

NCAR NO_{xy} O₃

4-channel chemiluminescence instrument
for in situ NO, NO₂, NO_y, O₃

ARCTAS Objectives:

- NO_y & O₃ tracers of long-range transport
- NO_x, NO_y, O₃ influenced by boreal fires
- Chemical processes (NO_x, O₃)

Measurement Specs:

- Generally reported at 1 sec, however:
 - NO_y & O₃ actually a bit faster
 - NO & NO₂ actually ~ 3sec
- Uncertainty:
 - O₃: DL~0.1 ppbv, 5% well above
 - NO: DL~20 pptv, 7-10%
 - NO₂: DL~40 pptv, 10%
 - NO_y: DL~20 pptv, 7-10%

Operational Issues:

- Hazmat shipping (CO, NO to Frbnk, CL)
- 3-hr pre-flight
- dry ice
- 2nd seat to Thule?