

# CU AMAX-DOAS RF01-RF03

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Science Team

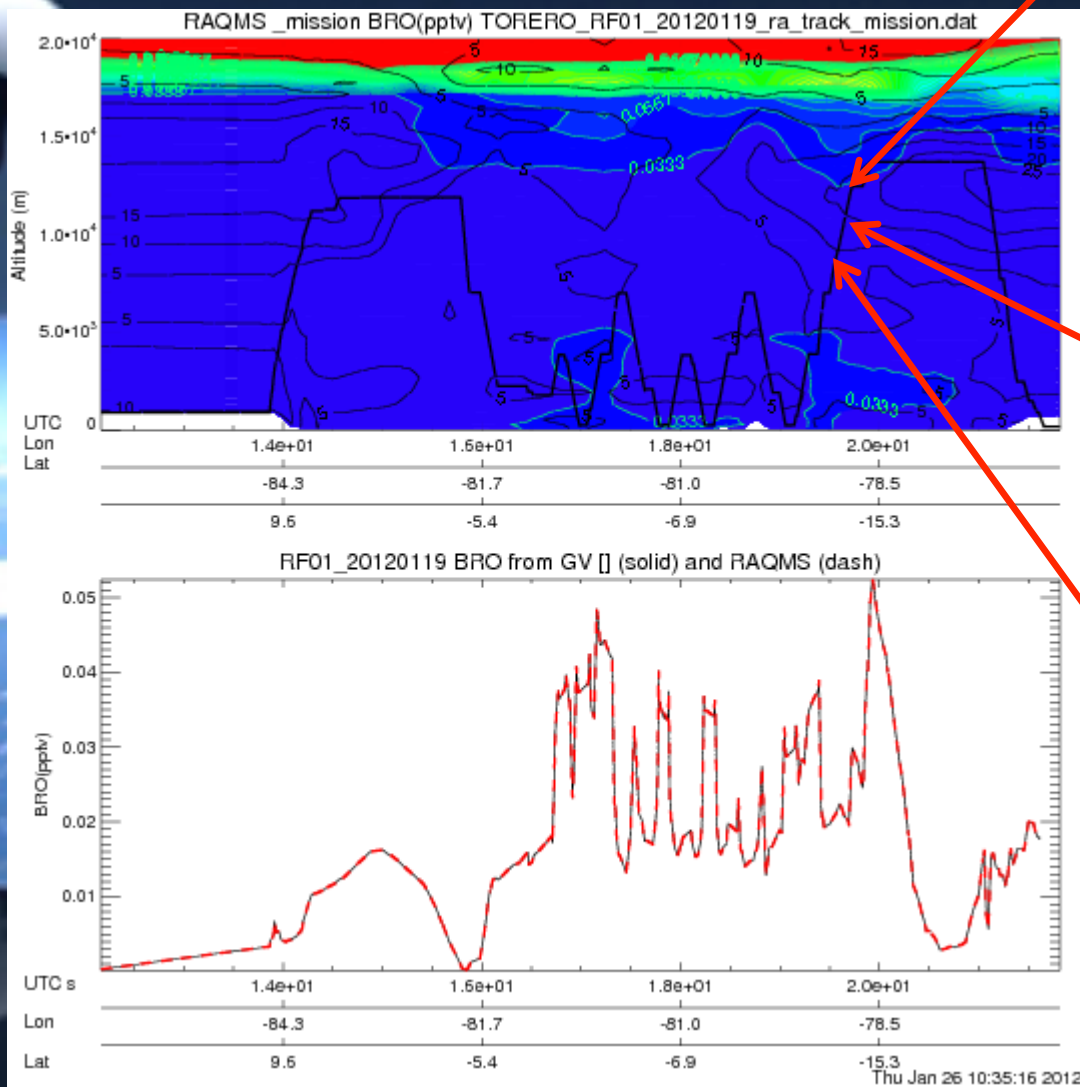
## **TORERO Science Hypothesis:**

**Hypothesis #1: Ocean sources of oxygenated VOC (OVOC) and reactive halogen species (RHS) impact atmospheric composition in the MBL, and in the FT as a result of deep convective transport.**

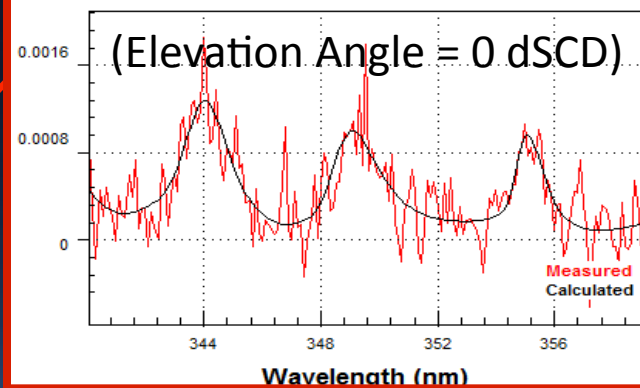
**Hypothesis #2: The gas fluxes across the air-sea boundary vary between the oligotrophic and mesotrophic ocean, and coastal upwelling.**

