EISCAT modes

- Default exps will be

  VHF: CP6 (manda)

  D region (360m)

  Tristatic at 150km

  UHF: CP1 (beata)

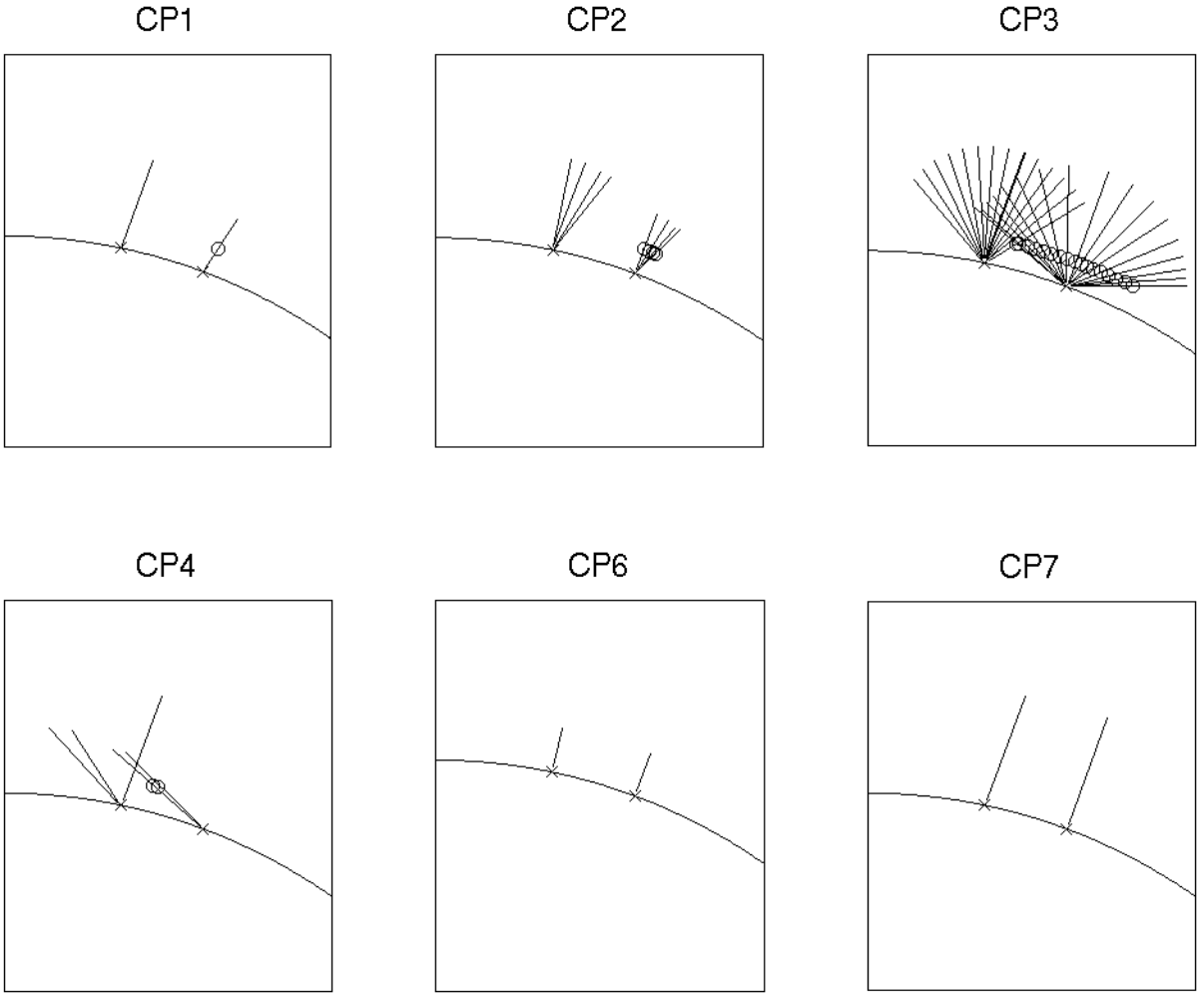
  E+F region (3km)

  Plasma lines

- Interrupts of EPO exps (calibration)

