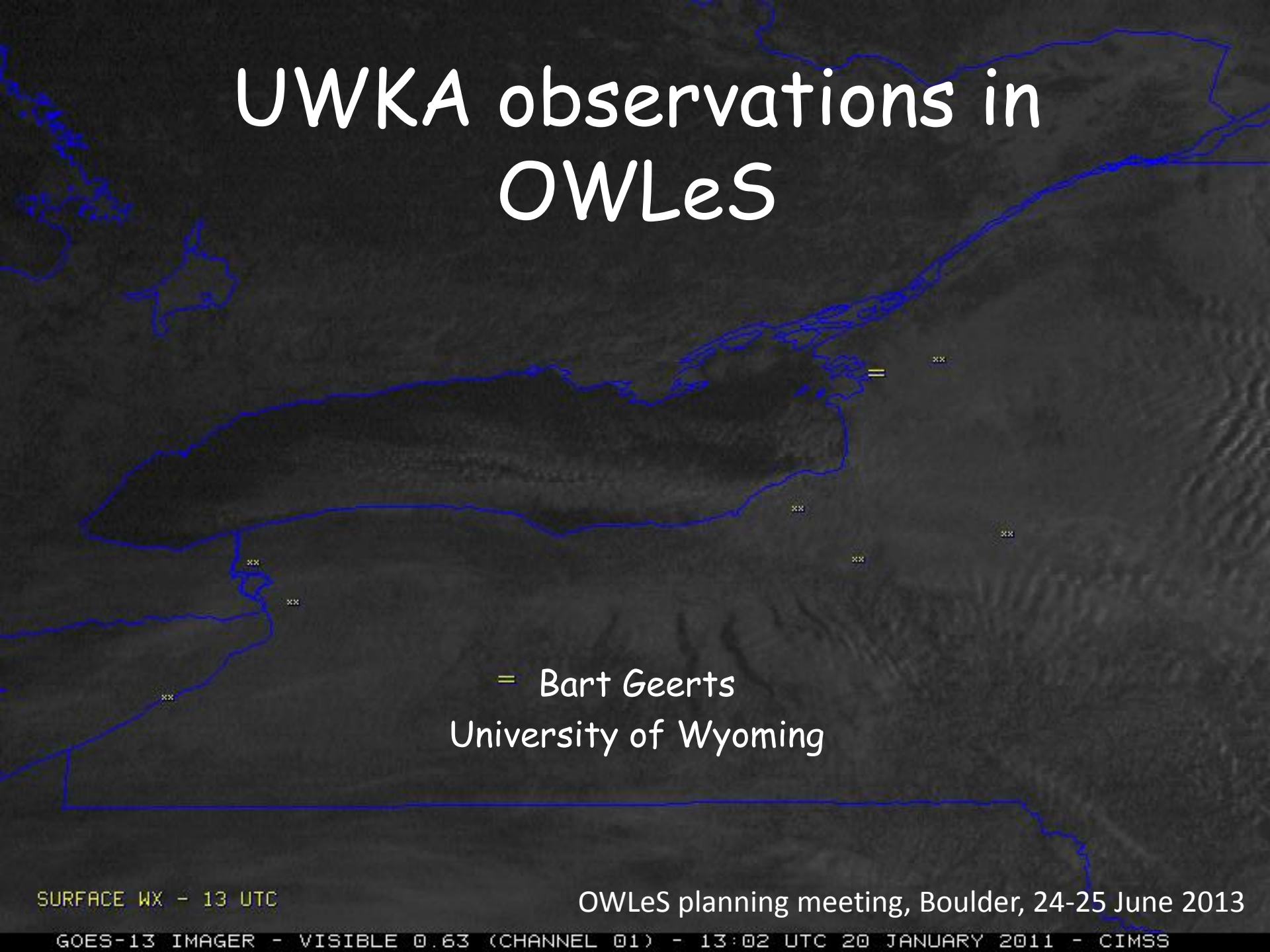
