

Millstone Hill experiment choices

67 meter zenith antenna and a 46 meter fully steerable antenna



Latitude: 42.61°

Longitude: 288.51°

Experiment Type A: Wide Field Scanning

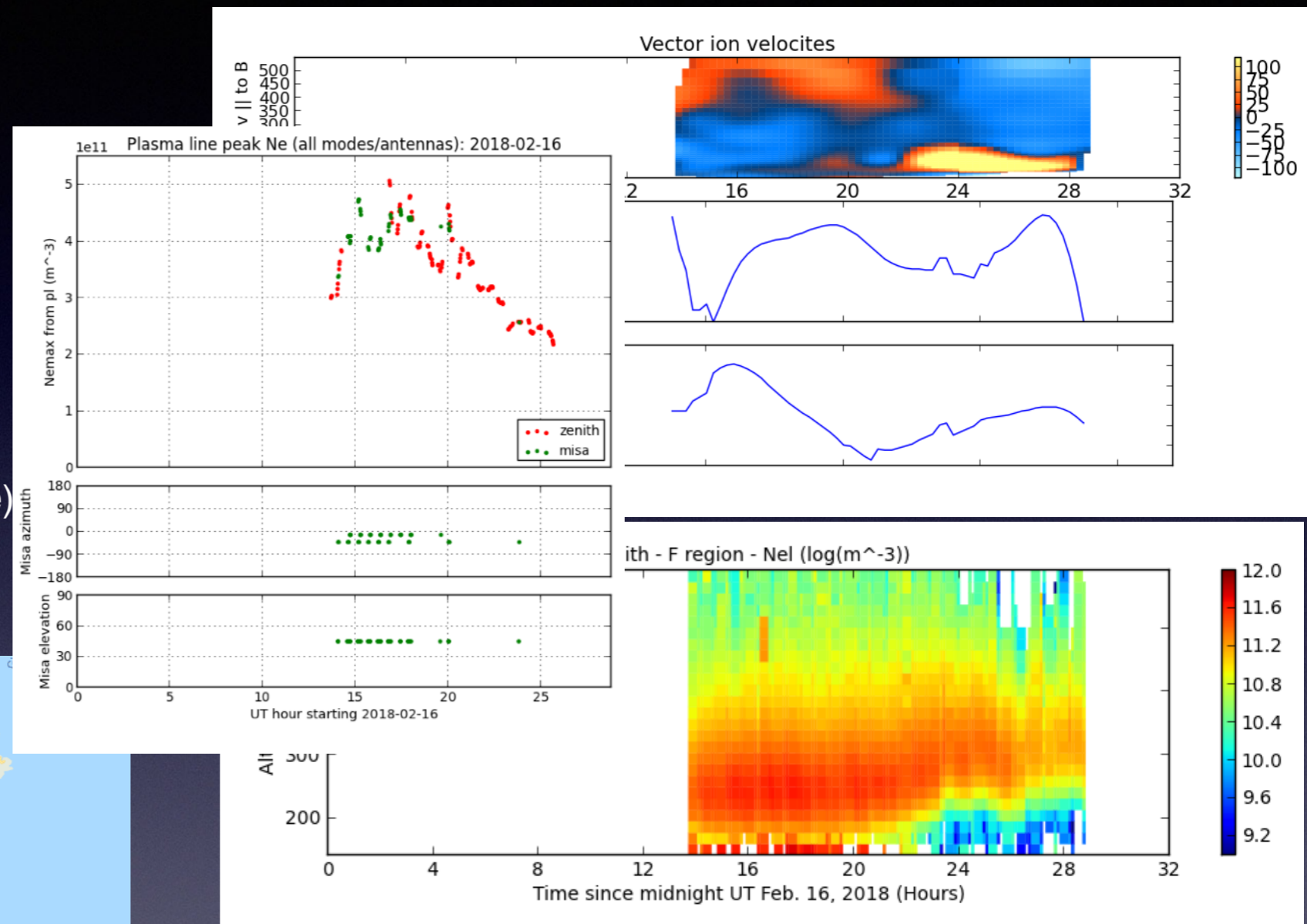
Vertical profiles [zenith],
 regional vectors [45 deg elevation],
 wide field scans [6 deg elevation]