EISCAT Common Programmes

- 6 modes
  - Altitude
    - D region
    - E region
    - F region
    - Topside
  - Antenna modes
    - Fixed
    - Small scan
    - Large scan

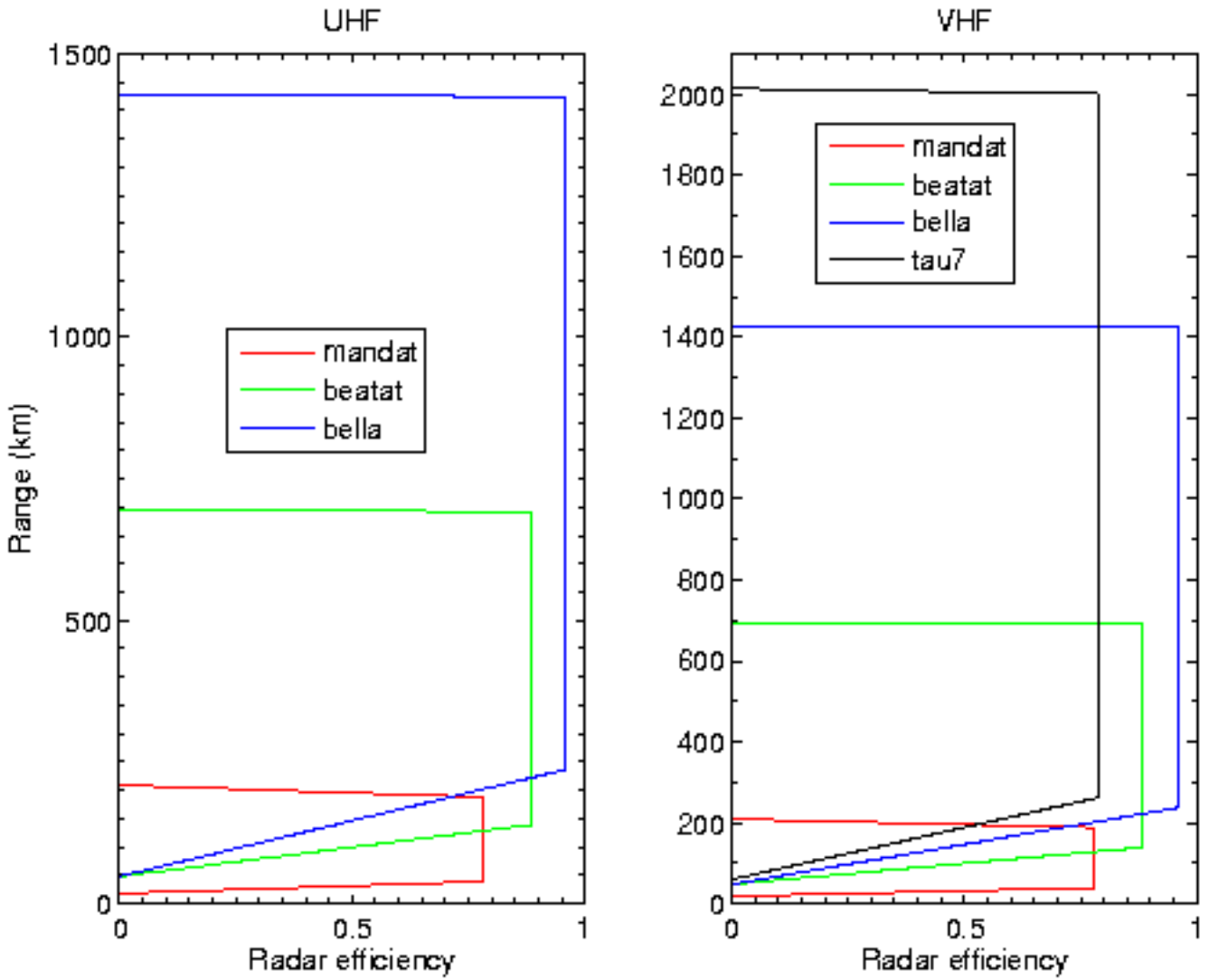


KST experiments

Dsp exp	Type
beata	High elevation, (D)EF region, moderate/high resolution
bella	Low elevation, E+F region, moderate resolution
manda	High elevation, D(EF) region, high resolution
tau7	High/Low elevation, (E)F region +topside, low resolution