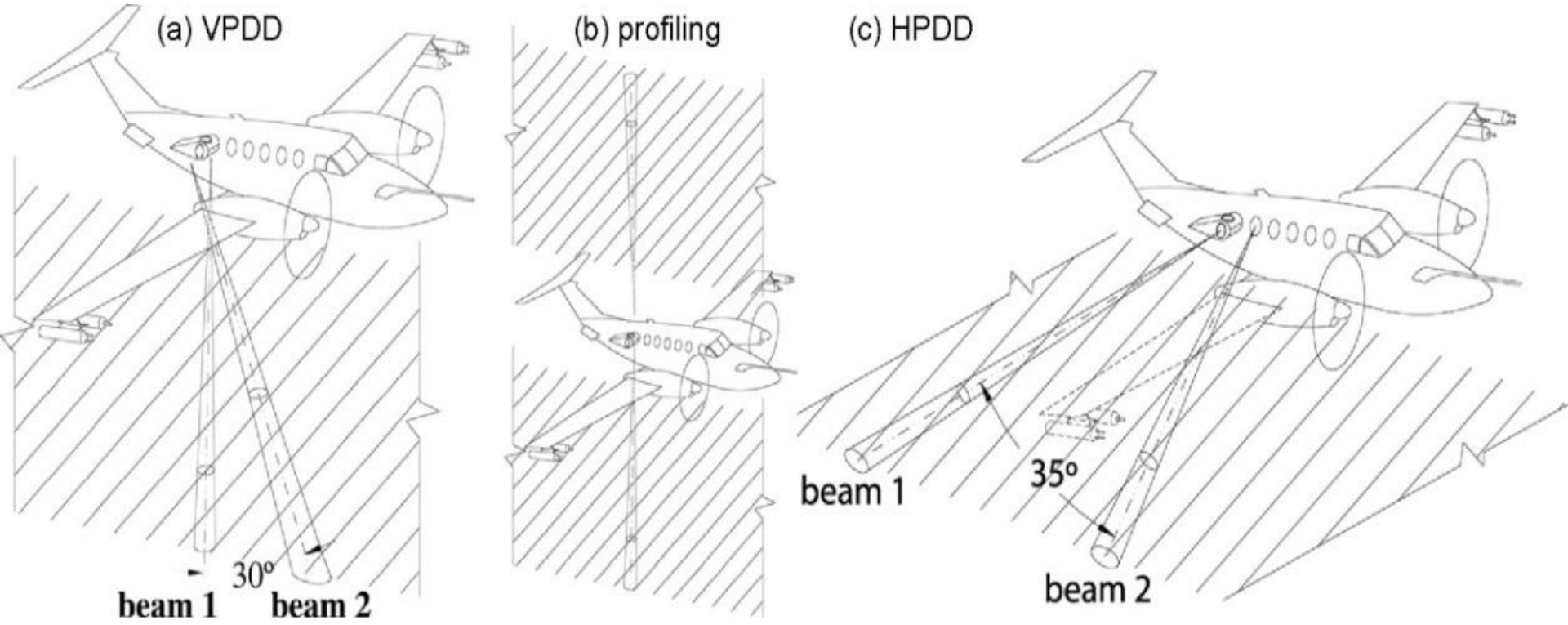
UWKA observations in OWLeS