MISA fixed positions on either side of
 magnetic meridian

E, F region

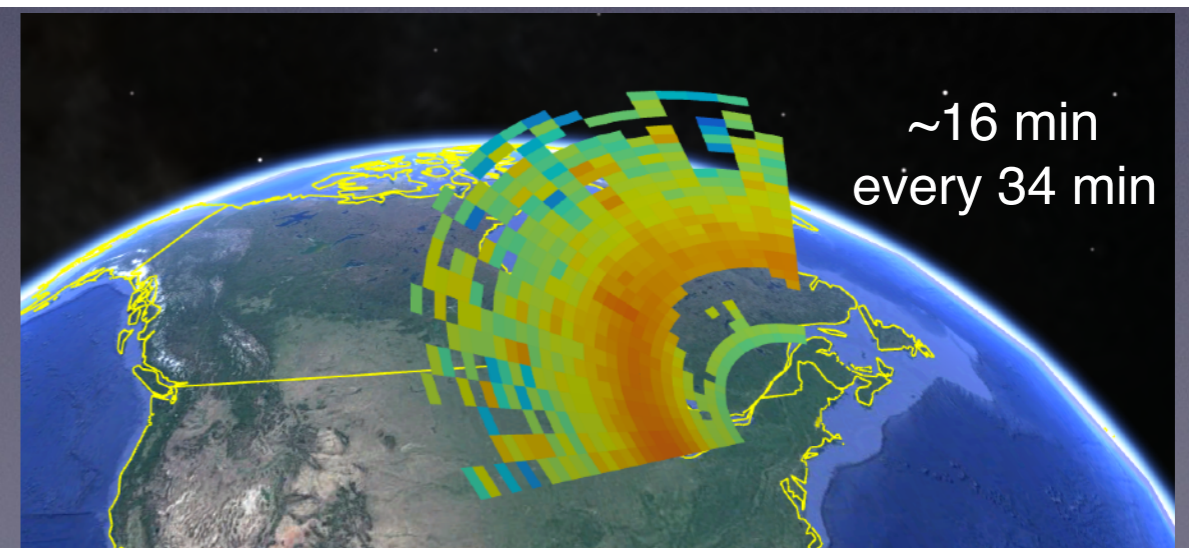
F2 peak high accuracy Langmuir mode
 electron density available (daytime ionosphere)

Experiment cycle time = ~34 minutes



Regional vector
 circle (F region altitudes)

Zenith: 3 minutes
 MISA scans: 35 seconds / 5 degrees
 MISA fixed positions: 3 minutes



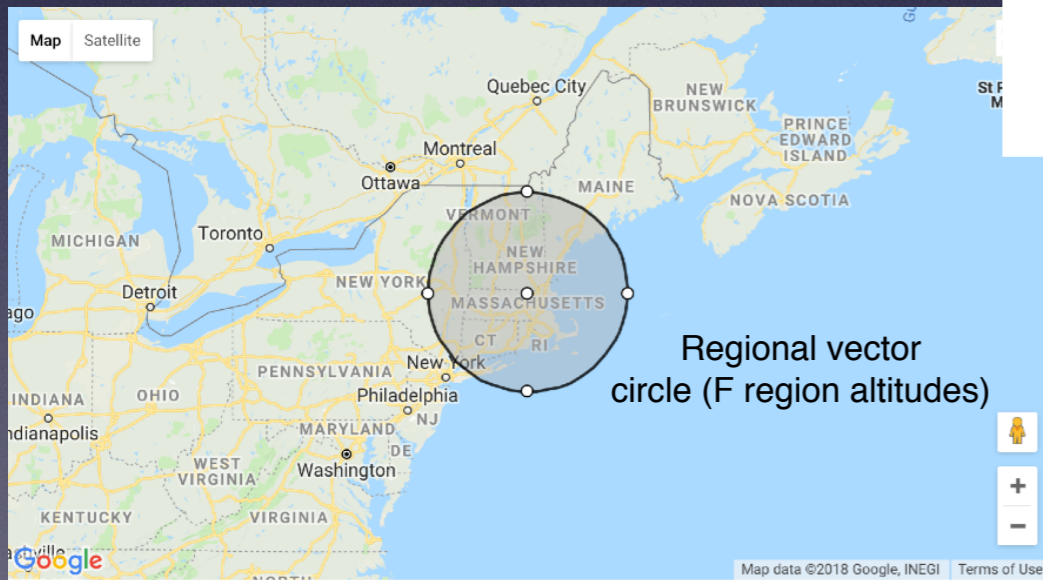
Experiment Type B: Regional Vector + Topside

