RINEX Data Visualization

For Observation and Navigation data

Software: RTKLIB 2.4.2 b11. RTKPLOT

Goal for this tutorial

- Visualize RAW RINEX data
  - Easy to examine your raw data with RTKPLOT

RTKLIB 2.4.2
http://www.rtklib.com/

RTKLIB 2.4.2 manual
http://www.rtklib.com/prog/manual_2.4.2.pdf

RINEX 3.02 (The Receiver Independent Exchange Format Version 3.02)
ftp://igs.org/pub/data/format/rinex302.pdf
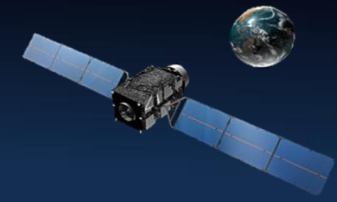

RTKLIB 2.4.2 manual

RTKLIB ver. 2.4.2 Manual

3.7 View and Plot Solutions with RTKPLOT

RTKLIB contains the AP RTKPLOT to view and plot the positionig solutions by RTKPOST and RTKNAVI with graphical user interface. RTKPLOT also accepts general NMEA 0183 files or streams to generate the solution plot.
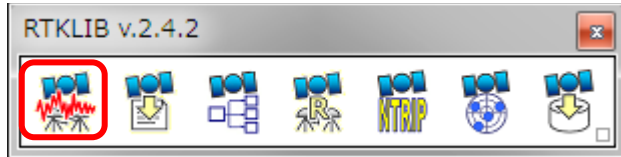
(1) Execute the binary AP file `<install dir>\rtklib_<ver>\bin\rtkplot.exe`. You can see the main window of RTKPLOT. By pushing `Plot...` button or some buttons of RTKPOST and RTKCONV, RTKPLOT is also executed.
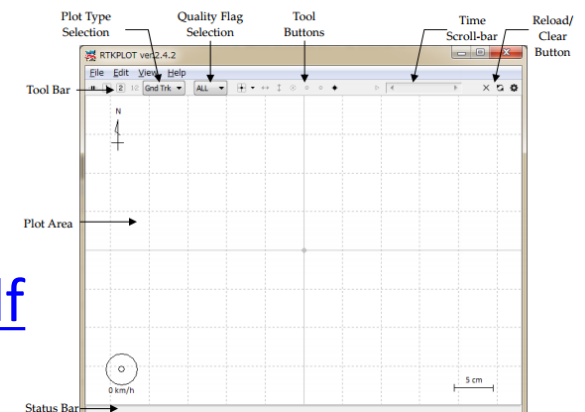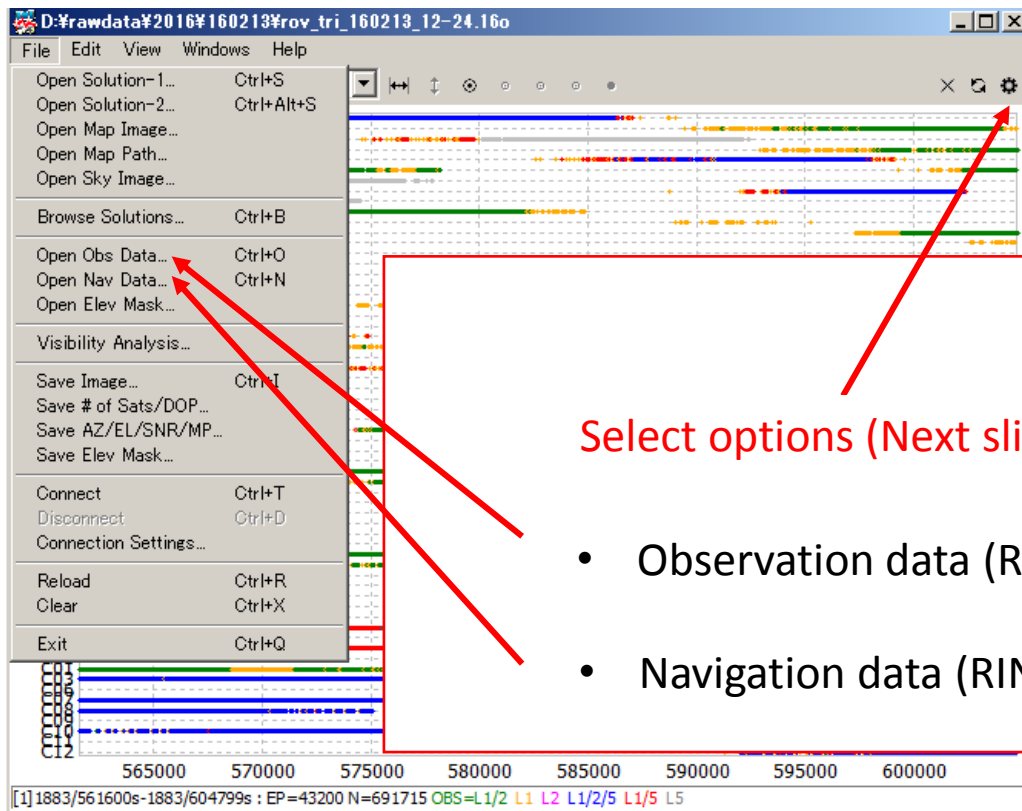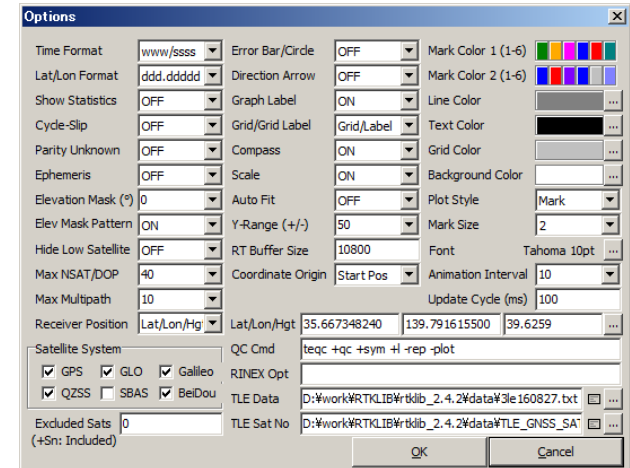
Convert BINEX to RINEX