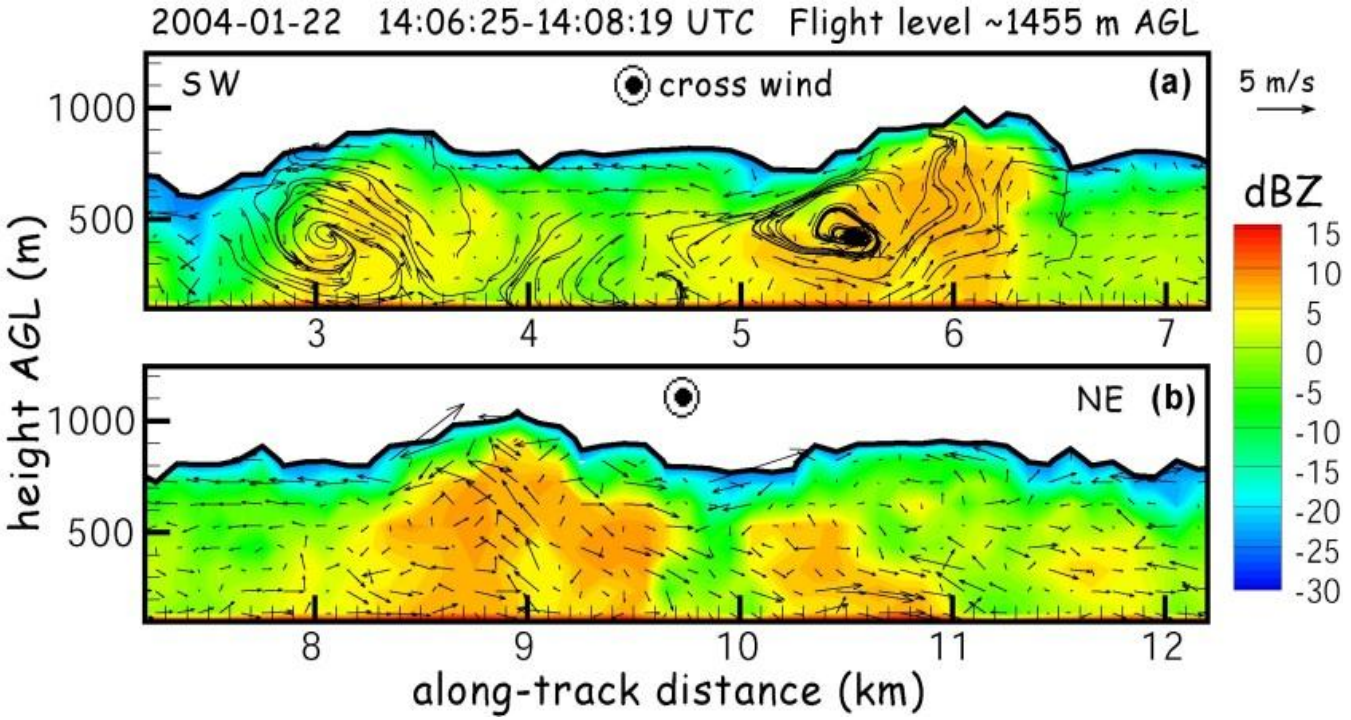
= Bart Geerts
University of Wyoming

OWLeS planning meeting, Boulder, 24-25 June 2013