**Hypotheses #3: Reactive gases released from the ocean are relevant to chemistry and climate.**

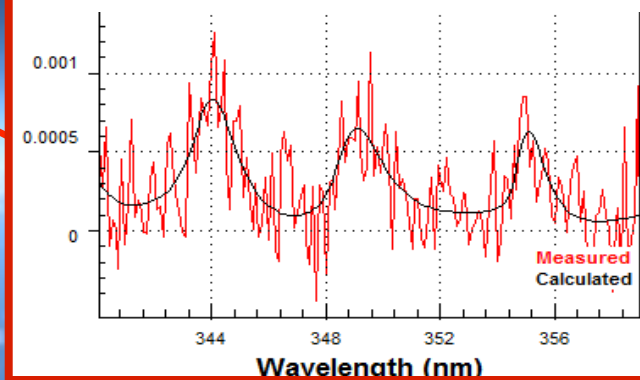
# RF01 - Bromine Oxide (BrO) in the upper troposphere



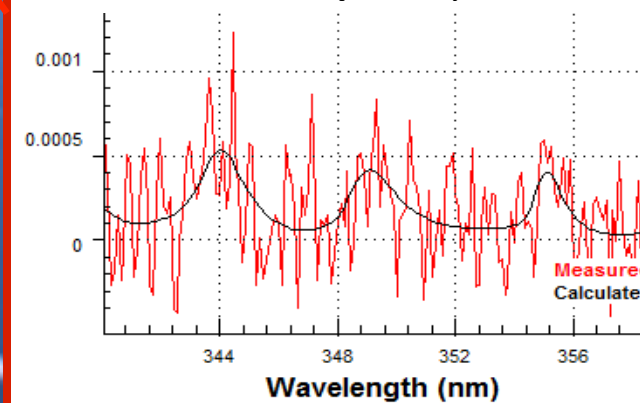