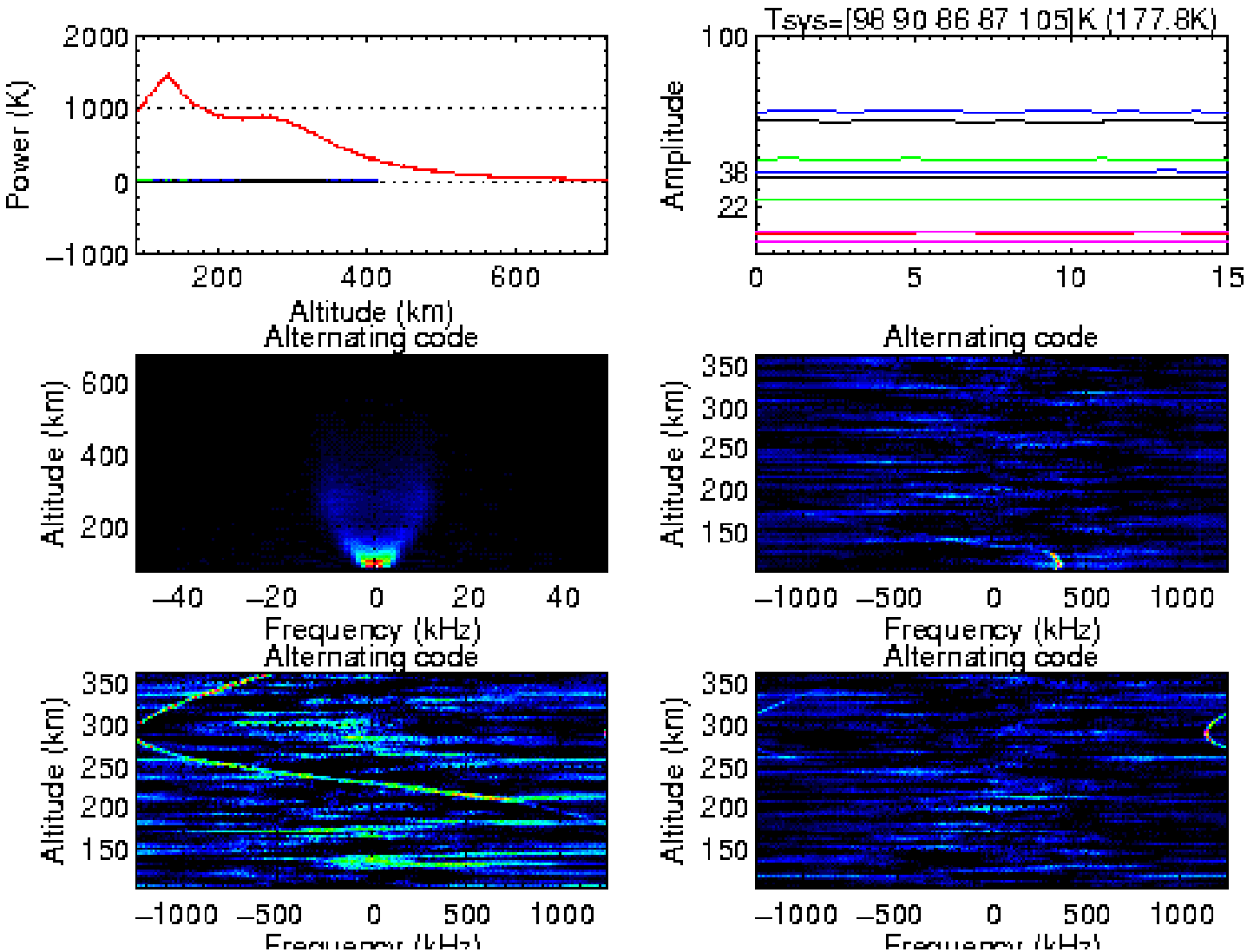
Dsp exp	Radar	Pulses (μs)	Sampling (μs)	Resolution (km)	Ranges (km)	Plasma line	Time resolution (s)
beata	UHF	32x20 AC	10	1.5 – 3	49-694	1x7.4MHz	5
	VHF	32x20 AC	20	3	49-694	(2x2.5MHz)	5
bella	UHF	30x45 AC	15	1.8 – 6.8	49-1428	1x9.8MHz	3.6
	VHF	30x45 AC	45	6.4	54-1340	1x4.9MHz	3.6
manda	UHF/VHF	61x2.4 AC	1.2	0.18-0.36	19-209		4.8
tau7	VHF	two 16x96 AC	12	2 – 14	61-2014		5

