

HAMP cloud radar calibration for the NARVALII/NAWDEX campaigns

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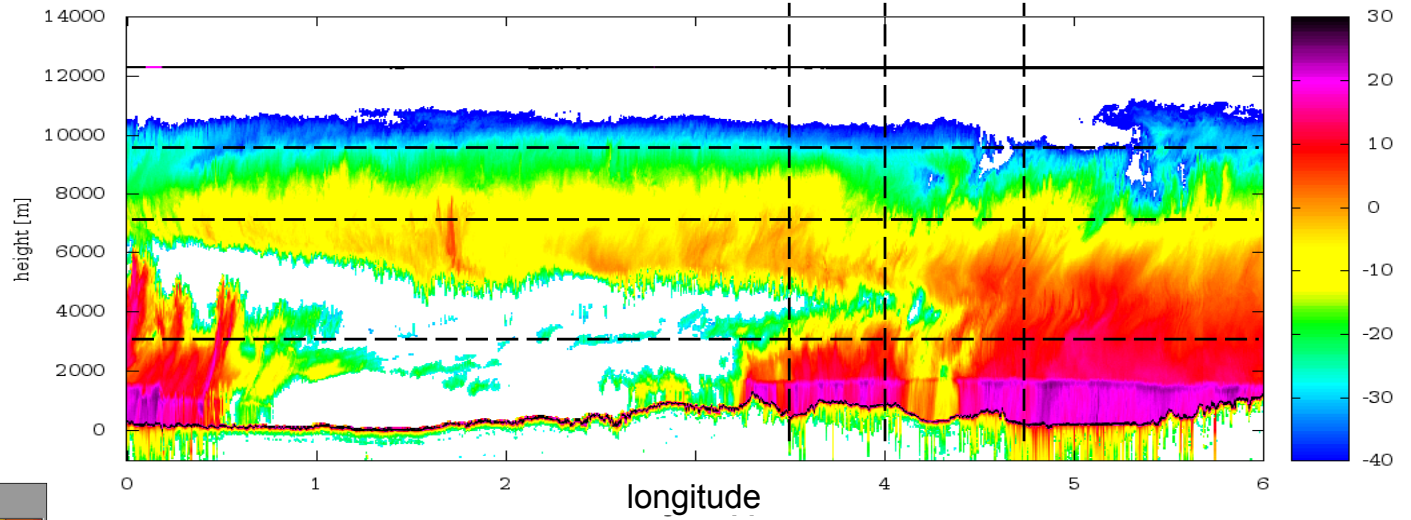
Knowledge for Tomorrow