**1.2E14 molec/cm<sup>2</sup>; 12.2km**



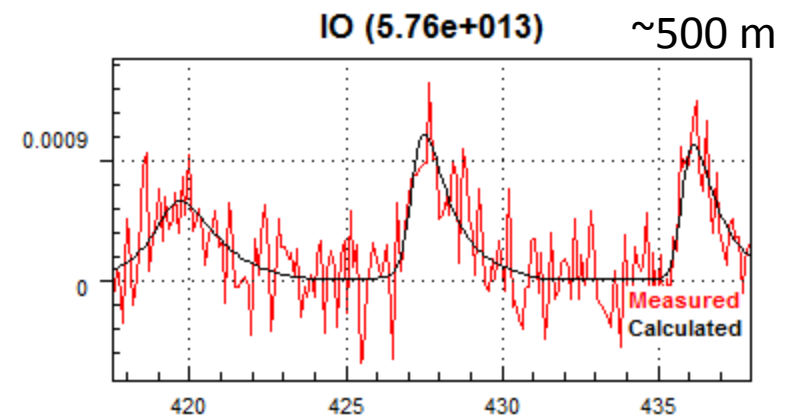
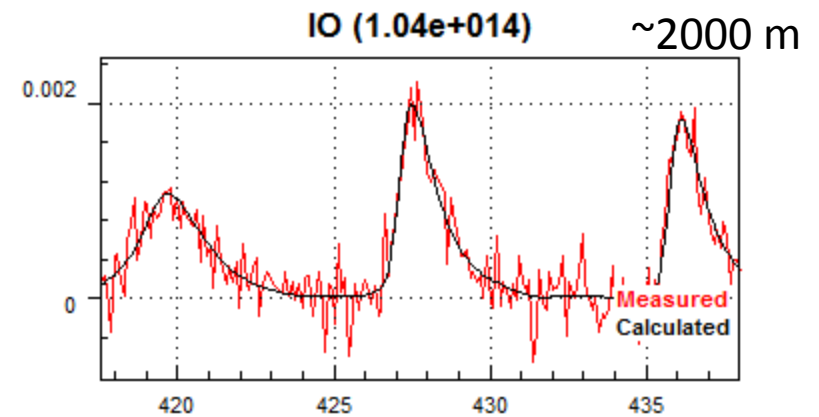
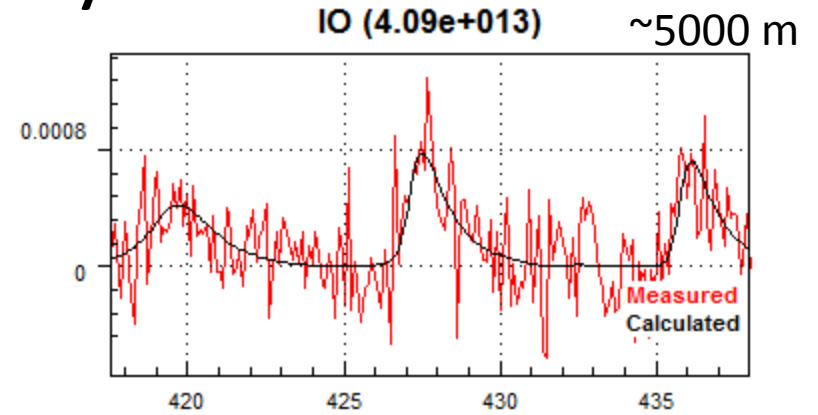
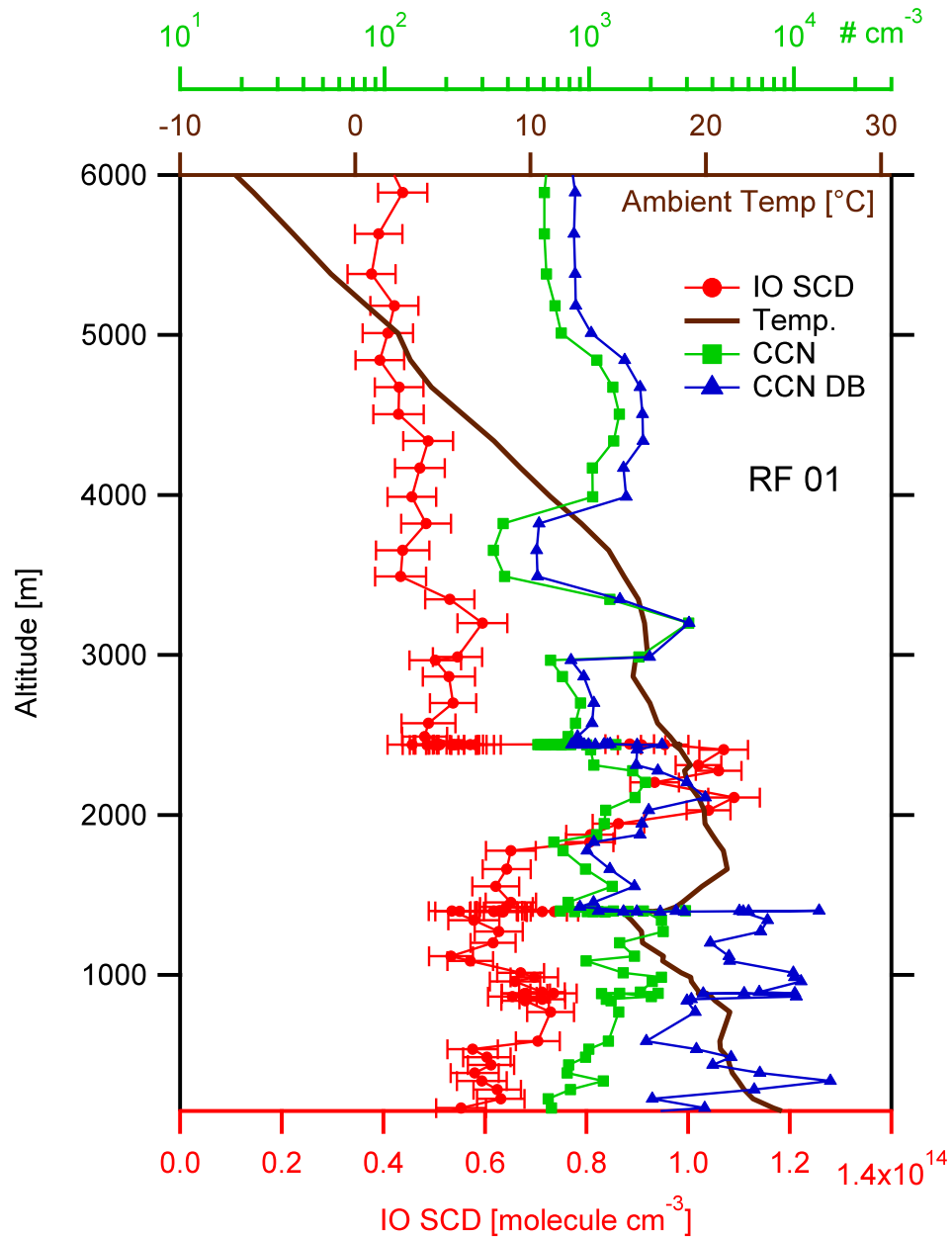
**0.8E14 molec/cm<sup>2</sup>; 11.2km**



