



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			5 6								
			universal	viewing	sat	azm	relative	solar	sat.	position	sat
3 Mo Day Year			4 local time	time	zenith	fr. N	azimuth	zenith	lat	long	dir
			hr	mn							
2	6	2002	11:34	10 34	12.08	100.85	60.54	61.36	43.61	9.59	des
2	7	2002	12:17	11 17	67.11	92.67	53.47	65.48	49.14	93.98	1
2	7	2002	12:40	11 40							
2	8	2002	11:22	10 22							
2	9	2002	12: 05	11 5							
2	10	2002	11:10	10 10							
2	10	2002	10:47	11 47							
2	11	2002	11:53	10 53							
2	12	2002	10:58	9 58							
2	12	2002	10:35	11 35							
2	13	2002	11:40	10 40							
2	14	2002	10:45	9 45							

3. Date

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

Time

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

4. 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/>

5. 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

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/SCOOOL/overpass.html>

There may, as in this example, be more than one overpass each day. See Details at <http://science-edu.larc.nasa.gov/SCOOOL/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. The Aqua and NPP (EOS-PM) spacecrafts 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 "For Participants" then click on "Get Overpass Times" 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/SCOOOL/diurnal.html>