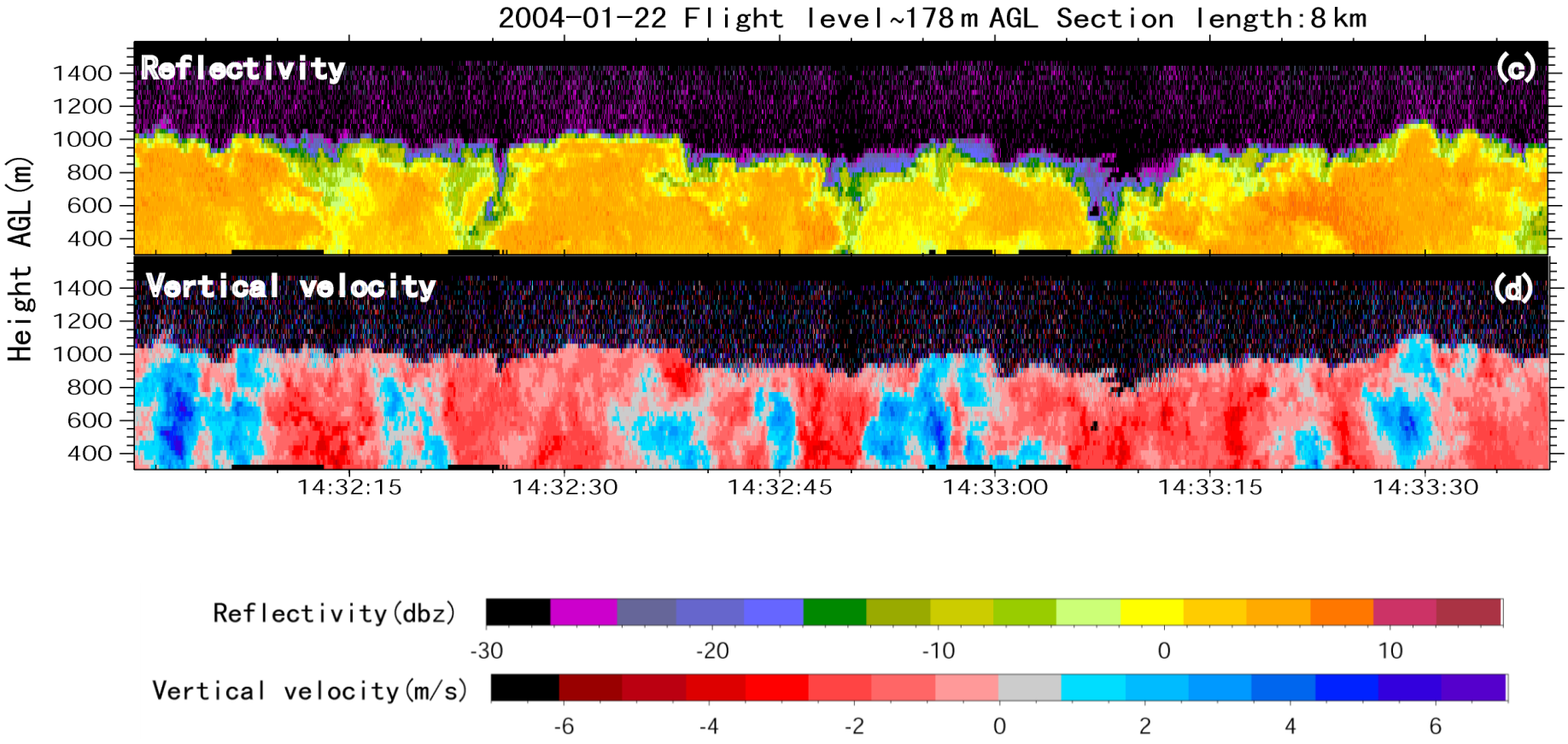
Cloud Radar



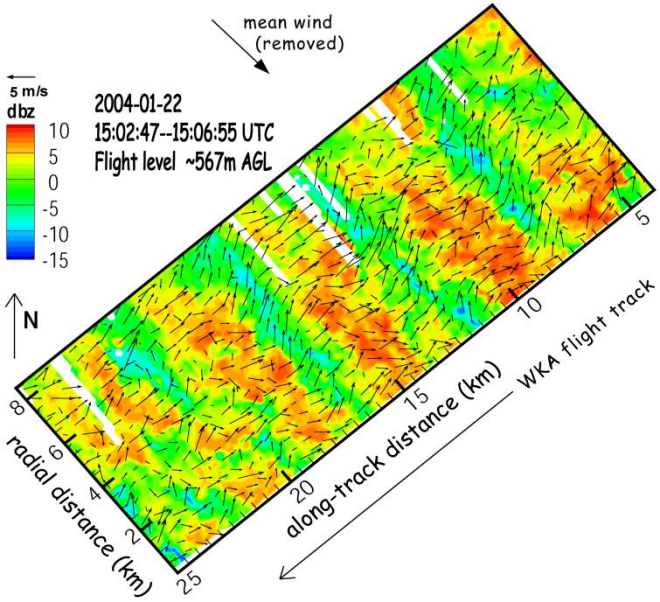
VPDD: example

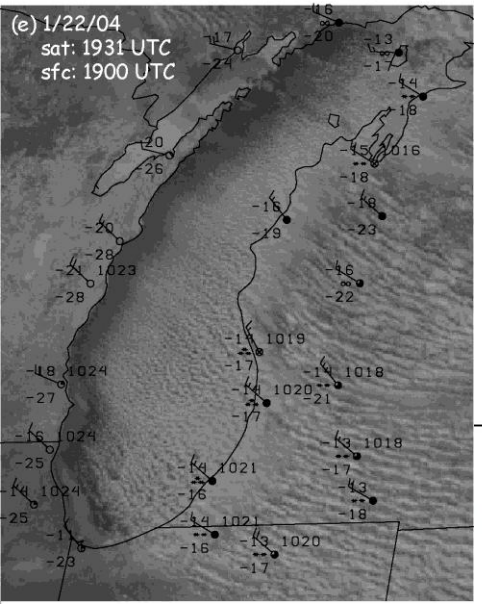


