

## PBO GPS Data Product File Naming Conventions

This document describes the naming conventions for all PBO GPS data products. Descriptions of the internal formats for each file can be found on the PBO web site under the GPS Products page.

## 1 Background

PBO has two GPS Analysis Centers (ACs) that process raw GPS data and produce position solutions for all stations in the PBO and PBO Nucleus networks as well as selected other stations. One AC is operated by the Geodesy Laboratory at Central Washington University and the other by the Berkeley Seismological Laboratory at the University of California, Berkeley. These ACs produce GPS station position solutions on a daily basis using rapid orbit products (“rapid” solutions), as well as with about 14 days latency using the final orbit products (“final” solutions). The ACs send both the rapid and final solutions to the PBO Analysis Center Coordinator (ACC) at MIT. The rapid and final products are available separately from the PBO GPS Archives with latencies of about 24 hours and 14 days, respectively.

The ACC first rotates each of the individual AC products into a single common reference frame. The ACC then combines these intermediate rotated products to produce a single best-estimate PBO combined solution for station position and velocity. The intermediate and final combined products are also available from the PBO GPS Archives with latencies of about 24 hours and 14 days (rapid and final).

For further details of the GPS processing and products, please see the PBO GPS Processing Plan and the Preliminary Design Review document for PBO data management, both of which are available on the PBO web site.

## 2 Common File Name Elements

**Table 1:** PBO GPS Product File Naming Common Elements

Element	Definition	Possible Values
<AC_ID>	Analysis Center identifier, 3-letter string that identifies which Analysis Center produced the given product	BSL (Berkeley Seismological Laboratory), CWU (Central Washington University), PBO (PBO combined solution, produced by the Analysis Center Coordinator at MIT).
<GPSWK>	GPS week number, 4 digits	0001 to XXXX
<GPSDAY>	GPS day number, 1 digit	0 (Sunday) through 6 (Saturday)
<PROD_ID>	Product type identifier. This is an 11-letter string that identifies what processing the product was derived from. This identifier allows users to distinguish between products derived from processing runs using rapid orbit products vs. final orbit products, as well as loose vs. tightly-constrained reference frames.	<b>rapid_loose</b> (product derived from processing runs using rapid orbit products, in loose reference frame); <b>rapid_frame</b> (rapid product, rotated into common PBO frame); <b>final_loose</b> (product derived from processing runs using final orbit products, in loose reference frame); <b>final_frame</b> (final product, rotated into common PBO frame); <b>rerun_loose</b> (product derived from reprocessing runs, in loose reference frame); <b>rerun_frame</b> (rerun product, rotated into common PBO frame)
<STATION>	4-character station name	Any valid 4-character station name.

### 3 SINEX File Names

PBO SINEX file names have the following structure:

```
<AC_ID><GPSWK><GPSDAY>.<PROD_ID>.snx
```

where the elements are as defined in Table 1.

For example, the SINEX file derived from final combined solutions generated by the Analysis Center Coordinator for 22 July 2005 (GPS week and day are 1332 and 5, respectively) would be named `pbo13325.final_frame.rms`. The SINEX file derived from Berkeley's rapid processing for the same day, in Berkeley's own loosely-constrained reference frame, would be named `bs113325.rapid_loose.rms`.

### 4 GPS Station Phase RMS File Names

Each GPS station phase RMS file generated by the GPS Analysis Center Coordinator is identified with a unique file name, with the structure

```
<AC_ID><GPSWK><GPSDAY>.<PROD_ID>.rms
```

where the elements are as defined in Table 1.

For example, the GPS station phase RMS file derived from final combined solutions generated by the Analysis Center Coordinator for 22 July 2005 (GPS week and day are 1332 and 5, respectively) would be named `pbo13325.final_frame.rms`.

### 5 PBO GPS Station Position Time Series Naming Convention

Each of the time series products created by the GPS Analysis Center Coordinator is identified with a unique file name, with the structure

```
<STATION>.<AC_ID>.<PROD_ID>.pos
```

where the elements are as defined in Table 1.

For example, the time series for station P041 derived from final solutions generated by Central Washington University, and in the standard PBO reference frame, would be named `P041.CWU.final_loose.pos`. The time series for station P511 derived from the final combined solution produced by MIT would be named `P511.PBO.final_frame.pos`.

### 6 PBO GPS Velocity Field File Naming Convention

Each velocity field estimate generated by the GPS Analysis Center Coordinator is identified with a unique file name, with the structure

```
<AC_ID>.<PROD_ID>.vel
```

where the elements are as defined in Table 1.

For example, the network velocity field derived from final combined solutions generated by the Analysis Center Coordinator would be named `PBO.final_frame.vel`.