Radiotelescope Observations 7 feb. 2013

Schedule

- (real+hard) **Deadline** for Homework: 14 feb. so you can include data from this second observation run …
- Unfortunately I could not progress in repairing the **Haystack** telescope.
- Therefore, we shall use the **Ground Station** on 432 MHz to observe the Sun …
- We do not split into teams … but let's try it in sections of say 30 min … since we'll stay for the data analysis, we'll have plenty of time:
- With **Dresden** everyone shall have a chance to do a **sky profile**, the **sun**, and the **moon** while someone else runs the **Ground Station**
- Please feel free to make your own decisions and experiment!!!
- The **Haystack** is available in simulation mode for anyone who desires …
- **Data Analysis** we can do and discuss in parallel … no formal session!

Dresden: sun ➜ determine solar temperature and radio flux. (Homework: Compare flux with NOAA data)

1. 5 min calibration
2. manual search for sun
3. 15 min half-scan, followed by sky
4. 5 min calibration

Dresden: moon ➜ determine lunar temperature

1. 5 min calibration
2. manual search for moon (is more tricky!)
3. 15 min half-scan, followed by sky
4. (5 min calibration)

Dresden: sky ➜ separate receiver noise level from atmospheric noise (for moon and sun observation)

1. 5 min calibration
2. 5 min sky @ EL=10°
3. 5 min sky @ EL=20°
4. 5 min sky @ EL=30°
5. 5 min sky @ EL=60°
6. 5 min calibration

GroundStation: sun with offset ➜ measure coronal radio flux, (Compare flux with NOAA data?)

1. Move to AZ and EL of sun (read from Dresden or Haystack GUI)
2. Measure signal for one full screen length
3. Move down in AZ by 90°
4. Measure signal for one full screen length
5. Move to sun … repeat as often as possible

Haystack: try whatever you like … (it may be impossible with the simulator …☺, but I might be able to give you some real data, so just ask me)