- ## Open RTKPLOT

- ## Input data

Initial (default) option settings

Select options (Next slide)

- Observation data (RINEX)

- Navigation data (RINEX)

Time format

Elevation mask

Receiver position

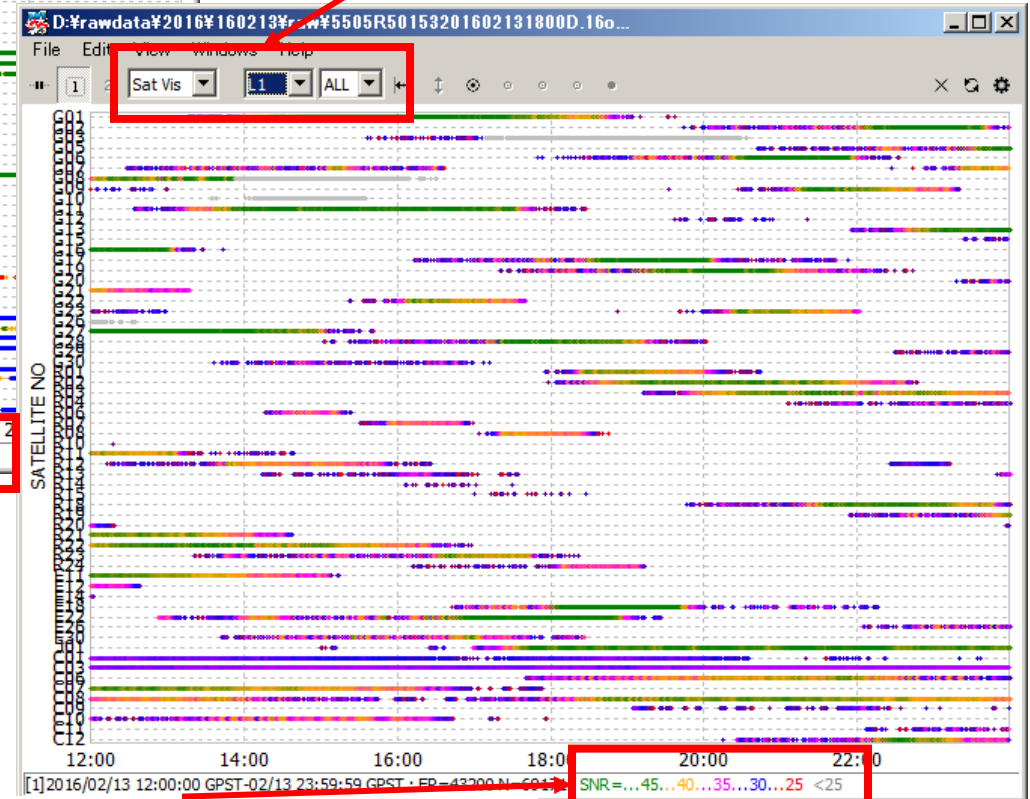Select satellite systems in RINEX data files

