

APRGP2006 GPS OBSERVATION CAMPAIGN

SPECIFICATIONS FOR HIGH PRECISION STATIC GPS OBSERVATIONS

- GPS Campaign dates:
- * Start: 0h GPS time Sunday 5th November 2006
 - * Finish: 0h GPS time Sunday 12th November 2006
- Observation sessions:
- * 24 hour observation sessions commencing at zero hours GPS time.
 - * Ideally, 7 sessions should be observed on continuous GPS tracking sites.
 - * Ideally, a minimum of 5 sessions should be observed on national geodetic network and tide gauge stations.
- GPS receiver type & settings:
- * Dual frequency geodetic GPS receivers should be used with appropriate geodetic type antenna.
 - * The GPS receiver should be set to operate in static survey mode to log phase and pseudorange observations on both GPS frequencies from all GPS satellites above the set elevation mask, including those satellites that are set as unhealthy.
 - * Set the GPS receiver to log data as close as possible to integer seconds of GPS time commencing at zero seconds.
 - * Set receiver to log data at 30 second epoch intervals.
 - * Set an elevation mask of 10°.
- GPS antenna set-up:
- * Align GPS antenna to true north. This is important for correct modelling of antenna phase centre variations during data processing.
 - * The height of the GPS antenna should remain unchanged during the observation campaign. If the height of the antenna changes, include detailed notes in the field log sheets indicating the date, time and change in height of the antenna.
 - * The antenna height should be measured before, during and at the end of each observation session. Check the antenna height using an independent measuring method.
 - * Prepare a detailed sketch of the antenna set-up on the field log sheets showing where the heights were measured to on the antenna. Include the antenna dimensions necessary for reducing the antenna height measurement to a vertical height of the Antenna Reference Point (ARP) above the station mark.
- GPS occupation report:
- * The GPS occupation report form is attached to this document.
 - * The GPS occupation report can be compiled from the information shown on the field log sheets. One report should be completed for each station occupied.
 - * The report should accurately describe the type and model of the GPS receiver and antenna used.
 - * The antenna height shown on the report should be the vertical height from the station mark to the GPS Antenna Reference Point (ARP).

Meteorological data:

- * Meteorological observations are not required during this campaign.

Supply of data files:

- * The agency observing the GPS data is requested to convert the observed GPS data to RINEX format files. Agencies requiring software and advice on this process should contact Geoff Luton at Geoscience Australia.
- * RINEX files should comply with the APRGP GPS RINEX observation file standardisation specification.
- * A copy of the GPS occupation reports and a copy of the RINEX files should be sent to Geoff Luton at Geoscience Australia, Canberra at the completion of the GPS campaign by courier or by FTP.

FTP

host: ftp.ga.gov.au
user: anonymous
directory: incoming
(see note below)

Postal address

GPO Box 378
Canberra ACT 2601
Australia

Street address

Cnr Jerrabomberra Ave &
Hindmarsh Drive
Symonston ACT 2609
Australia

Telephone: +61 2 62499050 (W)
+61 2 62539010 (H)

Facsimile: +61 2 62499929

Email: Geoff.Luton@ga.gov.au

Note: The ftp incoming directory is protected so that a list of files cannot be generated and all files uploaded to the directory are automatically deleted after 24 hours. Please send a list of the files uploaded to the incoming directory to Geoff Luton so that he can download the files before the 24 hour limit is reached.

- * Distribution of the campaign data set will be arranged by Geoscience Australia.

Site identifier:

- * For APRGP2006 stations, the four character site identifier should be identical to that used for previous APRGP observation campaigns.
- * For new stations, choose a four character identifier that is unique and not known to be in use elsewhere.

Geoscience Australia Earth Monitoring Group
Geoscience Australia
9th October 2006

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APRGP2006 GPS OCCUPATION REPORT
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STATION NAME: _____

4 CHARACTER ID: _____

LOCATION: _____

COUNTRY: _____

TYPE OF SURVEY MARK: _____

ORTHOMETRIC HEIGHT OF SURVEY MARK: _____
(MEAN SEA LEVEL DATUM)

OBSERVATION START DATE/DAY: _____

UTC TIME: _____

OBSERVATION END DATE/DAY: _____

UTC TIME: _____

GPS RECEIVER TYPE: _____

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MODEL: _____

SERIAL NUMBER: _____

FIRMWARE VERSION: _____

GPS ANTENNA TYPE: _____

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MODEL: _____

SERIAL NUMBER: _____

HEIGHT OF GPS ANTENNA ABOVE STATION MARK: _____
(VERTICAL MEASUREMENT)

DESCRIPTION OF THE POINT ON THE GPS ANTENNA
THAT THE ANTENNA HEIGHT REFERS TO:

ATTACH ADDITIONAL INFORMATION AND DIAGRAMS THAT MAY BE USEFULL FOR
PERSONS PROCESSING THE DATA AND ANALYSING THE RESULTS.

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