HALO cloud radar: Intercomparison with French RASTA

Joint flight
during NARVAL
(19 Dec. 2013)
between
Lyon and
Tarbes

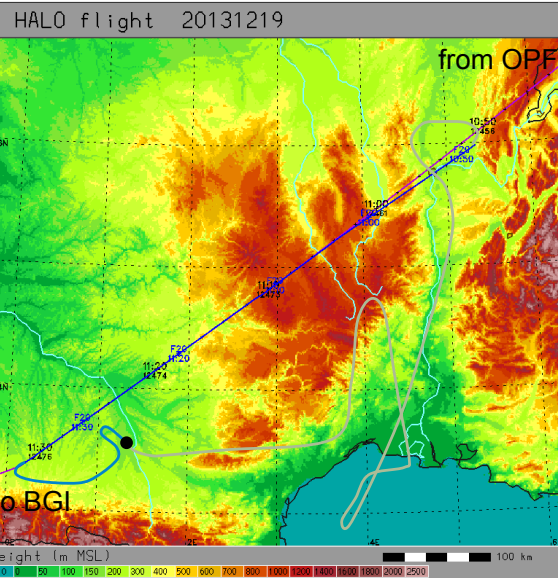
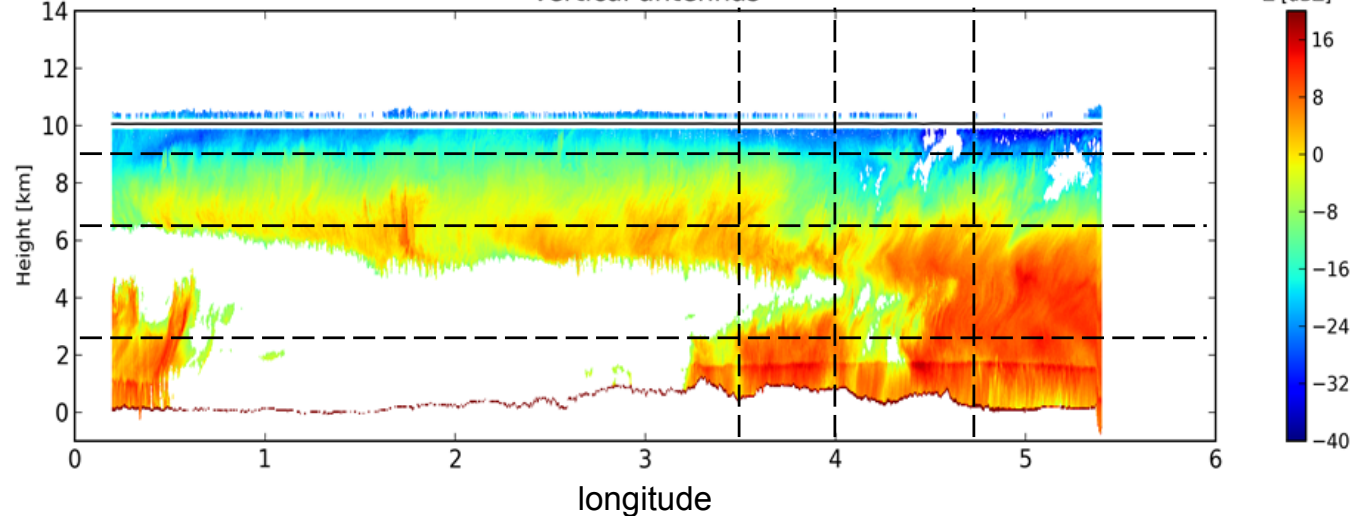
HALO cloud radar 2013-12-19 10:46:02 - 11:32:52