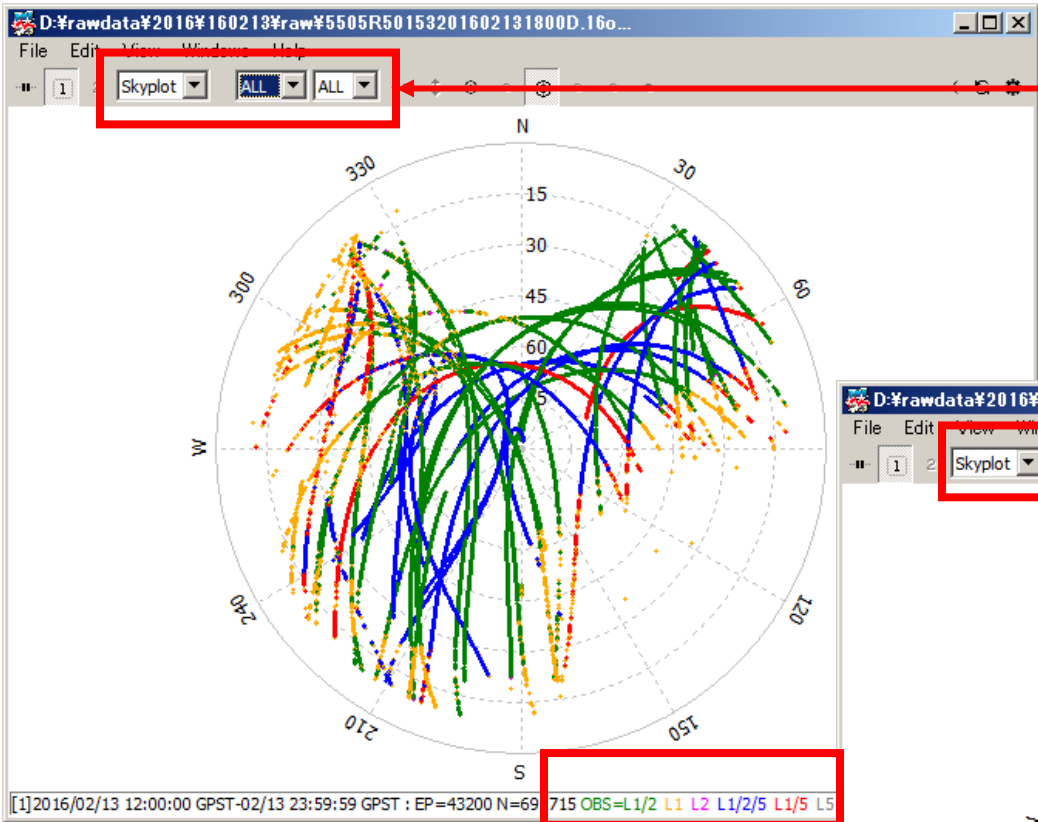# Time Series of Satellite Visibility
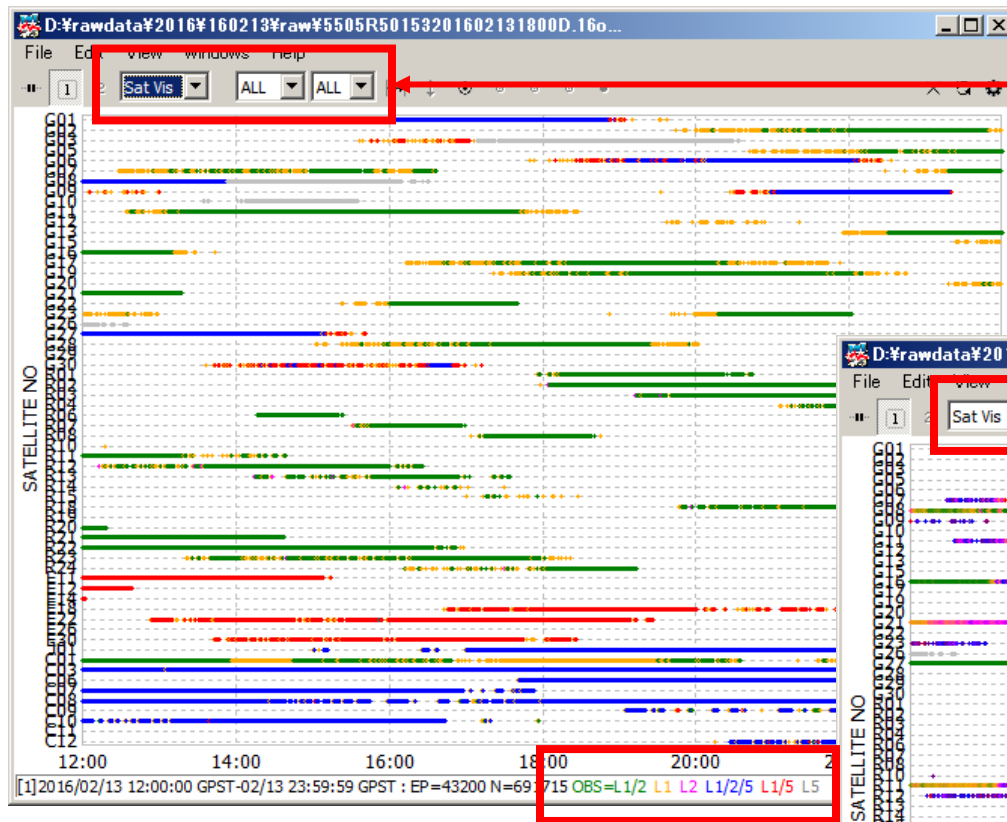