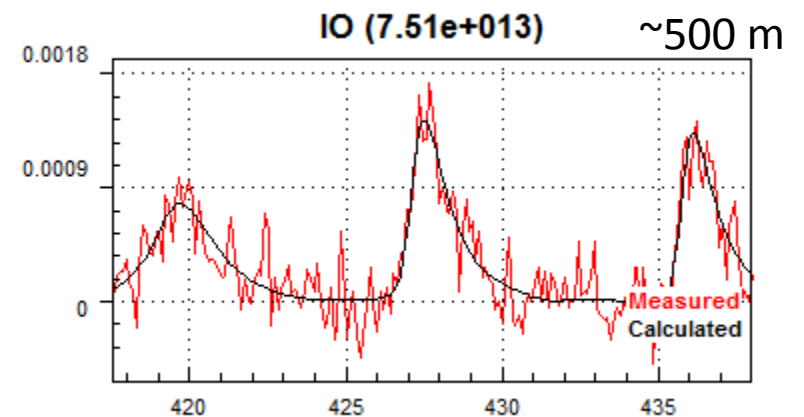
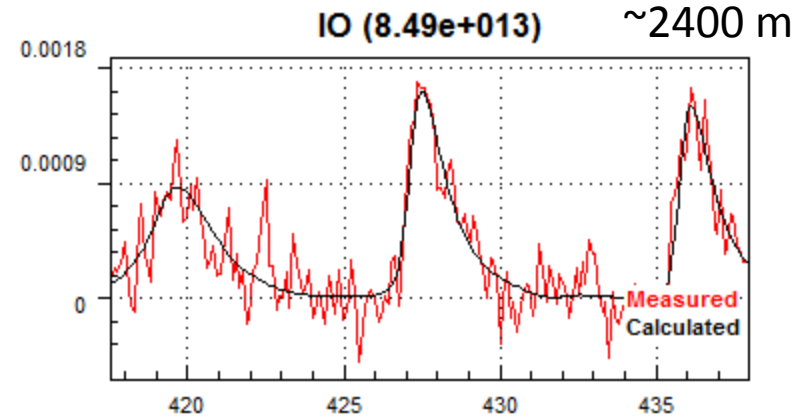
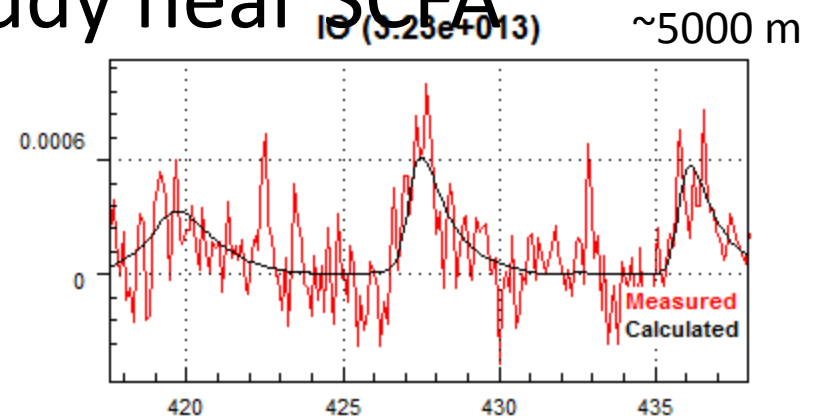
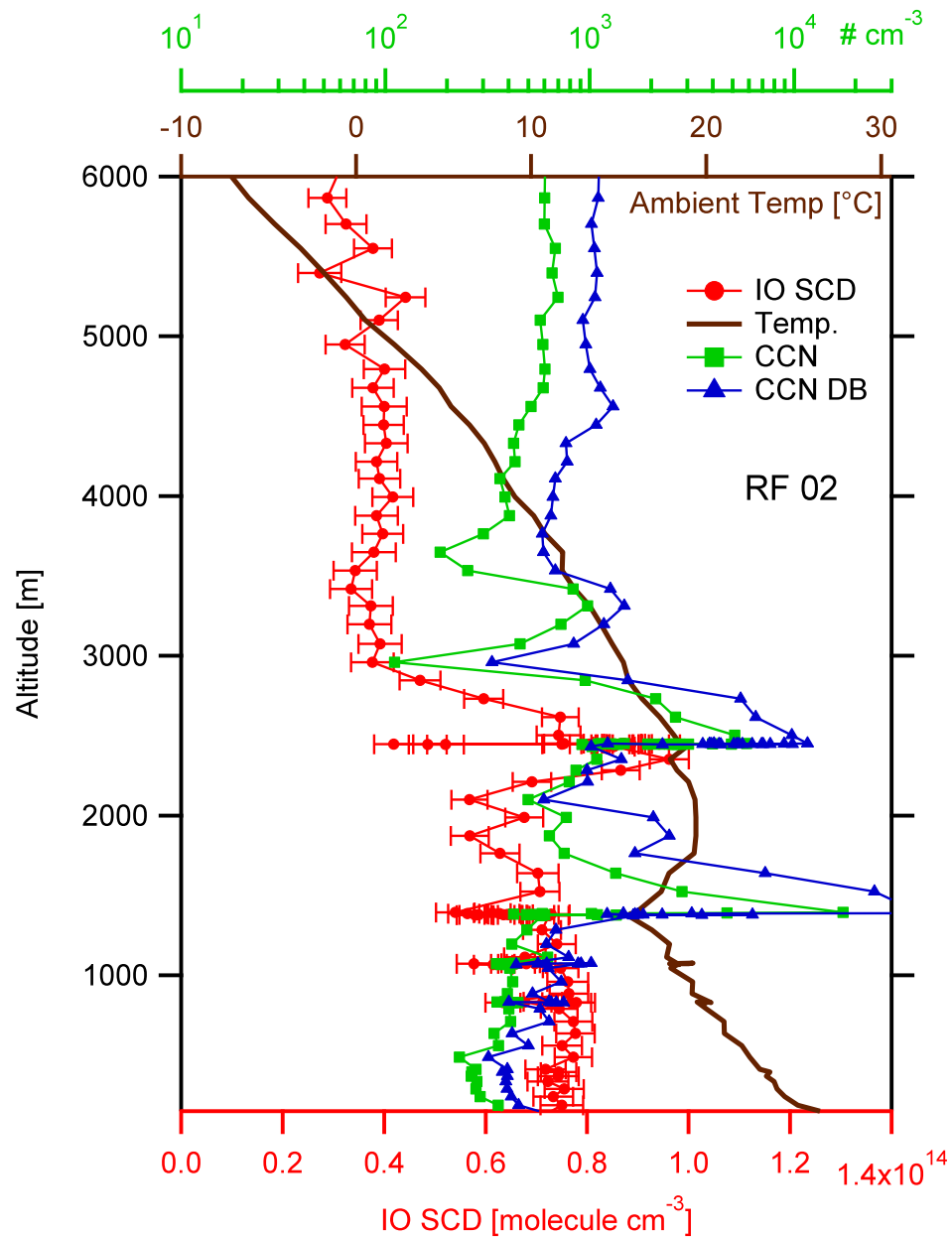
**0.5E14 molec/cm<sup>2</sup>; 8.9km**



