Guide for **Understanding the Overpass Schedule**

When can we do an observation?

1. Header

The first line gives the name and position of the site for which the output has been produced. It should always correspond to your city and lat/long. Note that longitude can be measured either east or west to the 180th meridian (180 degrees) or 0 to 360 degrees East. For example, the longitude of NASA Langley can be reported three different ways: 76 W, or -76 E, or 284 E. The latter method is the one used in the overpass report.

2. The second line identifies the satellite whose orbit was computed.

EXAMPLE: **SATELLITE OVERPASS SCHEDULE**

1 Your Town, State, Country lat= ……. long= …….

2 spacecraft is - Terra

3 da	mo	year	universal time **4** hr	mn	**5** local time	**6** viewing zenith	sat azm fr. N	relative azimuth	solar zenith	sat. lat	position long	sat dir
6	2	2002	10	34	11h34	12.08	100.85	60.54	61.36	43.61	9.59	des
7	2	2002	11	17	12h17	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]	[illegible]
7	2	2002	11	40	12h40							
8	2	2002	10	22	11h22							
9	2	2002	11	5	12h 5							
10	2	2002	10	10	11h10							
10	2	2002	11	47	10h47							
11	2	2002	10	53	11h53							
12	2	2002	9	58	10h58							
12	2	2002	11	35	10h35							
13	2	2002	10	40	11h40							
14	2	2002	9	45	10h45							

3. Date

The first 3 columns give you
the date of the satellite overpass: da mo year
da - is the day of the month
mo - is the month (i.e. 2 is February)
year- is the year

Time

The next 2 columns tell you what time the satellite passes over:

4. universal time (UT) (Help with Time Zone *http://www.worldtimeserver.com/)*
hr is the hour of the day in UT
mn is the minute of the hour in UT

5. local time is the time at which the satellite passes over in your local time. This is the time you need to do your observation. *This is given on a 24 hour clock. (13h27 means 13 hours and 27 minutes or 1:27 pm) This can be either Local Standard Time or Local Daylight Time (if Daylight Saving Time is in effect).* *http://webexhibits.org/daylightsaving/*

*Please report **Universal Time** and Local Time on your observation report.*

6. Position

The next 7 columns give information about the positions of the sun and the satellite. **This information is not needed to make an observation**, but may be useful if you want to know where the satellite is actually located. **view zenith** measured in degrees, is the angle between the local zenith and the line of sight to the satellite. With **sat azm fr. N**, the Satellite Azimuth from North, also measured in degrees, it tells you where in the sky to look for the position of the spacecraft. Note that you will most likely not be able to actually see the spacecraft during the day (see the FAQ on the web). **relative azimuth** is the difference between the satellite and solar azimuths from north. **solar zenith** is similar to viewing zenith; but gives the location of the sun. You should be able to see the sun unless the clouds are opaque. **satellite position** is measured in degrees of latitude and longitude. This is the position on the Earth of the point directly below the spacecraft. This will rarely be exactly at your location. The instruments on the satellite scan around as the spacecraft orbits, so they can see a wider area than just the point directly below them. **sat dir** is the satellite direction. **asc** stands for ascending, which means the satellite is moving from south to north. **des** stands for descending, meaning the satellite is moving from north to south.
http://science-edu.larc.nasa.gov/SCOOL/overpass.html

There may, as in this example, be more than one overpass each day.
See Details at http://science-edu.larc.nasa.gov/SCOOL/polaroverpasses.html
You can pick the most convenient overpass to fit your schedule; or you can use a different overpass time with different classes. The Terra (EOS-AM) spacecraft covers the globe daily with an overpass time around 10:30, usually before noon local time. After launch, the Aqua (EOS-PM) spacecraft will cover the globe daily with an overpass time around 13:30 in the afternoon.

Remember you can request a Satellite Overpass Schedule on the website. http://scool.larc.nasa.gov/ Select "When to observe" then click on "Overpass Calculator" OR , write, call, or E-mail scool@lists.nasa.gov to request a new overpass schedule. Diurnal cycle observations are welcome too. http://science-edu.larc.nasa.gov/SCOOL/diurnal.html