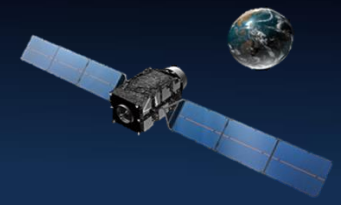
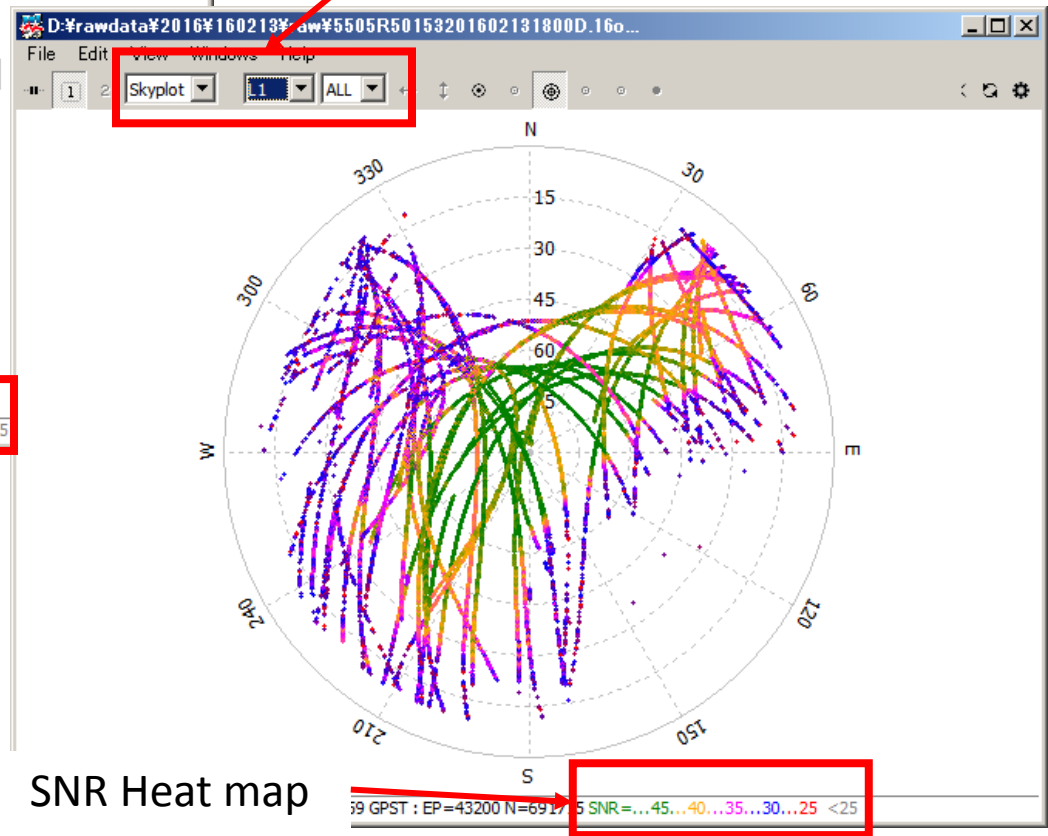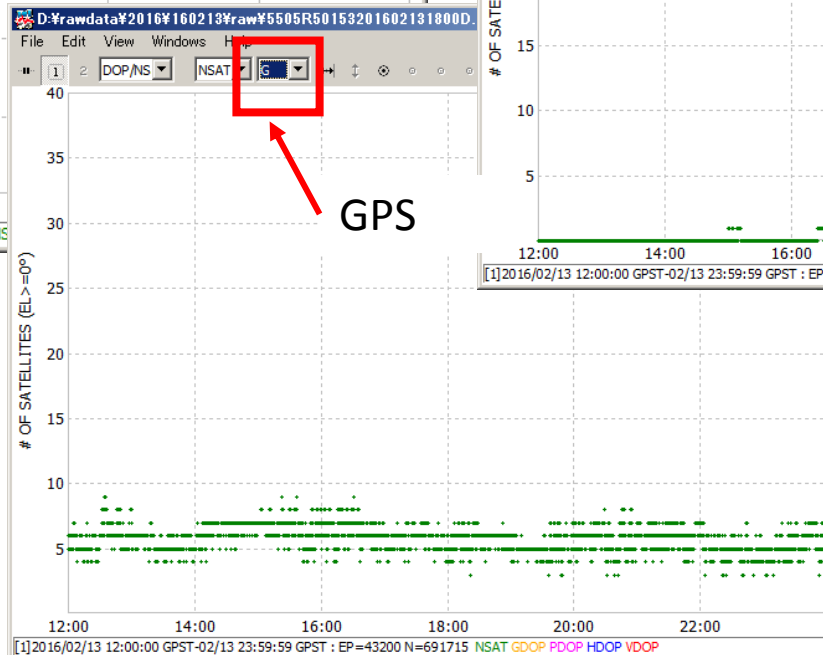Select All satellites

