

# Satellite operating

Chapter 6.6





## **International Space Station (ISS)**

ISS has onboard 2m and 70cm transceivers

Call sign NA1SS Uplink: 145.990 MHz (67.0 Hz PL), Downlink: 145.800 MHz

Cross band repeater Uplink : 145.990 MHz (67.0 Hz PL), Downlink: 437.800 MHz

Also running SSTV special events

LEO – Low Earth Orbit - about 250 miles from the Earth surface - around the world in 90 minutes





### Other amateur satellites

50++ OSCAR satellites since 1961

Orbiting Satellite Carrying Amateur Radio

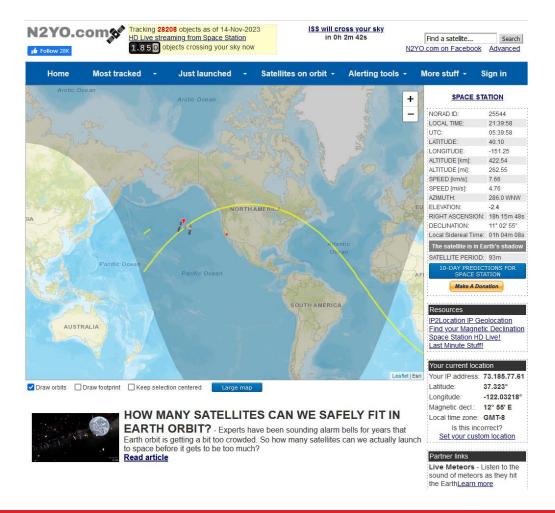
Anyone may listen – even with no license

License required to transmit to the satellite (uplink)

#### **Keplerian Elements**

- The data points needed to calculate the position of a satellite
- Many tracking programs to choose from

Online: n2yo.com





## **Satellite Communications**

Find it : Listen for Beacon - periodically sending ID

- usually using CW or RTTY

Some transmit telemetry data - includes status and health of the satellite

The "mode" of a satellite is "V/V", "V/U", "U/V" or "U/U"

- Refers to uplink / downlink band
- So "V/U" means VHF uplink, UHF downlink

The modulation mode may be SSB, FM, CW or Data

Avoid excessive uplink power.

Satellites may tumble, causing "spin fading"





## FIND MORE ABOUT SIERRA FOOTHILLS AMATEUR RADIO CLUB www.w6ek.org