35 GHz Z [dBZ]



HAIC TOULOUSE 20131219 F35 RASTA 95 GHz

Vertical antennas

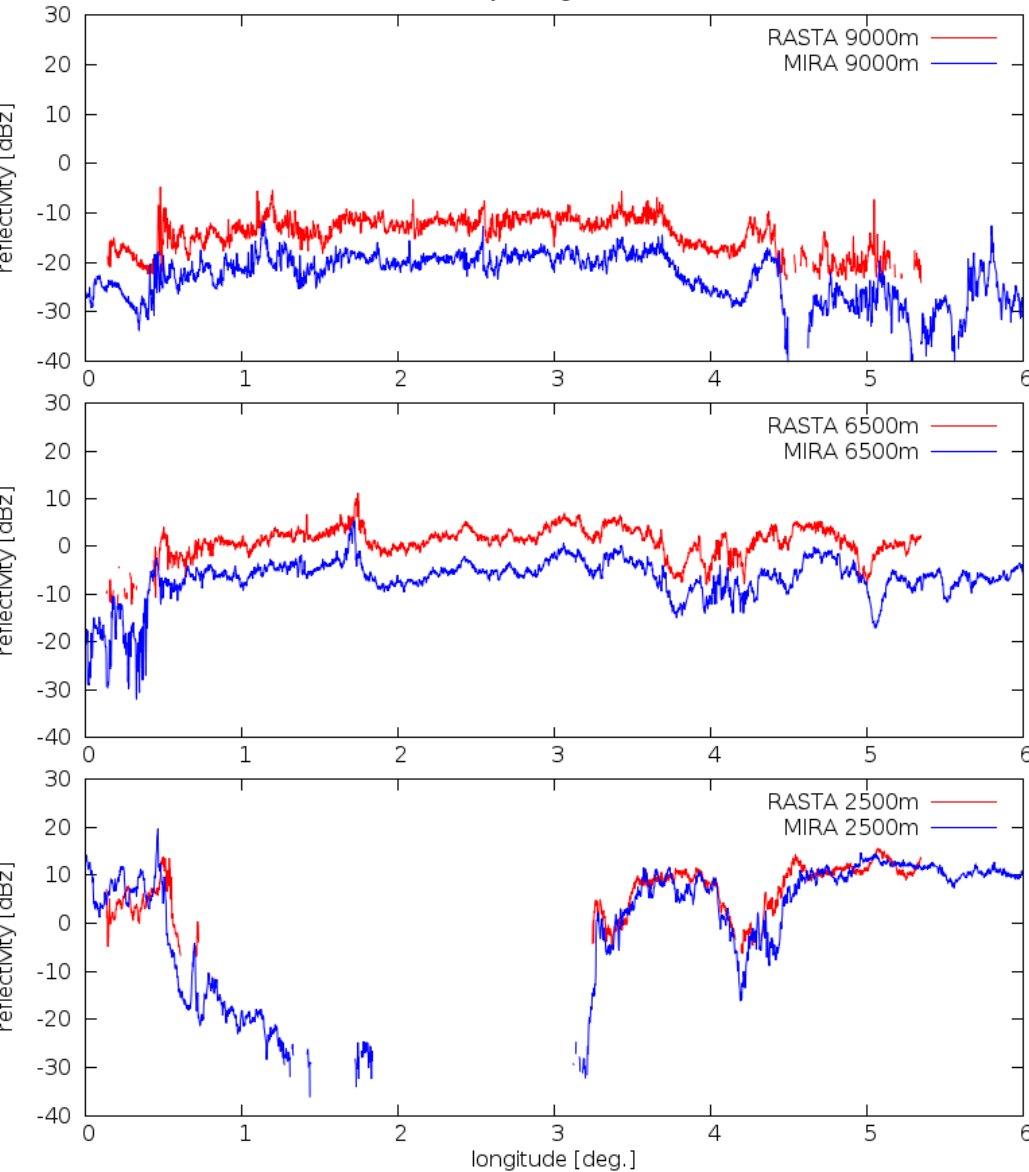


Martin Hagen
ERAD 2014

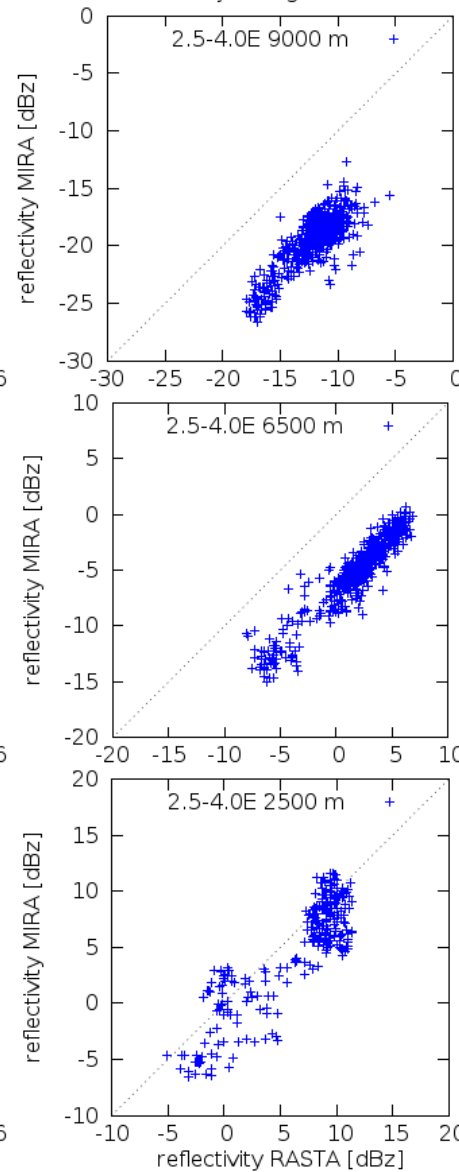