L1 signals for all satellites

Color indicating received frequencies
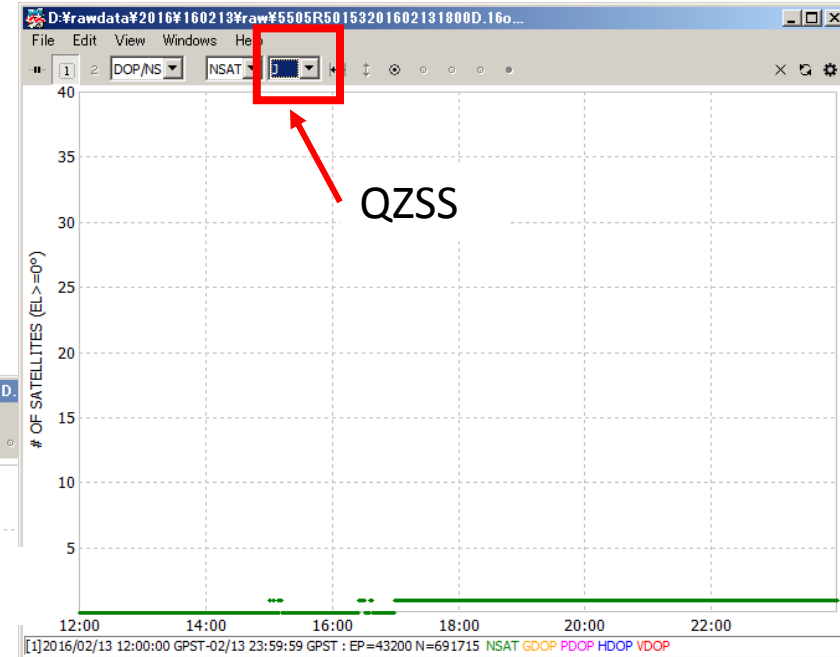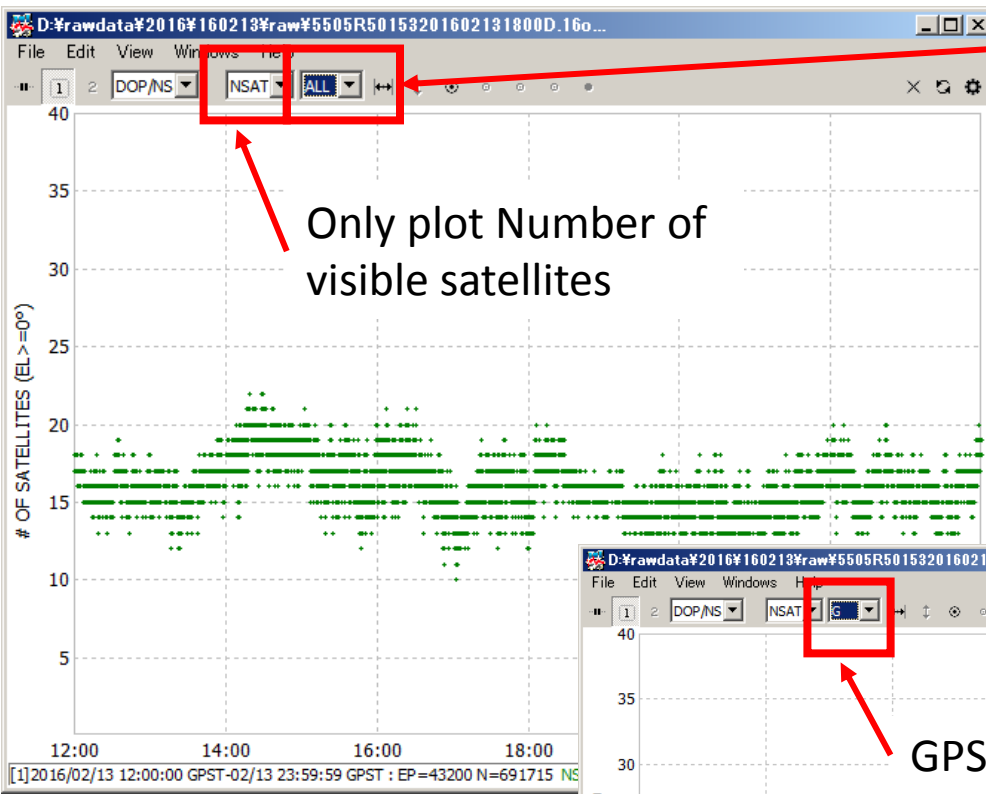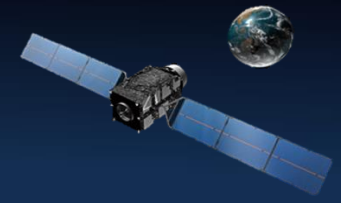
SNR Heat map