KST experiments

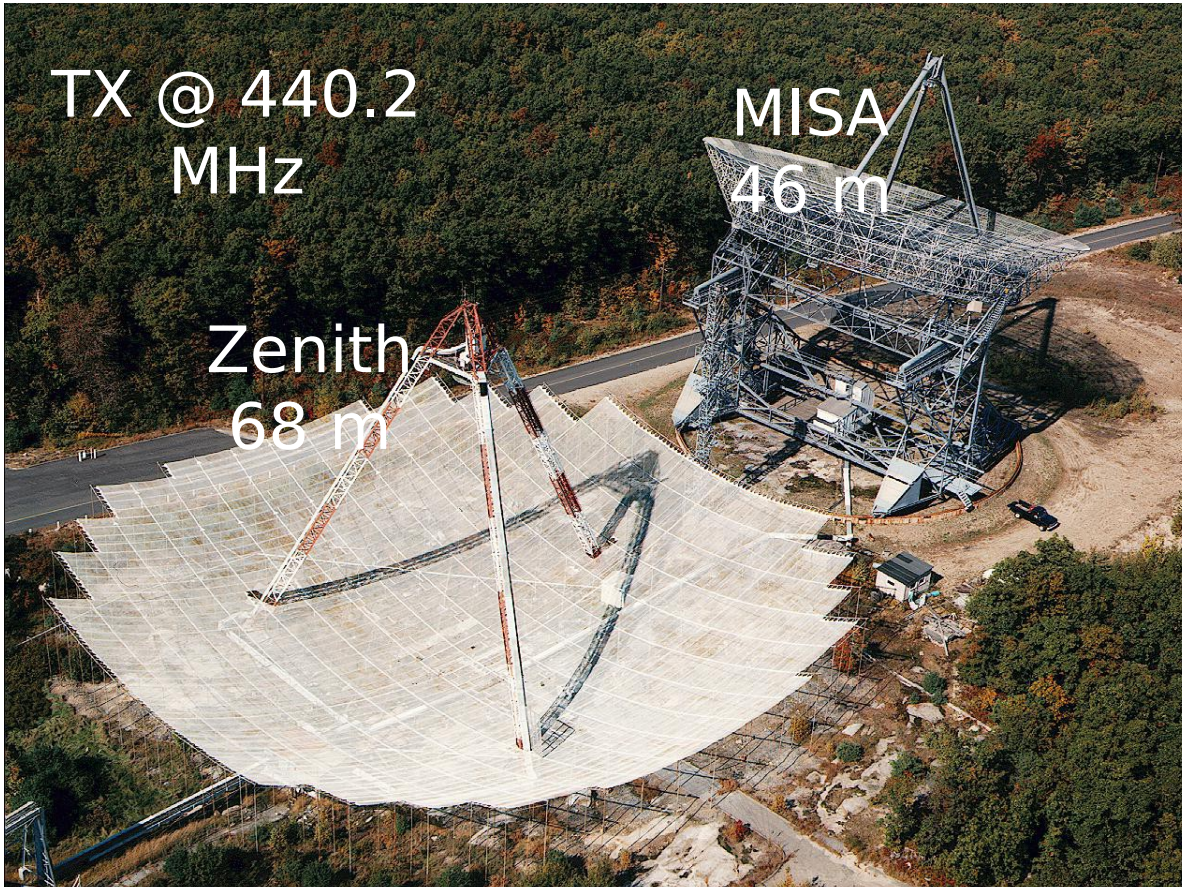


Data example

- Power profile
- Ion line
- Plasma lines



Millstone Hill ISR Mode: Regional Vector Coverage
2014-07-22 20 to 2014-07-23 07 UTC