HALO cloud radar: Intercomparison with French RASTA

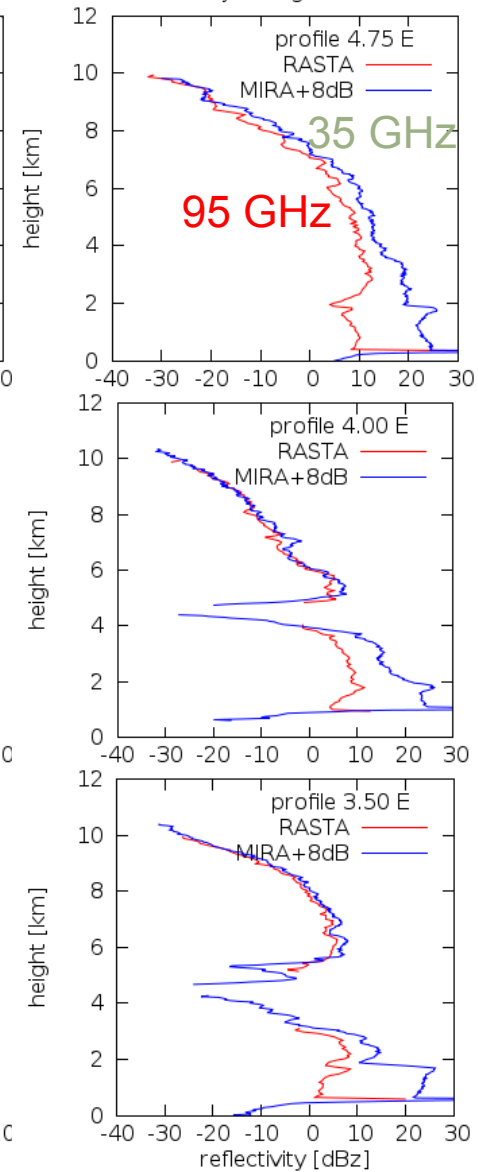
F20 - HALO joint flight 19 Dec. 2013



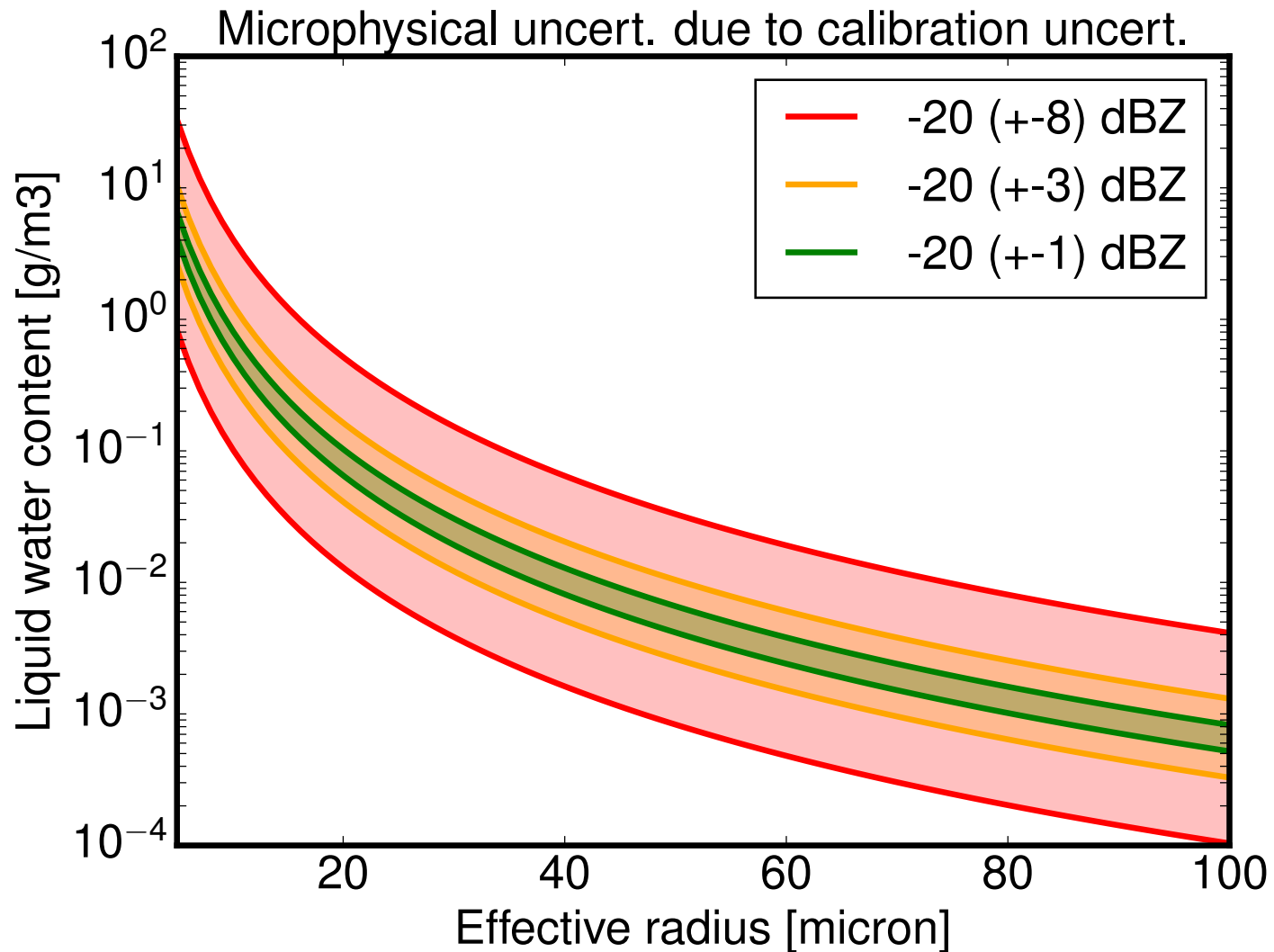