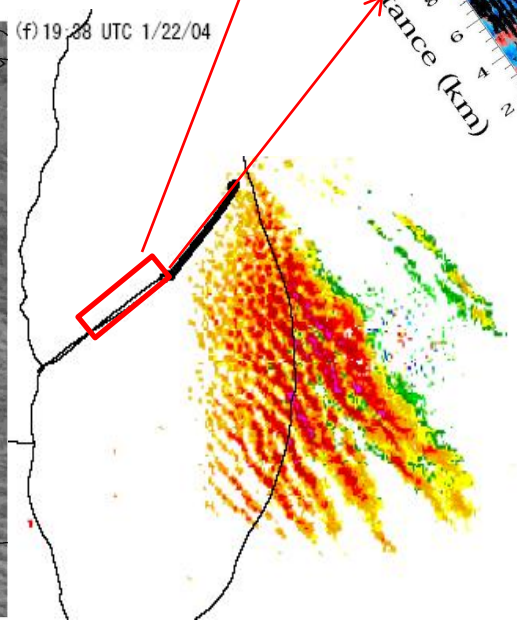
profiling: example

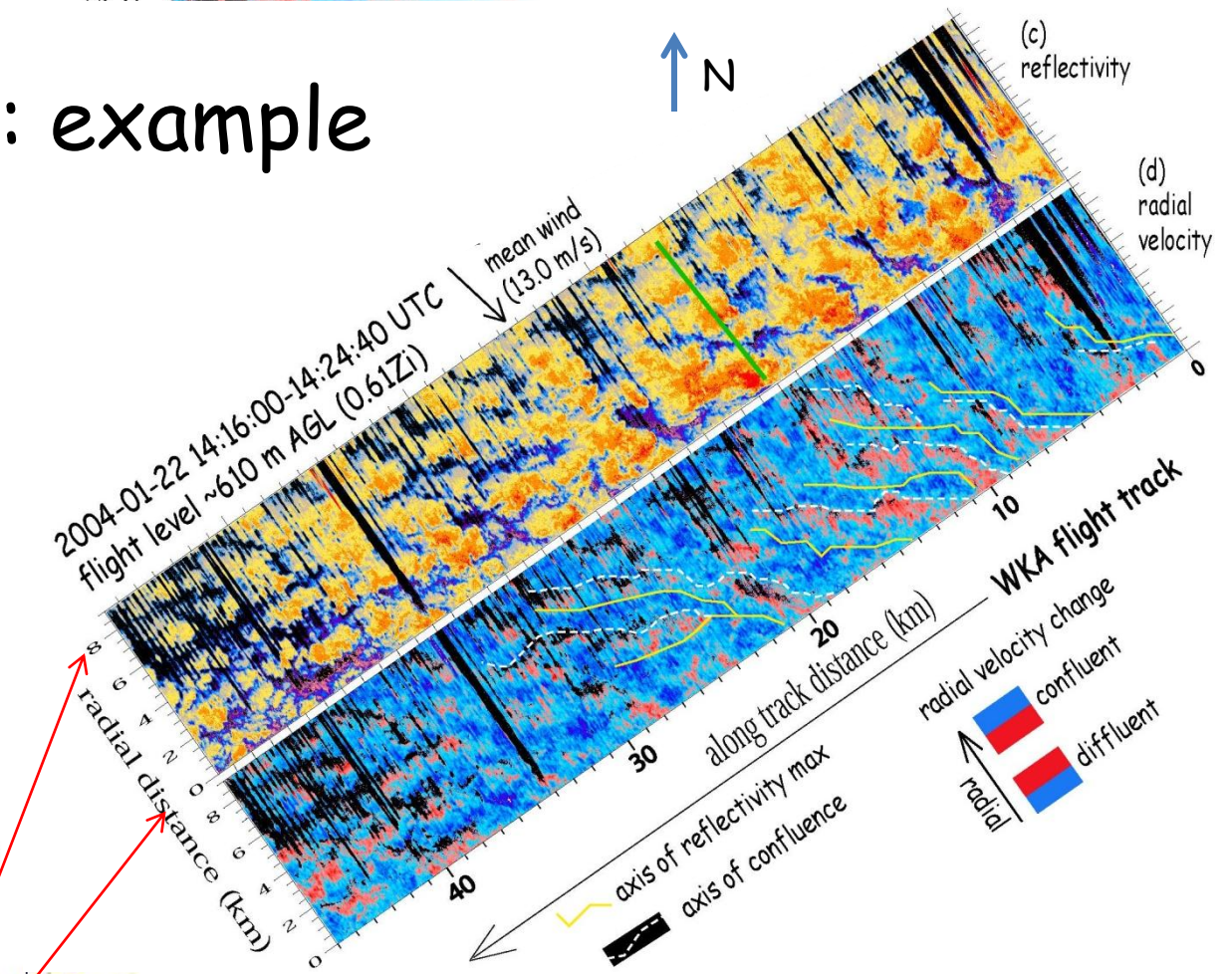


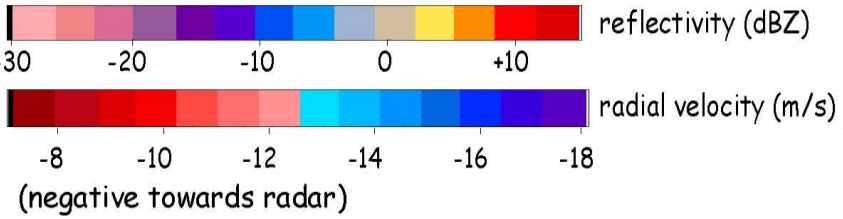
