

**Argentine Report on Antarctic Geodetic Activities
during the 1998/99 Season**

**1) Belgrano II base
(Nunatak Bertrab / Bertrab Nunatak)**

1.1. Continuous GPS-Tracking Station “BELG”

Instrumentation: Ashtech Z-XII GPS receiver, Ashtech Choke Ring antenna,
PC-notebook, Zip-Drive, PC-Card/Disks.

Equipment owner: AWI-Bremerhaven, Germany.

1.2. Seismological Station

Instrumentation: based on a Lennartz LE-3D/20s sensor and RefTek data acquisition
components.

Equipment owner: AWI-Bremerhaven, Germany.

*The 1998 GPS- and Seismological data sets were retrieved during the 2nd Cruise of “ARA Irizar”
icebreaker (mid-february 1999). Both systems started operating in February 1998.*

*The GPS receiver’s firmware was upgraded at Belgrano II on May 7th, 1999 (now “WNRO & y2k”-
compliant).*

**2) New geodetic site at Orcadas base
(Isla Laurie - Islas Orcadas del Sur / Laurie Island – South Orkney Islands)**

Continuous GPS-Tracking Station “BORC”

Instrumentation: Ashtech Z-XII GPS receiver, Ashtech Choke Ring antenna,
Notebook PC, Zip-drive.

Equipment owner: University of Memphis, USA.

This new station started operating on 18 March 1999.

*The GPS-marker is located on top of a ridge, some 100 m above and approx. 250 m away from
Orcadas main station building (Orcadas station lies on an isthmus, just a few meters above m.s.l.).*

The GPS receiver is housed inside a plastic cylinder, close to the antenna location.

*The data is downloaded to a notebook PC (which remains at Orcadas base) on a regular basis by
means of a special modem-link.*

The main installation works were carried out by a seismology team and station personnel.

*On 31 March 1999 the Ashtech receiver was replaced with an analogous “Z-XII”, with “CGRS CC00-
1D02” firmware (“WNRO & y2k”-compliant).*

Orcadas-GPS data retrieval: during austral summer.

**3) Jubany/Dallmann observatory
(Isla 25 de Mayo / King George Island)**

3.1. Continuous GPS-Tracking Station “DALL”

Instrumentation: Trimble 4000 SSi GPS receiver, Trimble Choke Ring antenna,
PC-notebook, Zip-Drive.

Equipment owner: AWI-Bremerhaven, Germany.

The Trimble 4000SSi GPS receiver's firmware version 7.24 was replaced with version 7.29 on April 8th, 1999 to make it "WNRO & y2k"-compliant. "DALL" GPS-station operates since early 1997.

3.2. Tide-Gauge System

Instrumentation: based on several Aanderaa components (with pressure sensor).

Equipment owner: AWI-Bremerhaven, Germany.

The sensor, the data cable (together with its protective housing), the data logging unit and the system battery were replaced on 16 April 1999. The

3.3. Seismological Station (discontinued)

Instrumentation: based on a Lennartz LE-3D/20s sensor and RefTek data acquisition components.

Equipment owner: AWI-Bremerhaven, Germany.

This seismological station was installed during GAP98 and dismantled on 4 April 1999.

Geodetic data retrieval from Jubany/Dallmann: mainly during austral summer (also possible at occasional Marambio-Jubany aerial links).

4) New Continuous GPS-Tracking Station at San Martin base (Bahía Margarita - / Marguerite Bay)

4.1. Continuous GPS-Tracking Station "SMR1"

Instrumentation: Ashtech Z-XII GPS receiver, Ashtech Choke Ring antenna, Notebook-PC, Zip-Drive.

Equipment owner: AWI-Bremerhaven, Germany.

The GPS receiver's firmware was first upgraded in order to make it "WNRO & y2k"-compliant. The pre-existent geodetic marker "SMR1 – GAP95" (installed during GAP95/SCAR Epoch 95 GPS Campaign and surveyed at that opportunity as well as during the repeat- GAP98/SCAR Epoch 98 GPS Campaign) is occupied. A metallic cylinder was erected on top of the "GAP"-marker in order to prevent the GPS-antenna from being covered by snow during the year.

This new continuous geodetic station started gathering GPS-data on April 23rd, 1999.

4.2. Tide-Gauge System

Instrumentation: based on several Aanderaa components (with pressure sensor).

Equipment owner: AWI-Bremerhaven, Germany.

The data logging unit and the system battery were replaced on 24 April 1999. This tide gauge station started operating continuously during GAP98.

Geodetic data retrieval from San Martin: during austral summer only.

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