F20 - HALO joint flight 19 Dec. 2013



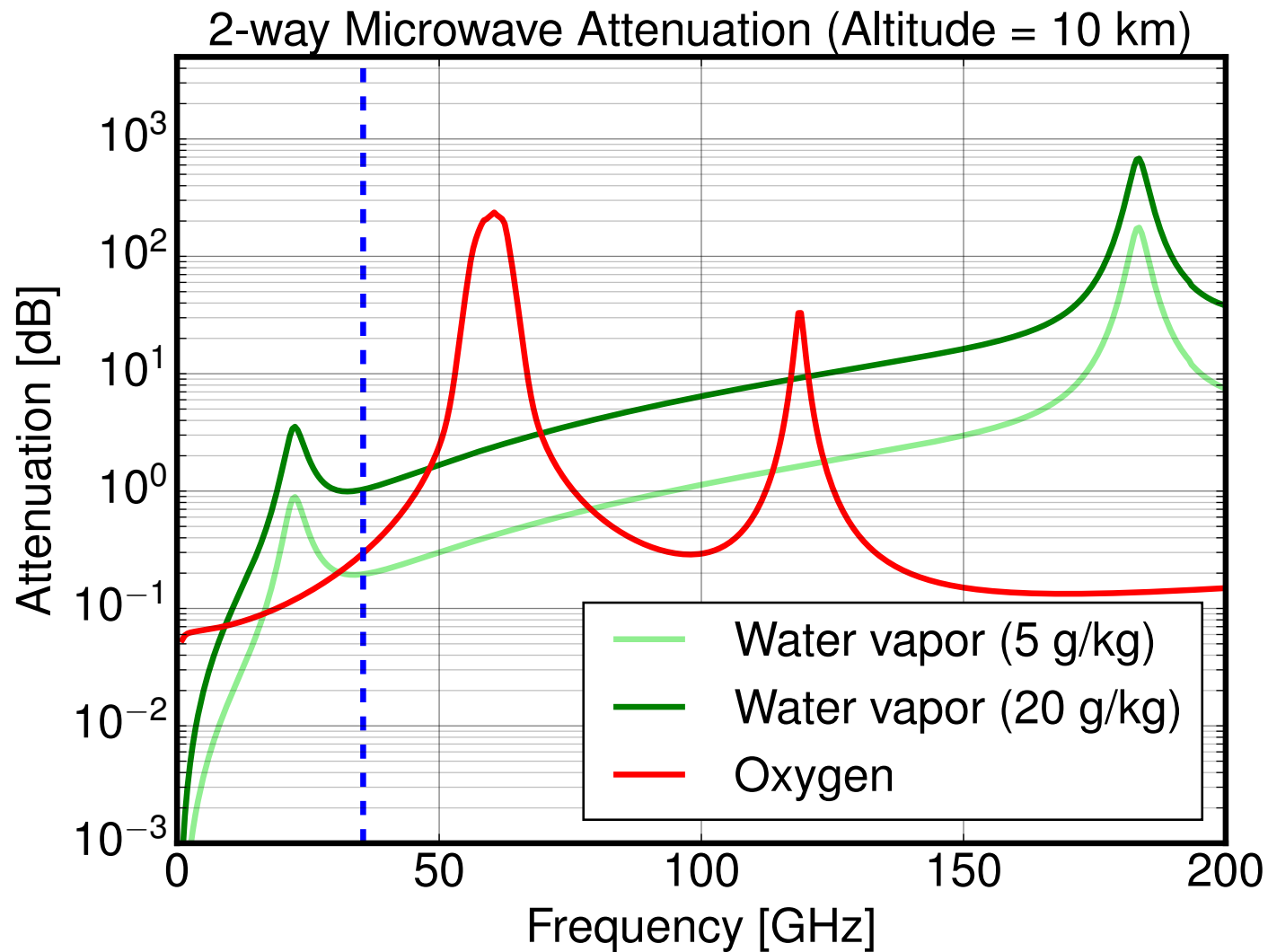
F20 - HALO joint flight 19 Dec. 2013



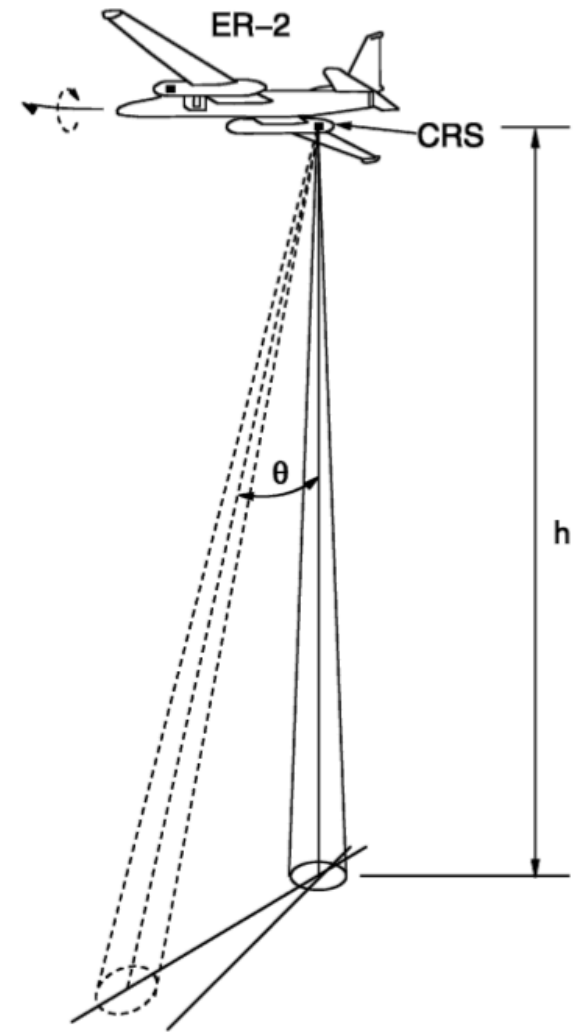
