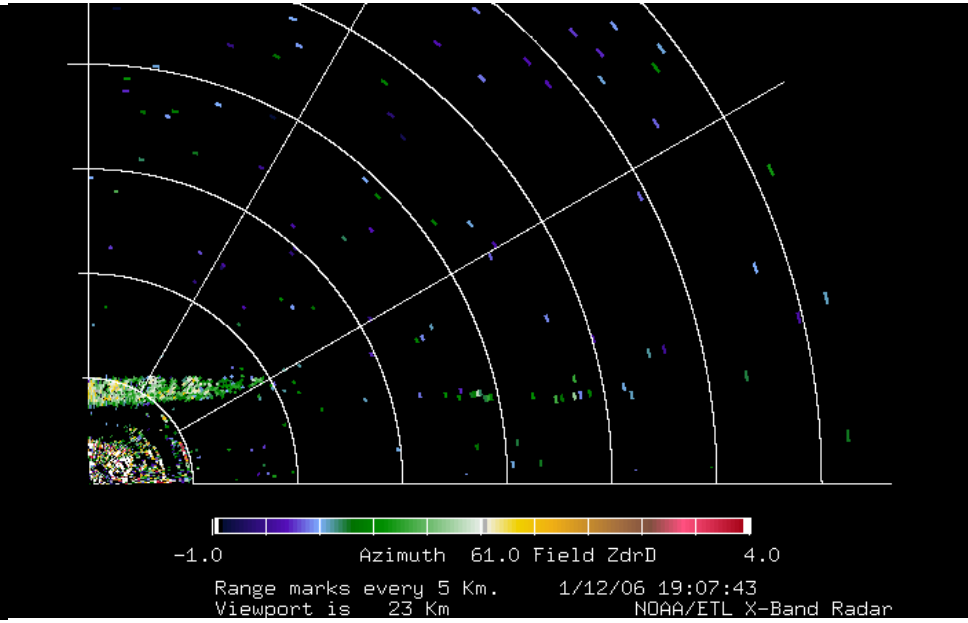


An example of observations of a stratus cloud with X-Pol in RHI scan

Z_e



Z_{DR}



Examples of observations of clouds over precipitation with X-Pol in RHI scan (Z_{DR})