Vertical profiles [zenith],
regional measurements [45 deg elevation]

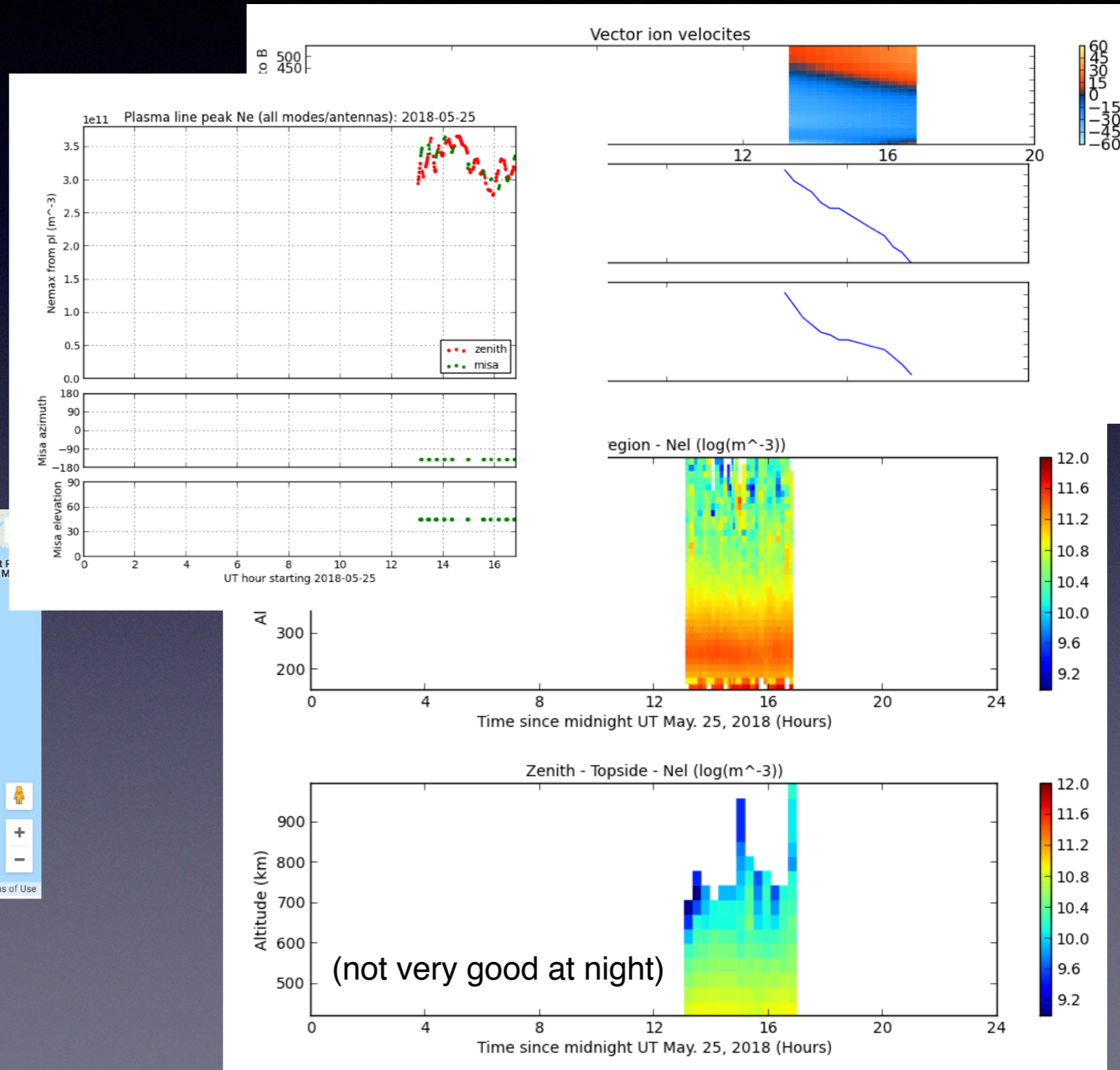
E, F region, topside ionosphere

F2 peak high accuracy Langmuir mode
electron density available (daytime ionosphere)