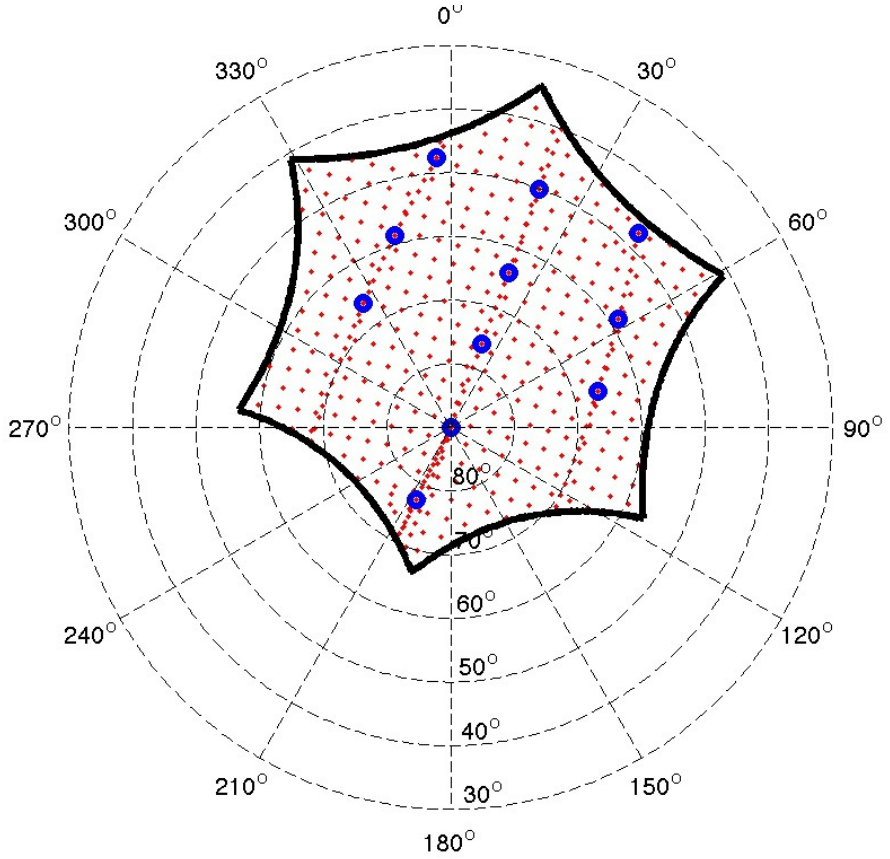


This is an experiment designed to provide rapid time coverage of E,F, and topside region ionospheric parameters in the vicinity of Millstone Hill, in a cone with radius +/- 2 degrees at F region heights. The mode provides vector ion drifts/electric fields as well as electron density, electron and ion temperatures, and ion composition.
Both the zenith and steerable MISA antennas are used. Integration time in any one position is 4 minutes with the possibility for shorter integrations in post-experiment analysis.

1. Zenith: 960 usec uncoded pulse : 4 minutes [Topside]
2. Zenith: 480 usec alternating code / uncoded pulse: 4 minutes [E, F region]
3. MISA @ 45 deg el, North: 480 usec alternating code / uncoded pulse: 4 minutes [E, F region]
4. Zenith: 480 usec alternating code / uncoded pulse: 4 minutes [E, F region]
5. MISA @ 45 deg el, West: 480 usec alternating code / uncoded pulse: 4 minutes [E, F region]