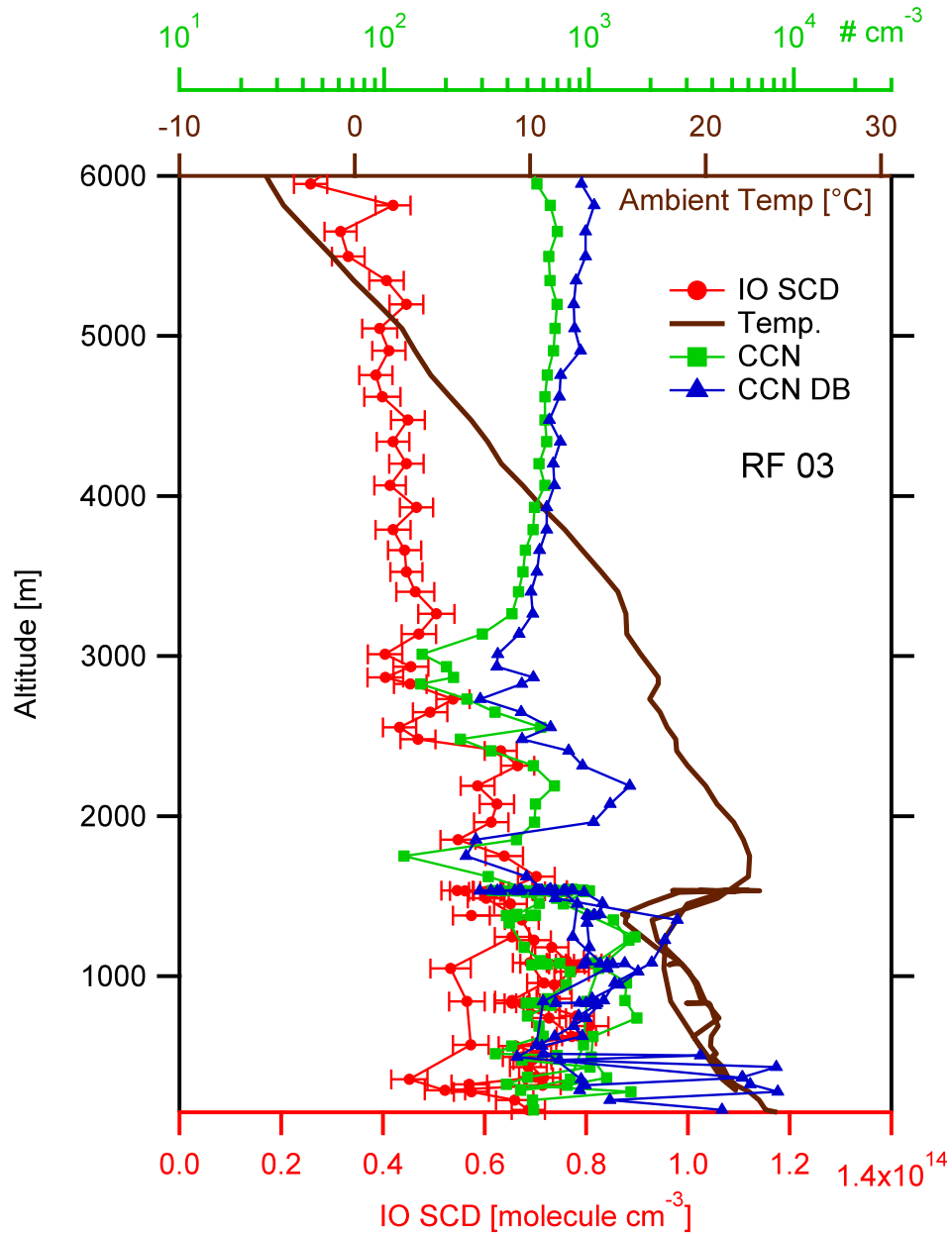
# RF01 - Local Case Study near SCFA



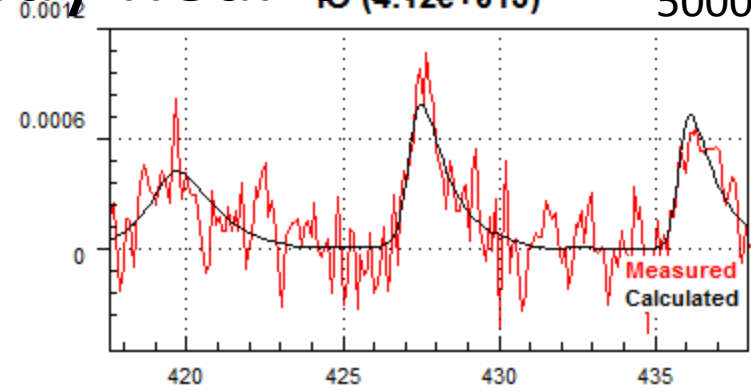
# RF02 - Local Case Study near SCFA



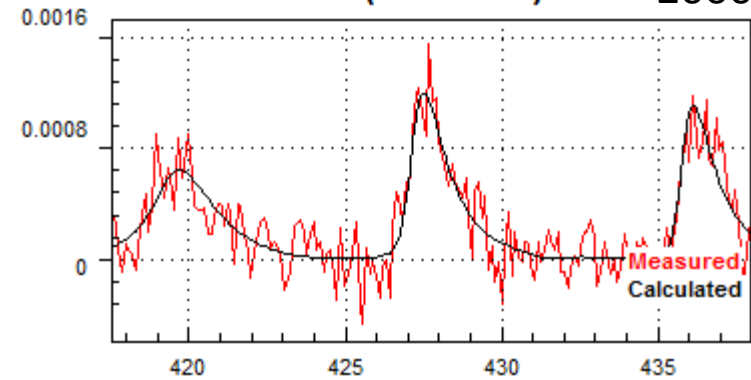
# RF03 - Local Case Study near SCFA