Sky Plot

Select All satellites

L1 signals for all satellites

Color indicating received frequencies

SNR Heat map

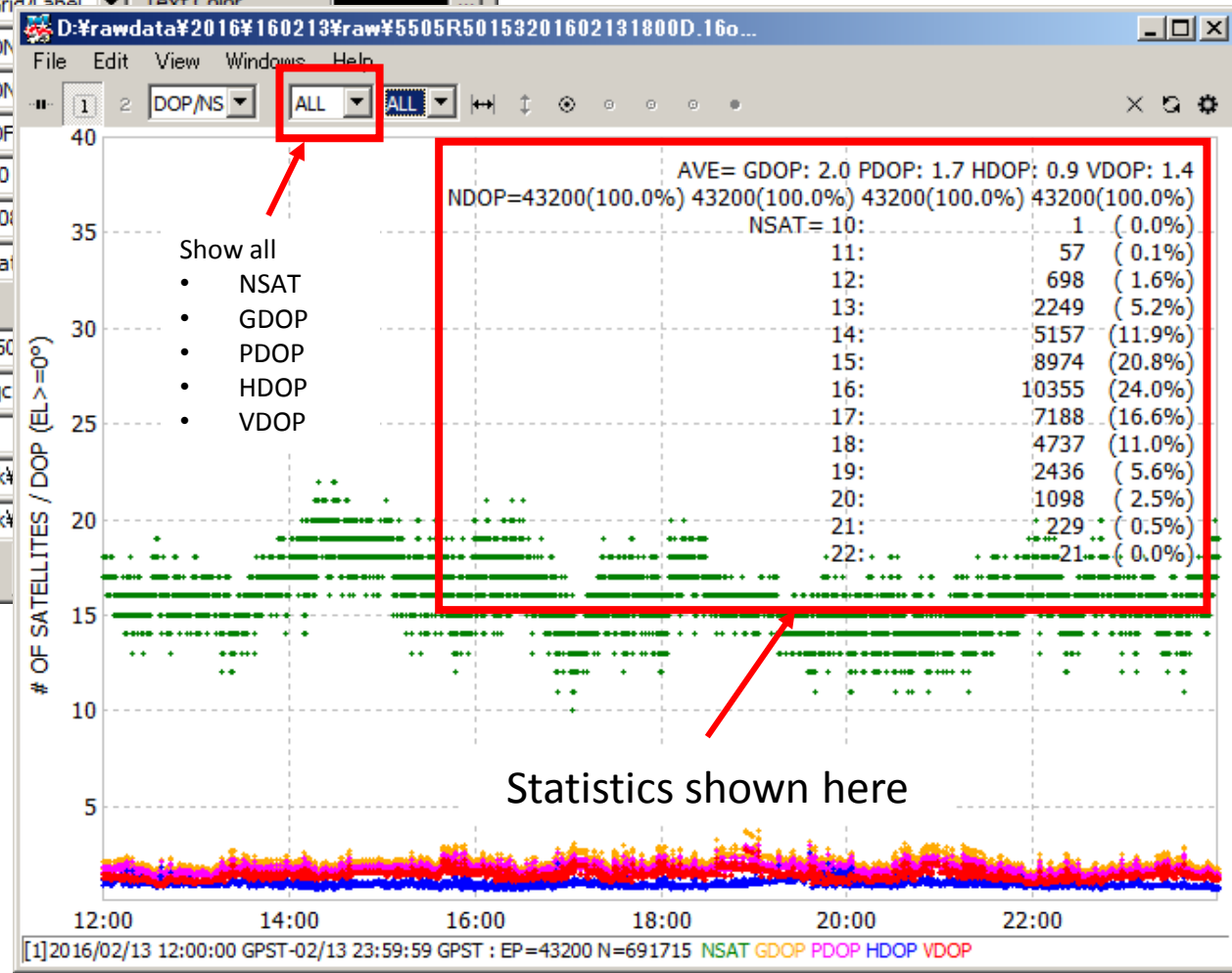# Number of Satellites and DOP

Select All satellites

Only plot Number of visible satellites

QZSS

GPS

Number of Satellites and DOP (Change options)

Select On to Show statistics

Show all
- NSAT
- GDOP
- PDOP
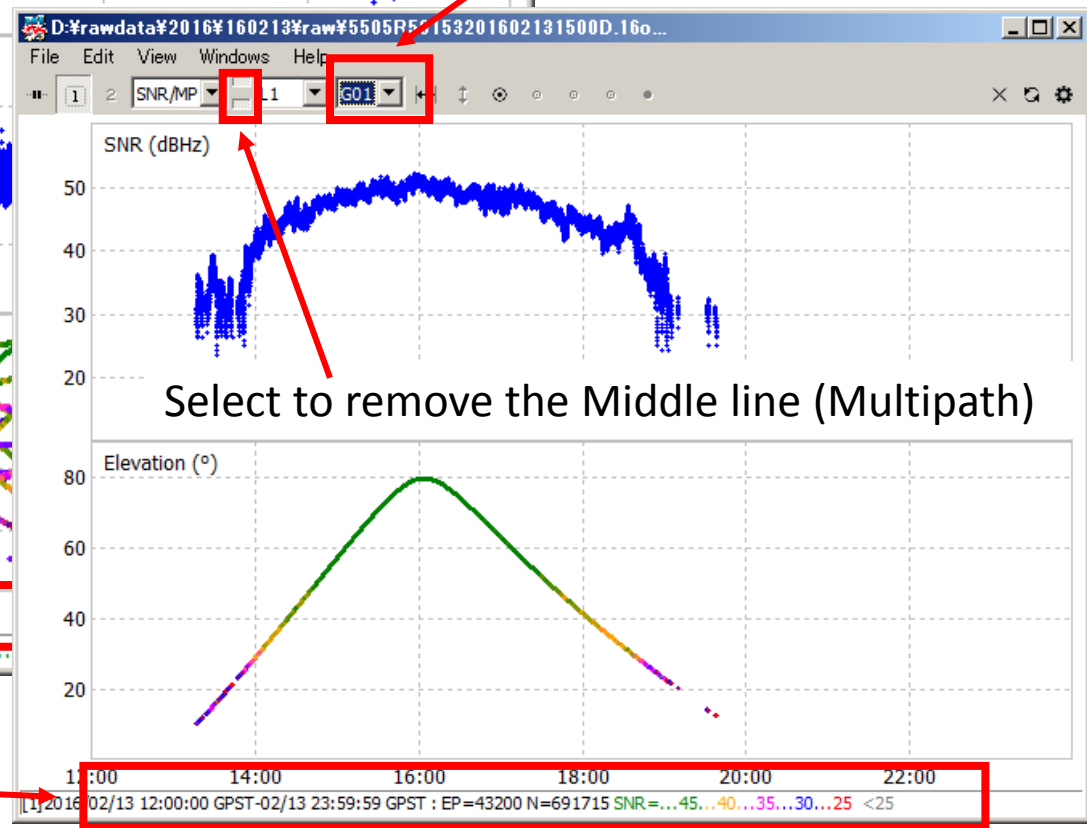- HDOP
- VDOP

