

# Utility programs and scripts

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GPS Data Processing and Analysis with GAMIT/GLOBK/TRACK  
UNAVCO Headquarters, Boulder, Colorado  
10–14 August 2015

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# Outline

- Organizing/pre-processing
- Part of sh\_gamit
- Evaluating results
- Visualization

# Guide to scripts

- There are many scripts in the `~/gg/com` directory and you should with time look at all these scripts because they often contain useful guides as to how to do certain tasks.
  - Look at the programs used in the scripts because these show you the sequences and inputs needed for different tasks
  - Scripting methods are useful when you want to automate tasks or allow easy re-generation of results.
  - Look for templates that show how different tasks can be accomplished.
- `~/gg/kf/utils` and `~/gg/gamit/utils` contain programs invoked by the scripts in `/com` or run directly from a command-line.
- Both the shell-scripts and the utility programs are self-documenting, invoked by typing the name without any arguments.

# GAMIT/GLOBK utilities

## Organizing/Pre-processing

sh\_get\_times: List start/stop times for all RINEX files

sh\_upd\_stnfo: Add entries to station.info from RINEX headers

doy: Convert to/from DOY, YYYYMMDD, JD, MJD, GPSW

convertc: Transform coordinates (cartesian/geodetic/spherical)

glist: List sites for h-files in gdl; check coordinates, models

cortran/convertc: Translate coordinate types and file formats

corcom: Rotate an apr file to a different plate frame

unify\_apr: Set equal velocities/coordinates for *glorg* equates

glist2cmd: Create a use\_site list from a glist file

vel2stab: Create a stab\_site list from a velocity org file

sh\_dos2unix: Remove the extra CR from each line of a file

## GAMIT/GLOBK Utilities (cont)

### Scripts used by sh\_gamit but useful stand-alone

sh\_get\_rinex: ftp a RINEX o file from remote archives (ftp\_info)

sh\_crx2rnx: convert to/from RINEX/Hatanaka

sh\_get\_nav: ftp a RINEX n file from remote archives

sh\_get\_met: ftp a RINEX m file from remote archives

sh\_get\_hfiles: ftp h-files from MIT/SOPAC

sh\_update\_eop: ftp an EOP file from IERS, create pmu, ut1., wob.

sh\_get\_orbits: ftp a g-file or sp3 file from remote archives, call -->

sh\_sp3fit: create a g- or t-file from an sp3 file (1-3 days)

## GAMIT/GLOBK Utilities (cont)

### Evaluating results

sh\_oneway: Plot phase residuals (sky map; vs elevation) [GMT]

sh\_plotelmean: Elevation angles average residuals plots [GMT]

cvview: Display and manipulate phase residuals [X-windows]

sh\_plot\_pos: Plot coordinate times series [GMT]

sh\_tshist: Plot histogram of time-series statistics [GMT]

tsview: Display and manipulate coordinate time series [MATLAB]

sh\_plotvel: Plot velocity maps [GMT]

sh\_map\_elements, sh\_map\_calif, sh\_map\_balkans, etc.

velview: Display and manipulate velocity maps [MATLAB]

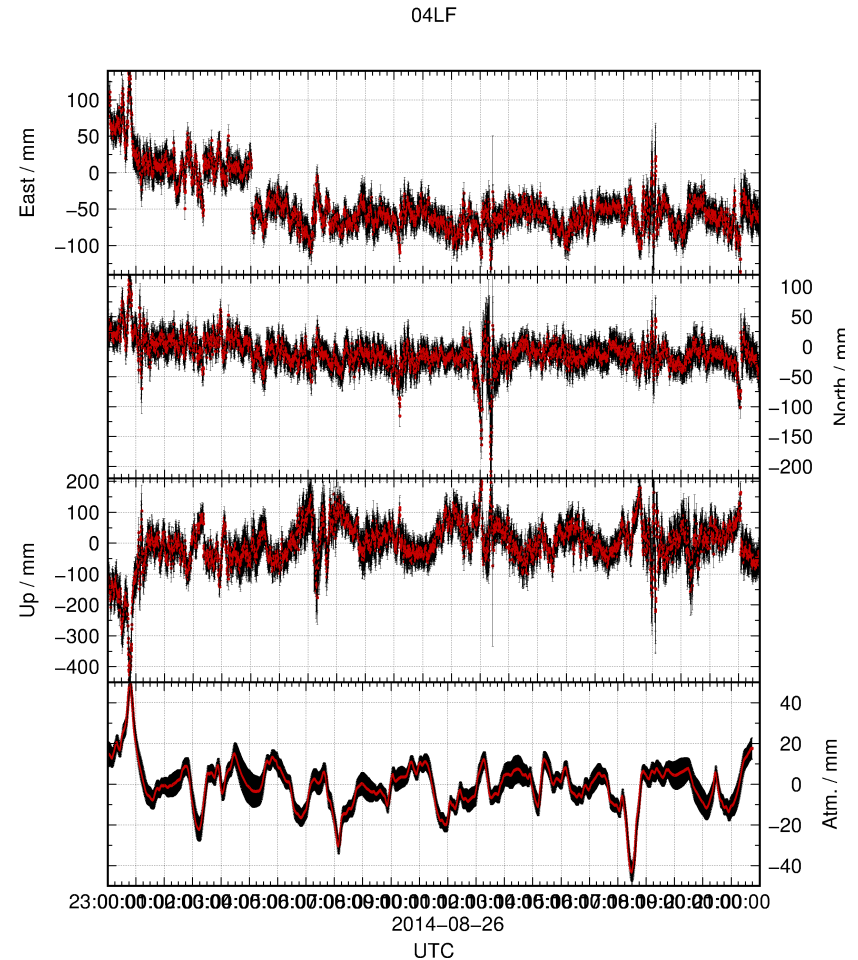
sh\_velhist: Plot histogram of velocity statistics

sh\_org2vel: Extract plate-referenced velocities from glorg print file

velrot: Combine velocity fields from different analyses

# sh\_plot\_track

- Reads track “NEU”, “DHU” or “XYZ” output file
- May add subplot to view evolution of atmospheric delay



# sh\_kml

- Script for converting several formats of result into KML format for viewing in Google Earth
  - glist (may also be used with time slider)
  - “.org”-file / “.vel”-file
  - track “GEOD”-format output file