HPDD: example



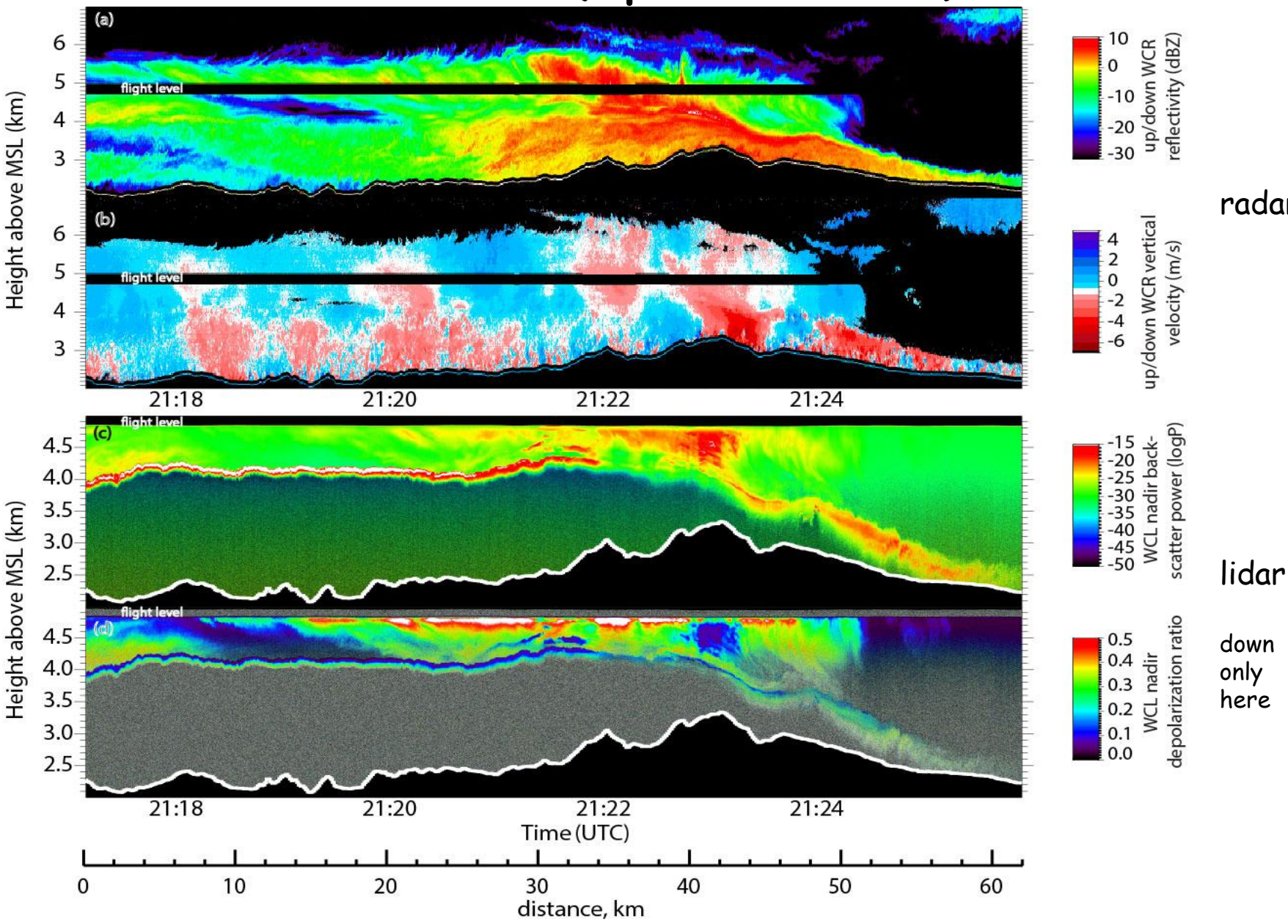




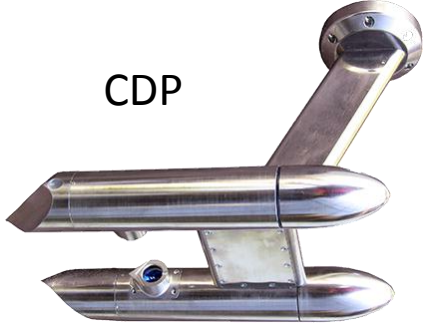




Cloud lidar (up and down)