Statistics shown here

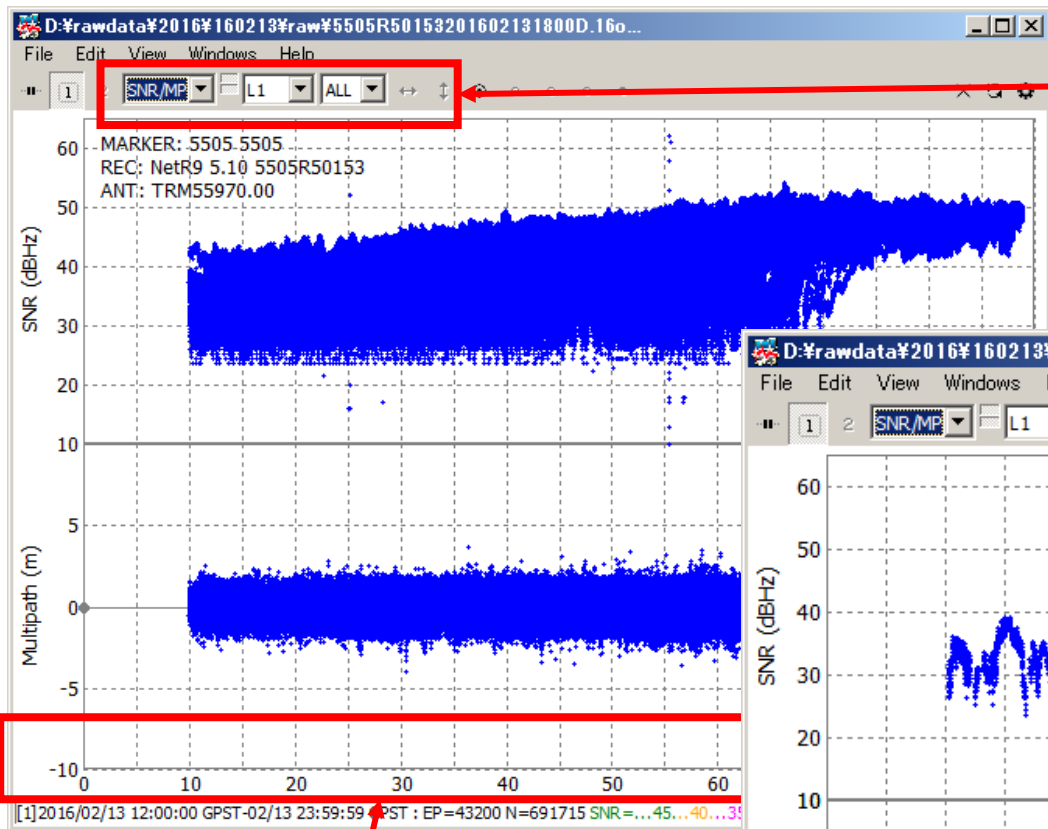# Signal to Noise Ratio / Multipath / Elevation
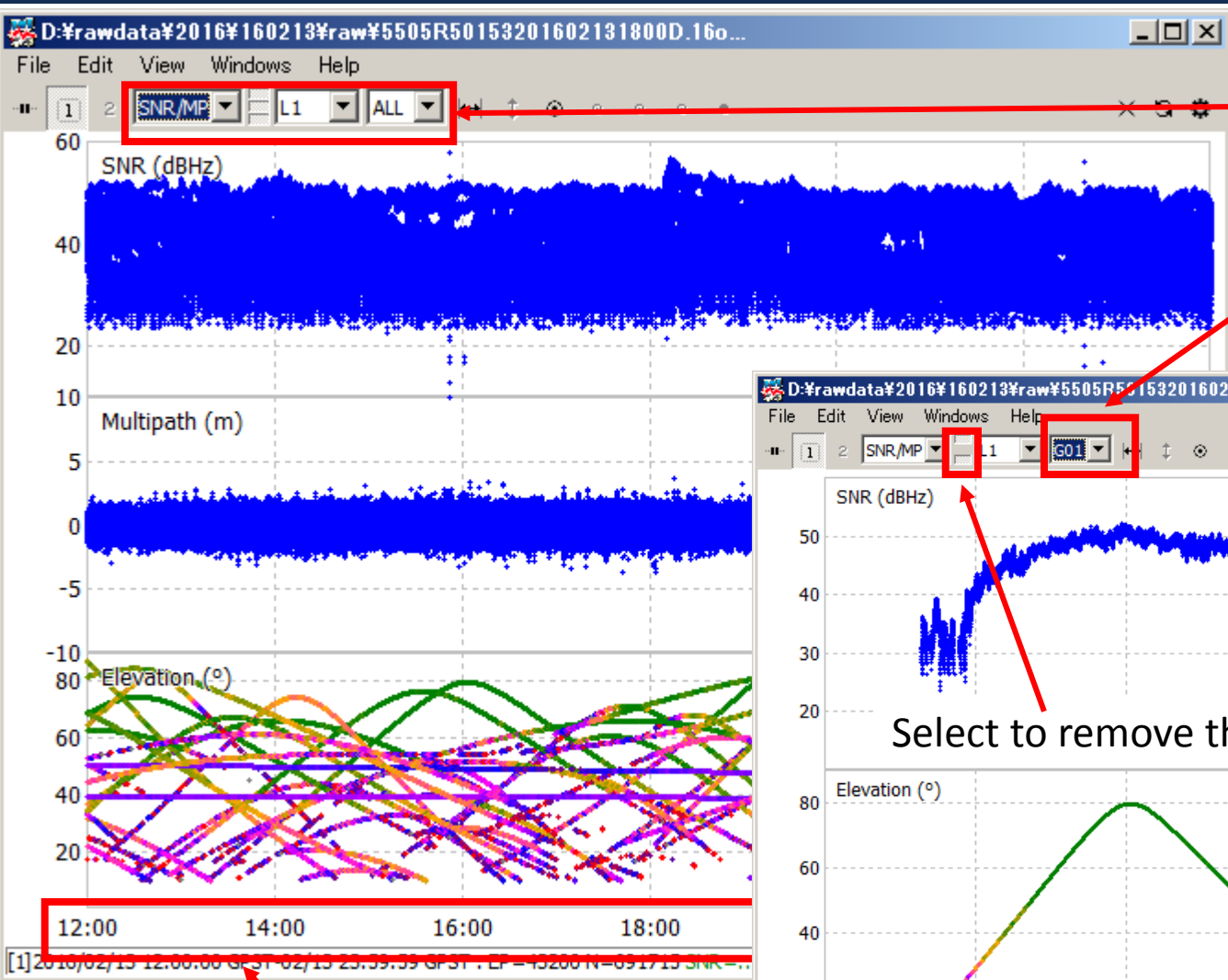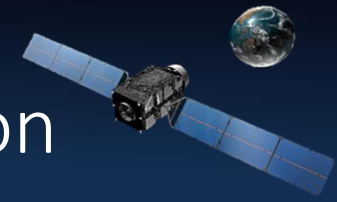
Select All satellites