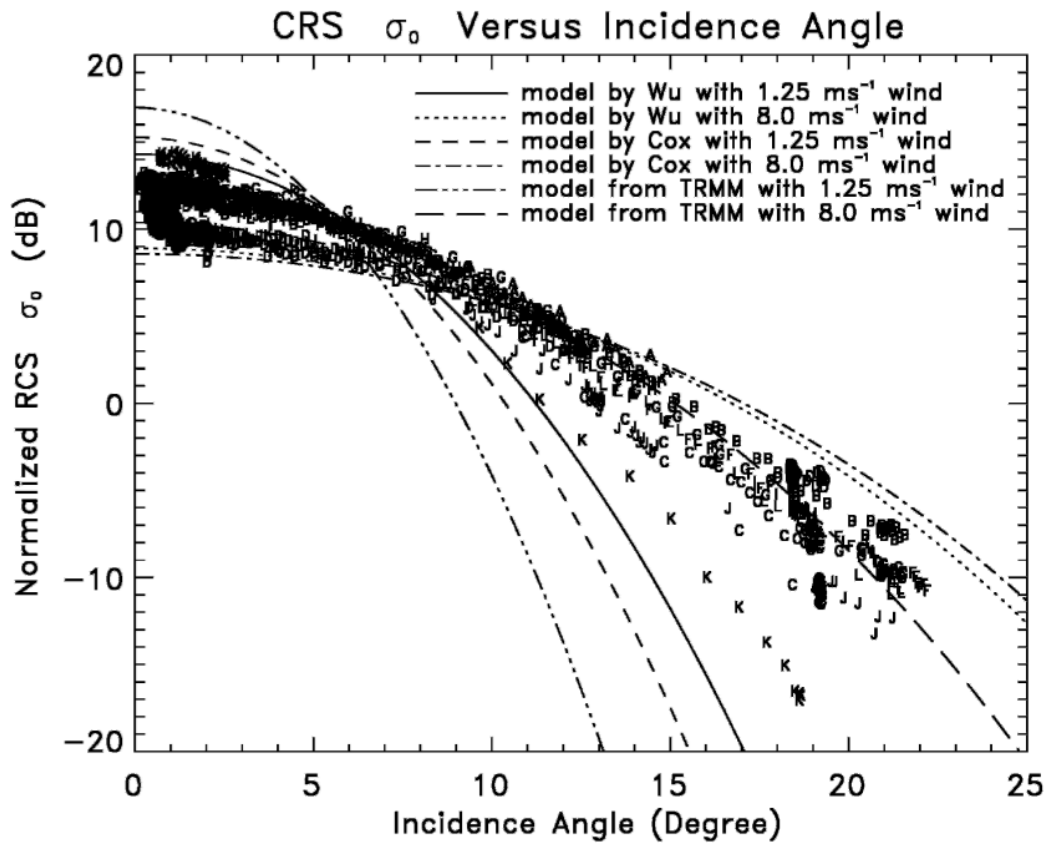
HALO cloud radar: Retrieval uncertainty



HALO cloud radar: Attenuation due to water vapor



HALO cloud radar: Calibration with ocean backscatter



Li et al., 2015

$$\sigma_o(\theta, \nu, \lambda) = \frac{|\Gamma_e(0, \lambda)|^2}{s(\nu)^2 \cos^4(\theta)} \exp\left[-\frac{\tan^2(\theta)}{s(\nu)^2}\right]$$