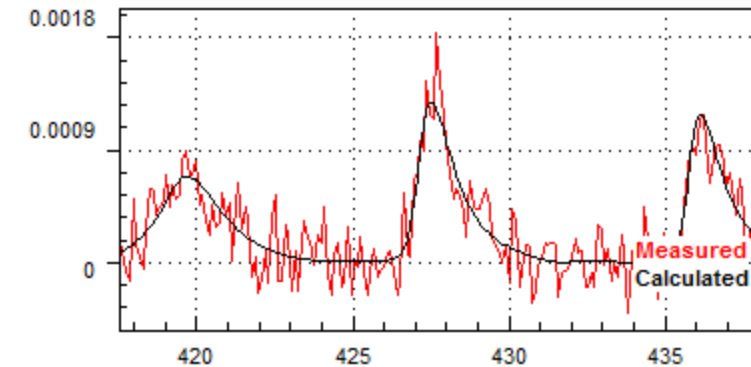
IO (4.12e+013) ~5000 m



IO (6.24e+013) ~2000 m

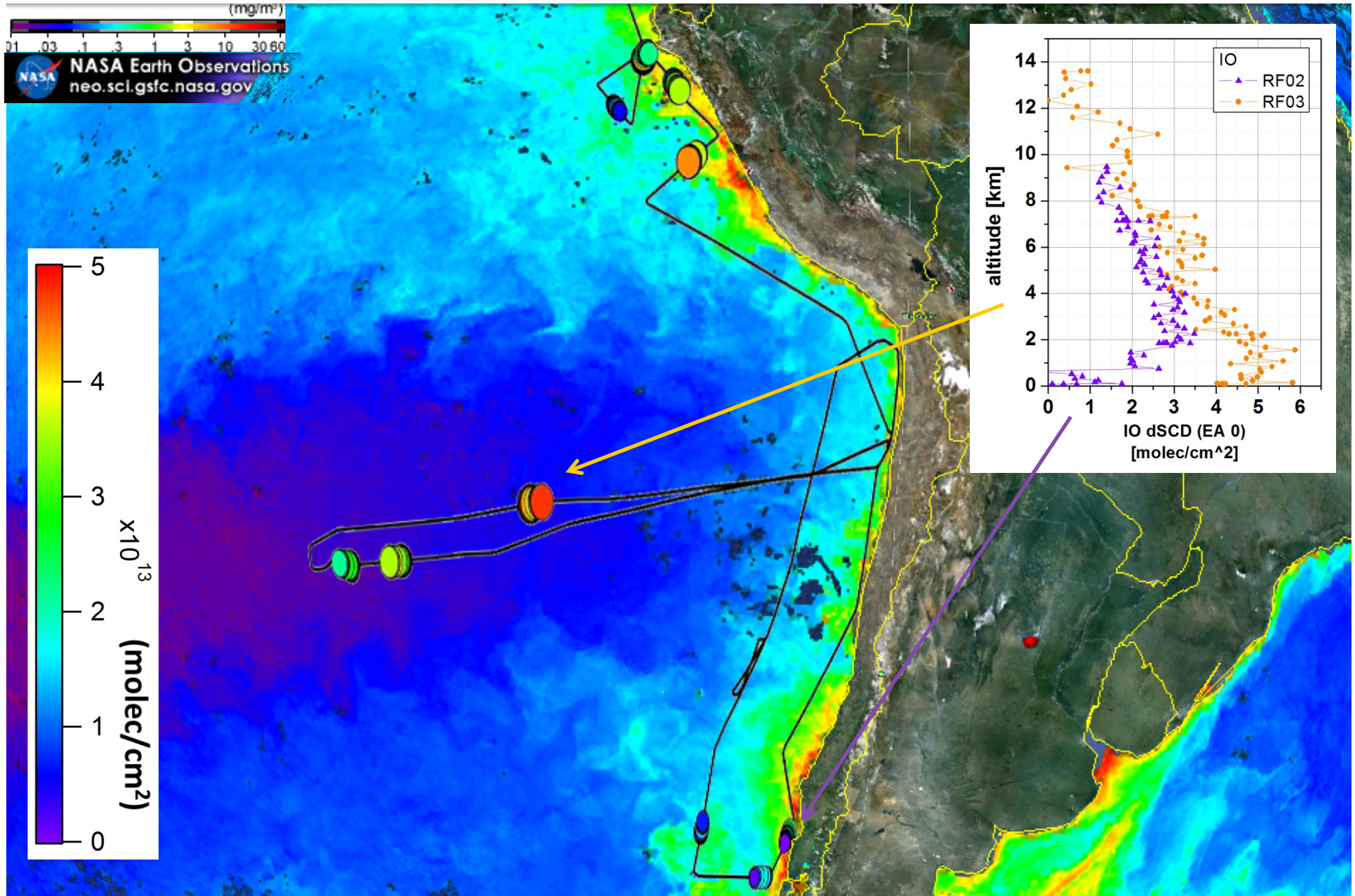


IO (6.73e+013) ~500 m



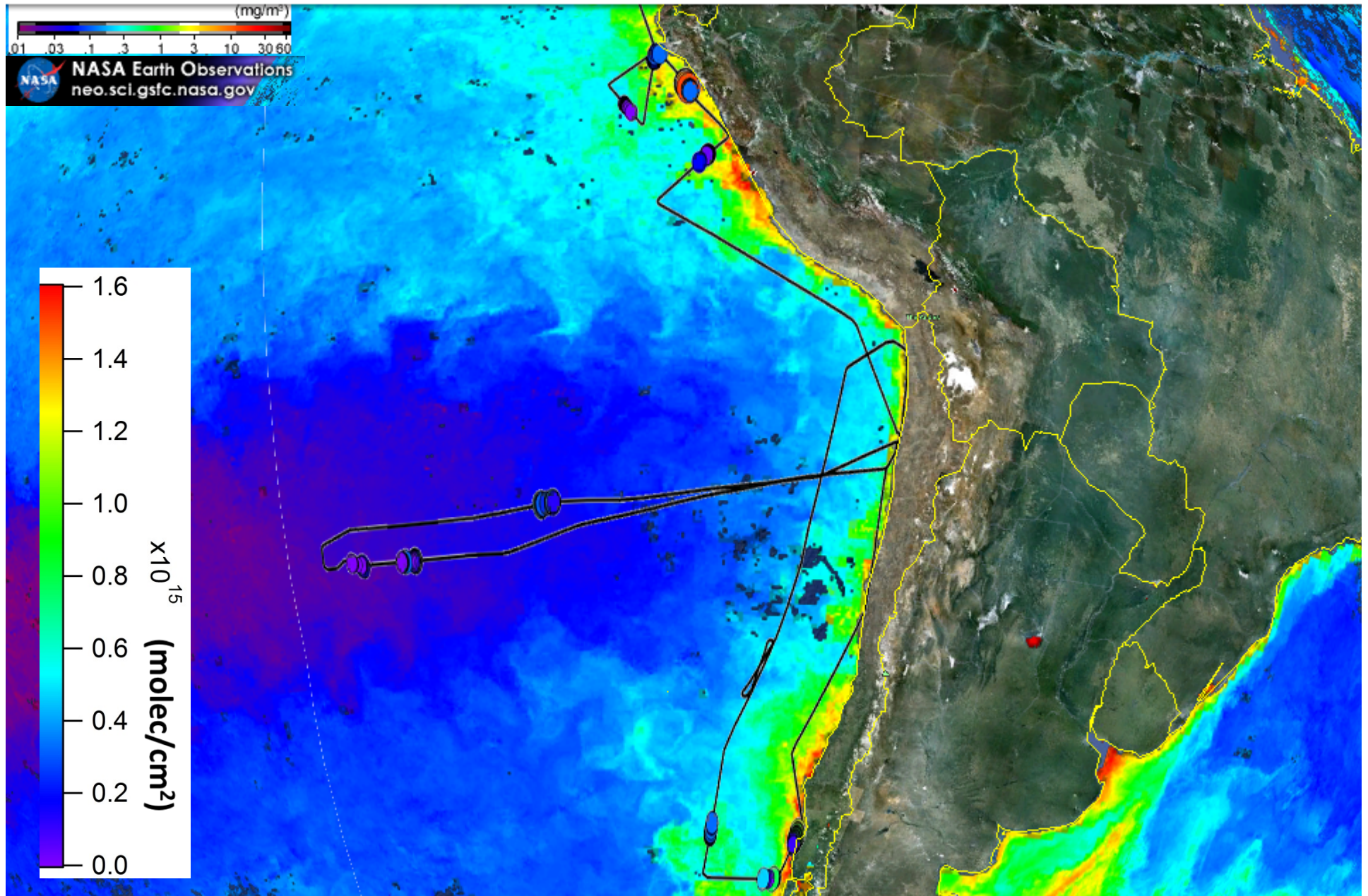