PFISR Mode for 2014 Student Workshop

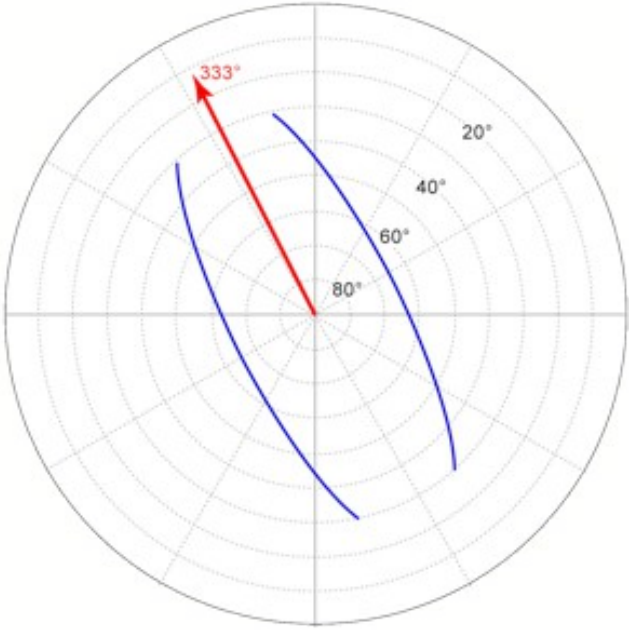
This mode consists of 11 look directions, including a vertical beam, an up-B-looking beam, and 9 beams directed towards the North. The mode utilizes E-region (AC) and F-region (LP) pulses, switching look-directions on a pulse-to-pulse basis. Vector ion flows are resolved by combining the line-of-sight velocities from all beams.

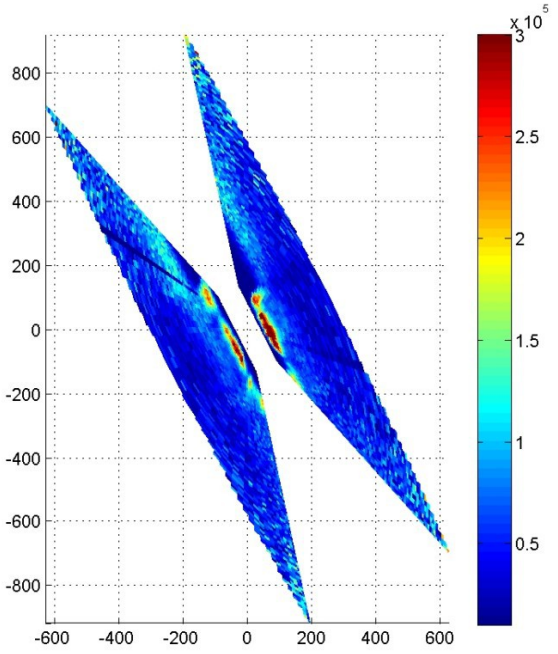


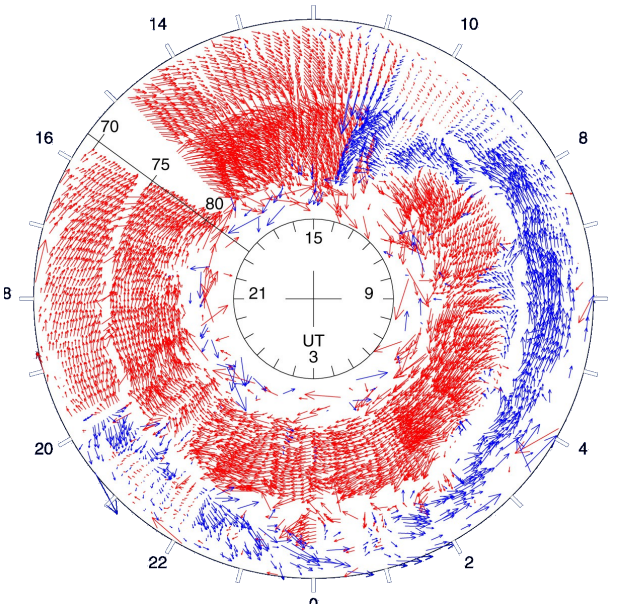
- 11 beam (look directions)
- 330 us long pulse / 20 us sampling
- 480 us alternating code / 10 us sampling
- Dual frequency plasma line channels

Mode for Sondrestrom

Full composite-scans will be run at the Sondrestrom radar tonight. It consist of 2 alternating elevation scans offset to the east and west respectively. This will give convection vs latitude with 5-minute resolution, in addition to standard parameter. 320 us longpulses.







Typical modes: scans