Experiment cycle time = ~18 minutes



Zenith: 3 minutes
MISA fixed positions: 3 minutes



Experiment Type C: Vertical + Up B

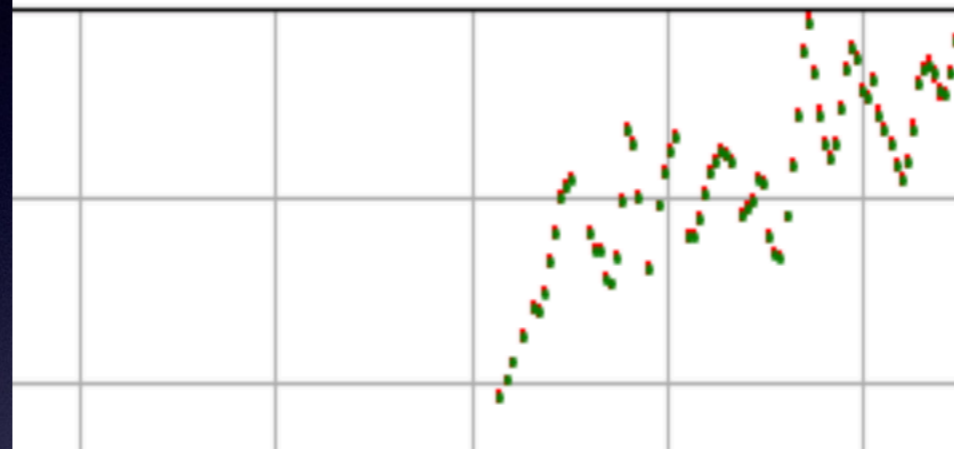
Vertical profiles [zenith; 1.5 minutes],
fixed pointing up B [MISA; 1.5 minutes]