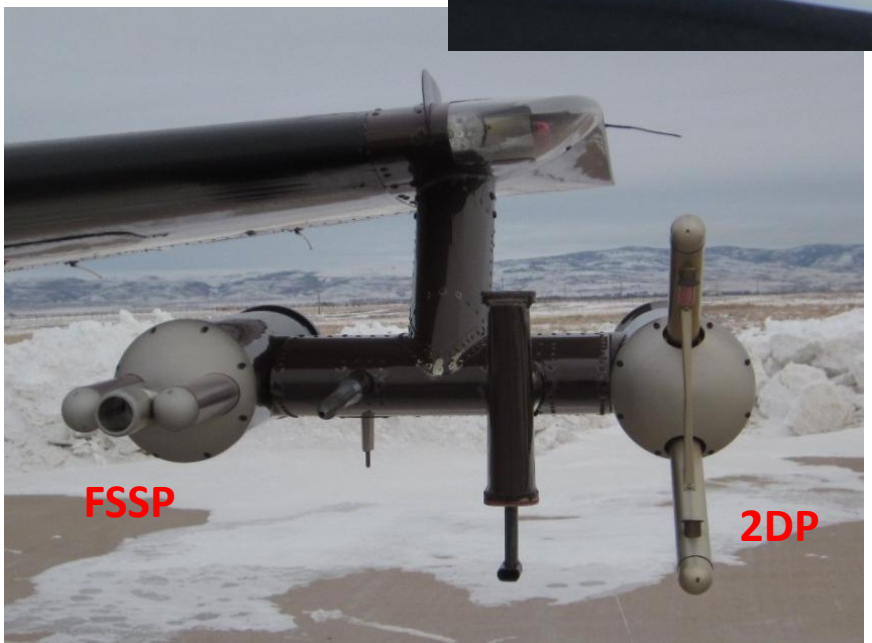


King Air in situ instruments



CDP

with ice shattering avoidance tip



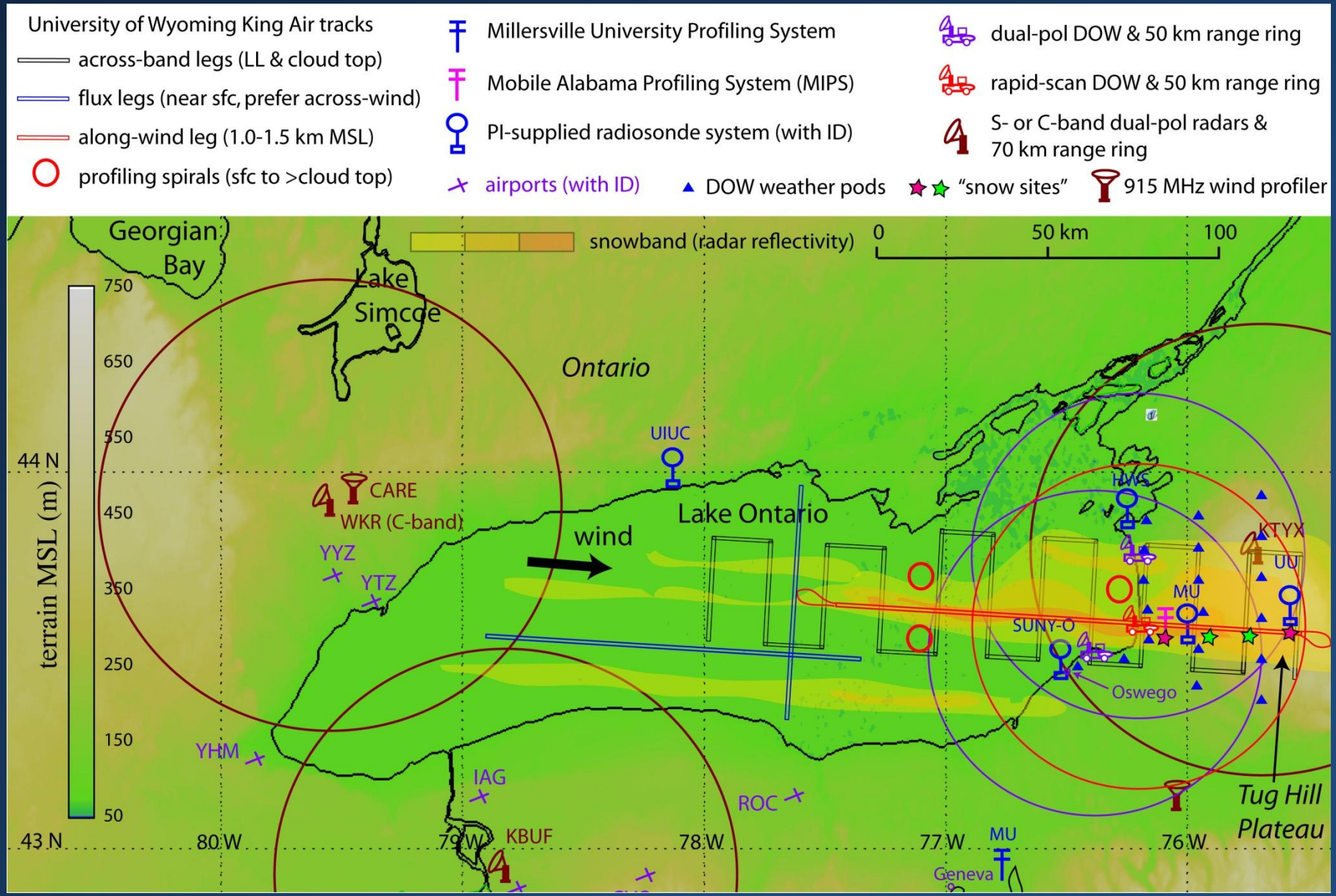
King Air in situ instruments

- Licor 6262 (or 7500): water vapor & CO_2 fluxes
- Hemispheric Pyranometer & Pyrgeometer (up & down)
  - Note: no Heiman IR temperature probe
- Downward time lapse photography (1 frame/sec)
- Liquid water: DMT LWC-100 (hot wire LWC), Gerber (droplet surface area & volume), FSSP, and CDP
- PCASP: the only aerosol probe, and its data can serve as a first surrogate for both CCN and IN concentrations