Select one satellite (G01)

Select to remove the Middle line (Multipath)

Time series

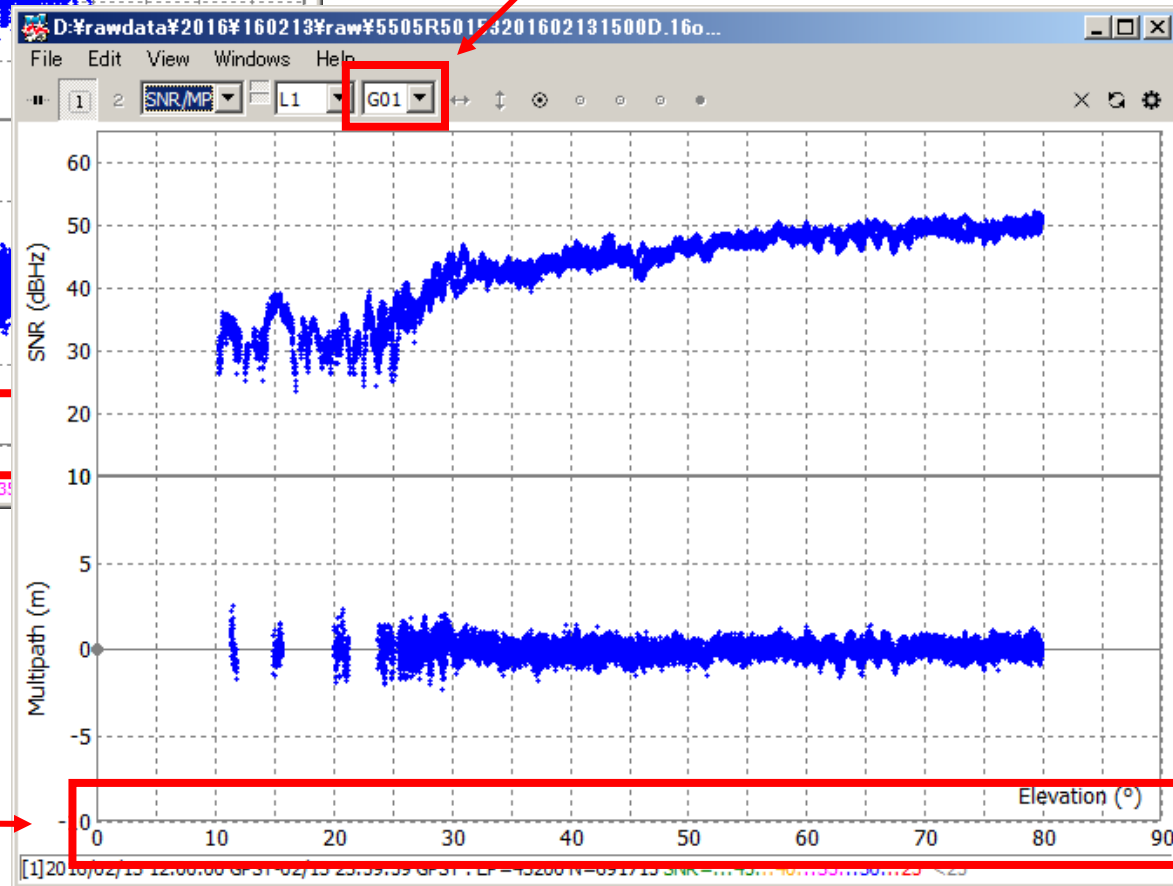# Signal to Noise Ratio / Multipath vs Elevation

Select All satellites

Select one satellite (G01)

Elevation