E, F region ionosphere

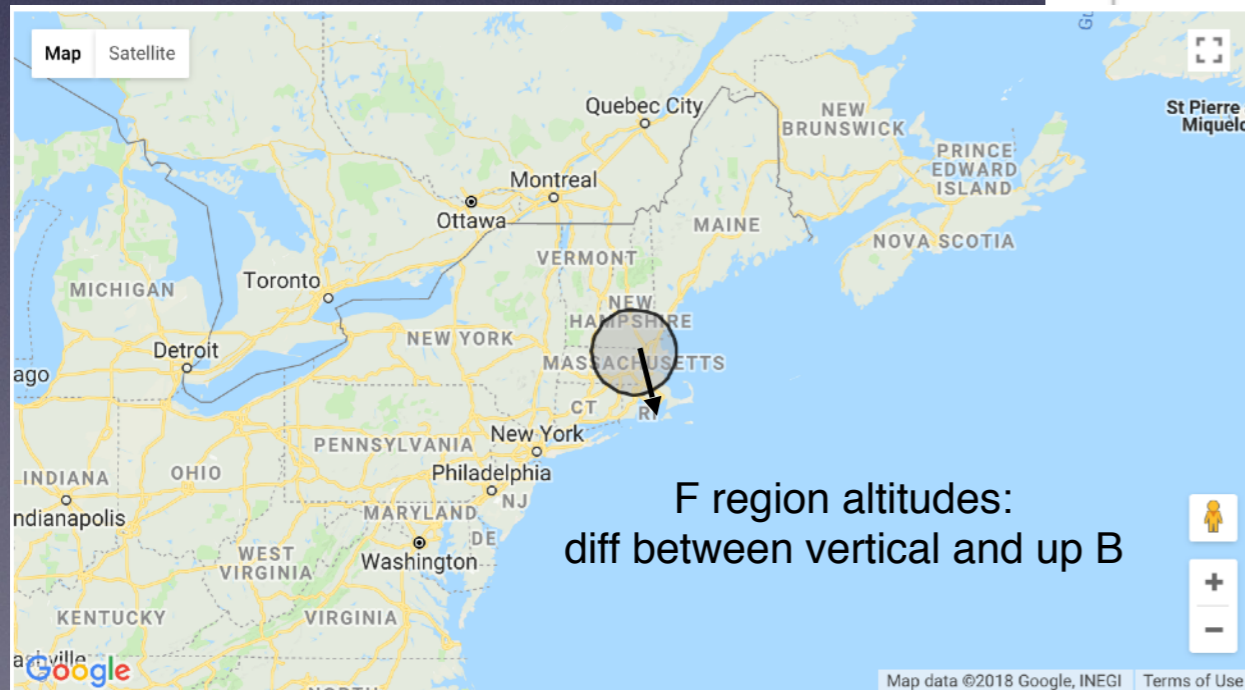
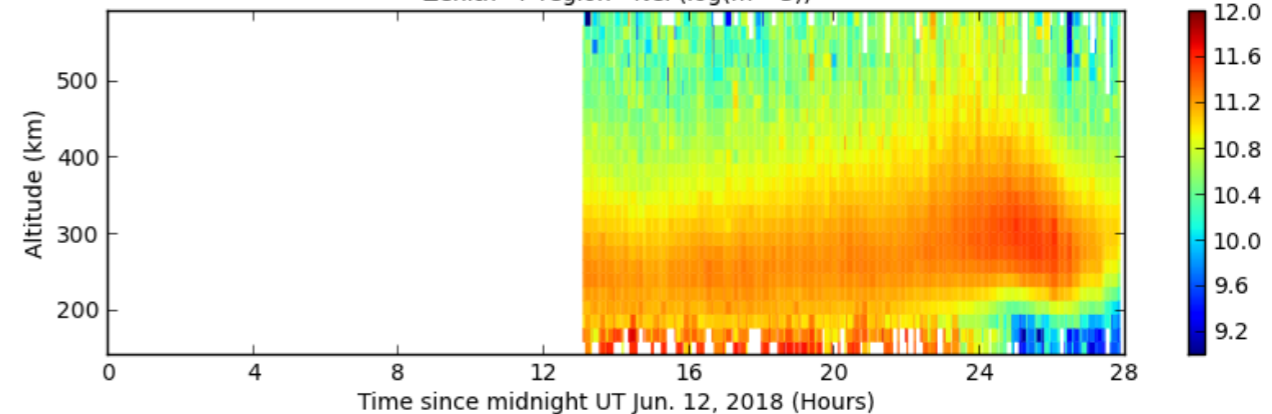
F2 peak high accuracy Langmuir mode
electron density available (daytime)

Experiment cycle time = ~3 minutes

Plasma line N_{max} (m⁻³)



Zenith - F region - N_{el} (log(m⁻³))



Zenith: 3 minutes
MISA up B: 3 minutes