# Assignment: Coordinates

**Question 1:**
What is the longitude and latitude of HartRAO ?

**Question 2:**
Complete the following table:

| Observer's Latitude | Altitude of North Celestial Pole (Az.=0) | Altitude of South Celestial Pole (Az.=180) | Altitude of Celestial Equator (Az.= 0 or 180) | Declination of North horizon | Declination of South horizon | Declination of Zenith |
|---|---|---|---|---|---|---|
| 0 (Ecuador) | | | | | | |
| 30 (Caribbean) | | | | | | |
| 60 (Canada) | | | | | | |
| 90 (North Pole) | | | | | | |

**Question 3:**
On Wednesday 14 March 2018 at 01h00 UT the Local Sidereal Time (LST) at HartRAO will be approximately 14h23m. We will do drift scan observations of Hydra A, one of the radio galaxies used for flux calibration, whose coordinates are approximately
RA 09h18m DEC -12°05'

a) What is the Local Hour Angle (HA) of Hydra A at 12h00 UT?
b) What will be the best time (LST and approximate local time) to observe Hydra A?

**Question 4:**
On Monday 16 May 2019 we will observe the Sun using a small satellite dish.

a) Where in the sky will the Sun be between 09:00 and 11:00 local time. Create a table with the azimuth and elevation of the Sun for every 10 min using
http://ssd.jpl.nasa.gov/horizons.cgi#top

From your terminal window: telnet horizons.jpl.nasa.gov 6775
> Sun
Q to quit