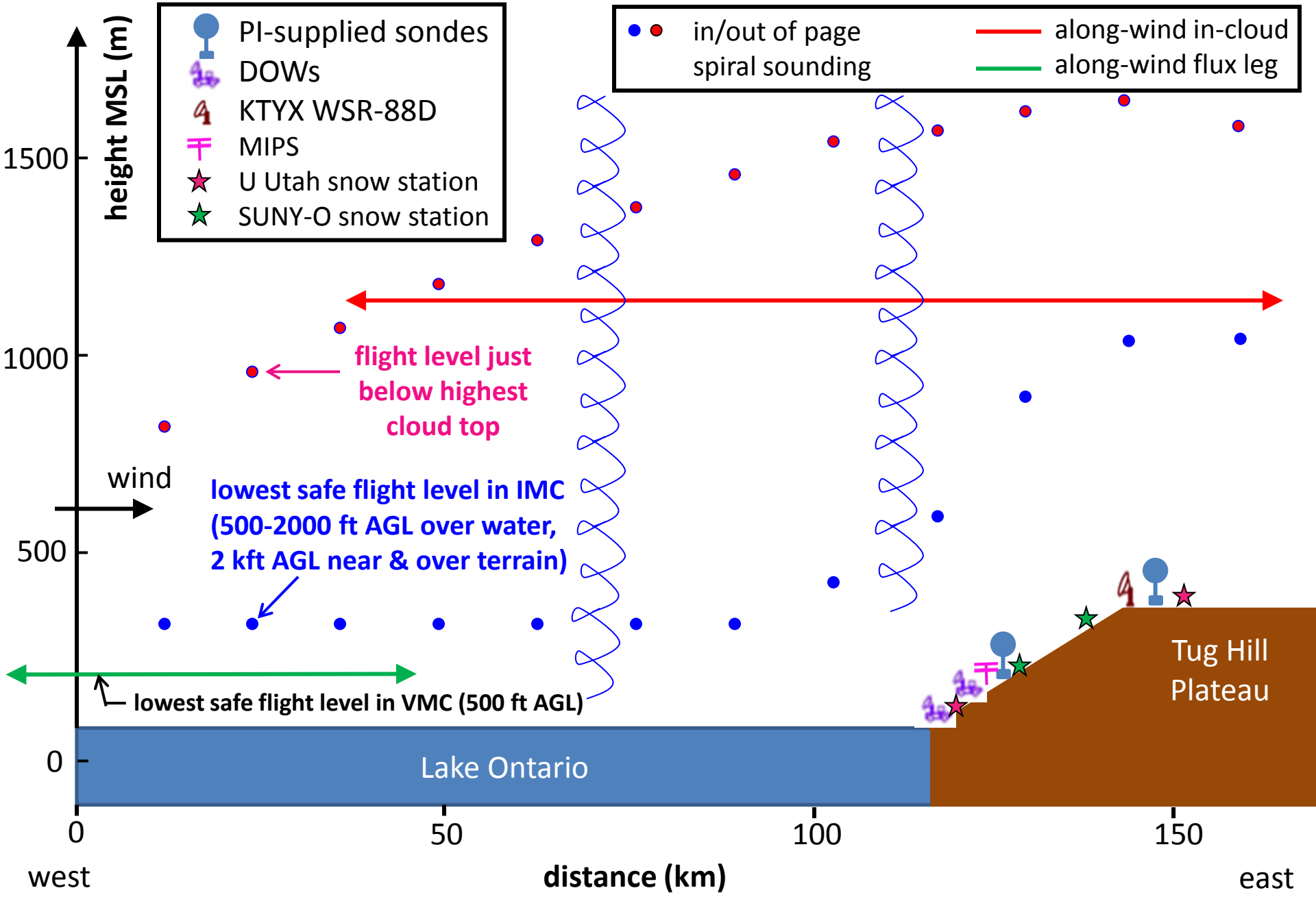
airframe & instrument icing

OWLeS experimental design: long-fetch bands

Westerly Winds, bands along the long axis of Lake Ontario



Schematic vertical cross-section for long-fetch LeS



UW science interests

- WCR 2D kinematics & snowband dynamics
- WCR, WCL, *in situ* probes & snow growth mechanisms
- WSR-88D dual-pol particle ID & QPE
- Large Eddy Simulations of snowbands (dynamics & QPF)