# Iodine Oxide (IO) dSCDs, EA = 0, altitude < 800m



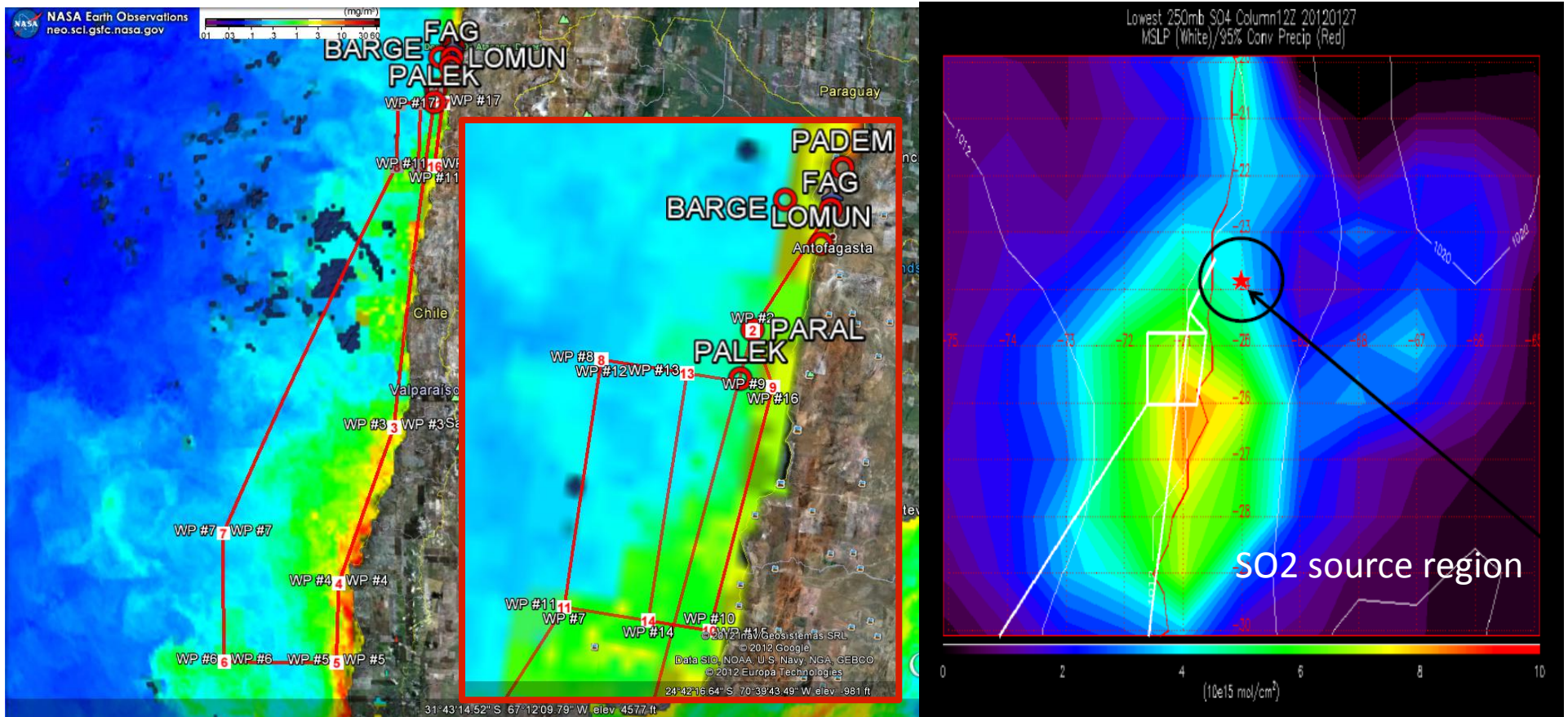


# Glyoxal (CHOCHO) dSCDs, EA = 0; altitude < 800m





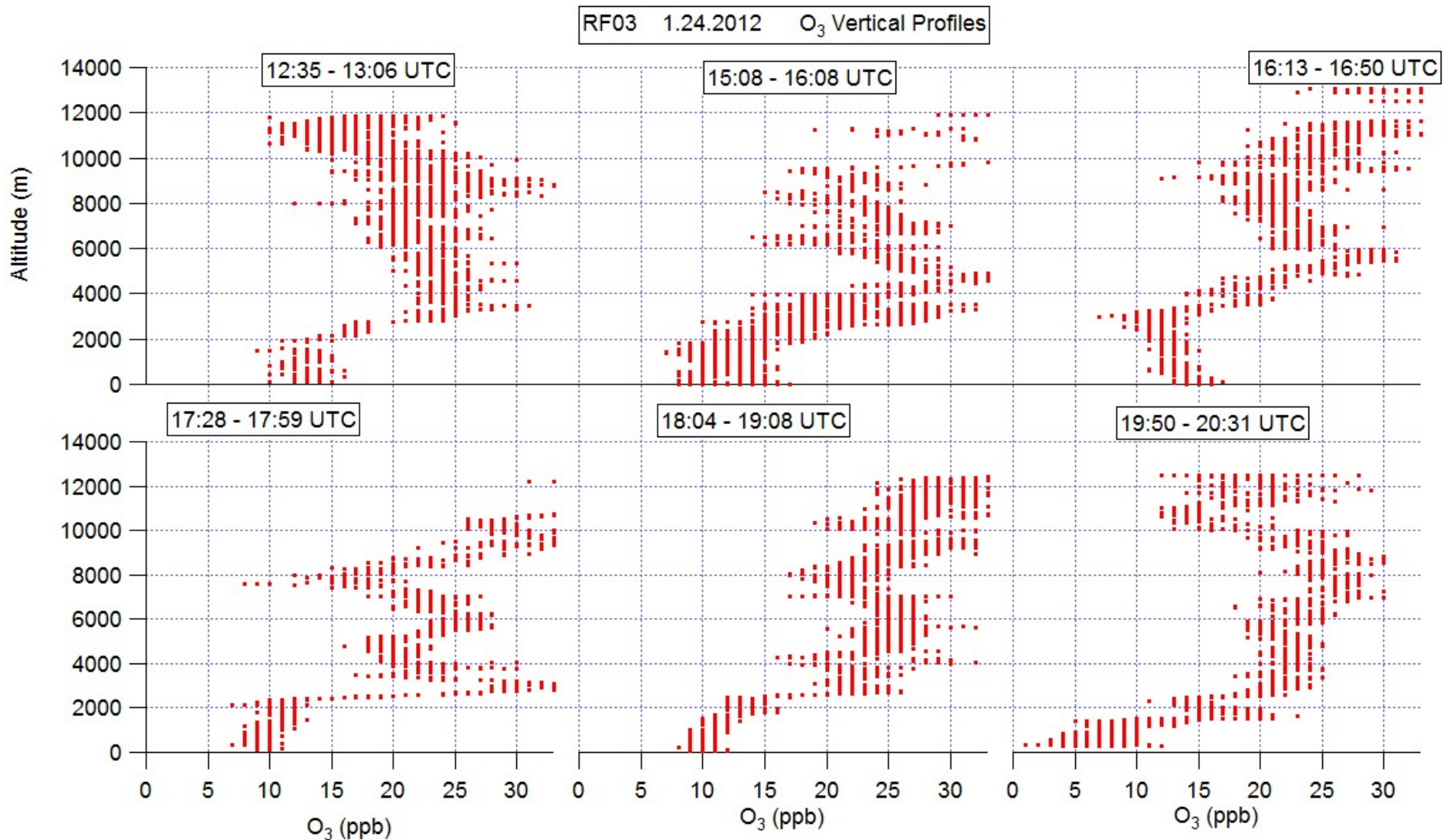
# RF04 – 27 Jan – Chilean Upwelling, Marine Deep Convection, Local Focus



Local study domain: WRF domain 1x1km<sup>2</sup> simulations (Jim)



# Aeros – routine archive of plots in FC



Email [Michael.lechner@colorado.edu](mailto:Michael.lechner@colorado.edu) for variables you liked to have plotted routinely