

## EISCAT SP-FI experiments October 2007

### UHF

- Remember to move the **tristatic measurement point** of remotes close to the F region maximum! All UHF experiments are tri-static.
- Always field-aligned in Tromso

#### 1. Active aurora

- **arc1** experiment
- good temporal resol. of 0.44 s, spatial resol. 0.9 km
- bad: high start range: 96 km
- good for less energetic evening precipitation (before 21:30 UT = 00 MLT)

#### 2. Energetic precipitation

- **manda** experiment
- start altitude 58 km, captures lower E and D region precipitation with good range resolution
- temporal resol. only 6 s, spatial resol. 0.45 km
- bad: gap in the F-region maximum, not good for tristatic measurement => tristatic could be tried to be measured at about 210 km altitude (above the gap there is probably not much ionization)
- good especially for morning sector and pulsating aurora

#### 3. Quiet conditions

- **tau2pl** (or new **beata** if tested for tristatic)
- temporal resol. 5 s, spatial resol. 5 km (beata 3 km)
- large range (50 – 700 km) and good for electric field
- maybe Markku's experiment is run during quiet/cloudy conditions(?)

**Conclusion:** Both arc1 and manda data are desirable. Some runs could be measured by using only one of the measurements (either arc1 or manda). Some run(s) could be such that one starts with arc1 and changes around magnetic midnight to manda.

### VHF

- **tau8** experiment
- el= 30 deg, az= 359.5 deg (to geographic north)

### ESR

- **taro** 2:1 (32m:42m) experiment with ranges 46-812 km, resol. 6.4 s (also **hilde** possible, there 1:1 ratio of pulses, after that next priority is steffe and then tau0)
- az=150 deg (to magnetic south), 2 nights: el=30 deg, 1 night el= 45 deg (1 night: CP-experiment has a priority)