

SCAR WG–GGI PROGRAM MEETING CANBERRA

GIANT Program Report

1. PERMANENT GPS OBSERVATORIES

Continuous Sites with Satellite data retrieval

- Mawson
- Davis
- Casey
- McMurdo
- Amundsen-Scott
- Palmer
- Sanae
- Higgins
- Sub Antarctic: *Macquarie, Kerguelen, Gough*

Continuous Sites without Satellite retrieval of data

- Dumont d'Urville
- Syowa
- Maitri
- Jubany
- Frei
- Belgrano

Forward Plan

Upgrade data access to existing sites

Syowa, Dumont d'Urville, Jubany, Belgrano

Establish new stations at manned stations

- Rothera
- Arctowski

Establish new remote operation sites (to be reviewed by ANTEC)

- Bunger Hills (or Mirny)
- Lenindgradskya
- Cape Adare
- 3 sites along Transantarctic Mountains
- High Latitude Antarctic Peninsula
- Marie Byrd Land (or Edward V11 Land)
- Patriot Hills.
- Aboa/ Vestfjella region

1.2 Network details on WWW

Details of existing networks posted on web site

1.3 IGS and IERS inputs of products

AUSLIG outputs daily (in weekly blocks) to International GPS service

AUSLIG will include all regular available data sites in to monthly combined solutions to International earth Rotation Service.

1.4 Publish station information

No progress other than web crosslinks

Information to be collated before GIANT workshop

1.5 Evaluate local connections

No progress to date. Item for GIANT meeting in Warsaw

2. EPOCH CAMPAIGNS

2.1 Monument guidelines

Data gathering commenced by Kevin Dixon. Report Item for GIANT meeting.

2.2 Coordinate 98/99 campaign

Summer GPS campaign coordinated by Reinhard Dietrich.

VLBI and permanent GPS data access improvement and absolute gravity program by John Manning

Status presentation item for Warsaw

2.3 Coordinate 99/00 campaign

GPS campaign item for GIANT meeting Warsaw.

Discussion commenced regarding VLBI and absolute gravity programs

3. PHYSICAL GEODESY

3.1 Geoid Data

Separate report by Alessandro Capra

3.2 Collaboration with Key groups

Three GGI persons proposed for ANTEC – Dietrich, Capra, Manning

First meeting planned during EUG Polar Earth Sciences Symposium, Strasbourg, March 99

3.3 ISAES meeting NZ

Capra proposes to attend. Other representation under consideration. Request to Capra to visit Canberra

3.4 Preparation for Antarctic Geoid computation

Too soon to be actioning this item. Much more work required for data gathering of Gravity data

4. GLONASS

4.1 IGEX

Data from McMurdo submitted to IGEX global database

4.2 Antarctic applications

Paper to be prepared following planned IGEX Results meeting in ION (September)

5. DIFFERENTIAL DGPS

Information on globally accepted standards being collated for preparation of report to COMNAP

6. Remote Observatories

Reports from 98/99 operations yet to be gathered. Reports of solid fuel cell and Australian experience with solar at Beaver lake are interesting.

7. INFORMATION ACCESS

7.1 Antarctic Science Publication

A small amount of progress in gathering input material

7.2 SCAR WGS84-ITRF paper

Item for presentation to GIANT meeting in Warsaw and subsequent publication

7.3 AGS99 Meeting in Warsaw

First circular distributed. Notice of meeting in GIANT listserver newsletter. Posted on web site.

8. OTHER CURRENT ITEMS

A number of other issues have developed since the Concepcion meeting:

Antarctic Gravity Satellite Mission Calibration

AUSLIG has been approached about involvement in the CHAMP and GRACE satellite gravity projects. These will produce significant long wave length gravity over the polar regions and will benefit from ground calibration sites in Antarctica. Principal US investigator CK Shum (Ohio) likely to request WG involvement in this aspect.

Antarctic Geodesy Conferences

There has been considerable Geodesy exposure at recent and future discipline conferences.

- AGU December 98 Antarctic Geodesy sessions - Hothem and Dietrich
- EUG Polar Earth Geoscience Symposium - involving Neotectonics of the Antarctic Continent
- European Geophysical Society Antarctic Geodesy Symposium - Ihde convenor.

ANTEC

Reinhard Dietrich, Alexandro Capra and John Manning proposed for ANTEC.

IAG

Commission X of the International Association of Geodesy overviews the general status of geodetic networks of continental areas. This has a number of Sub Commissions. In response to discussions with the Commission X President a sub commission on Antarctica was formed to provide a link from the SCAR WG-GGI GIANT Program. Reinhard and John Manning will be co-chairman.

ABSOLUTE GRAVITY SITES

A specific paper for the web needs to be prepared listing all details and values of the site but this will also include all fundamental papers related to each site and the observations. Information will be requested from the appropriate agencies in:

- Finland
- USA
- Italy
- Germany

J Manning
GIANT Convenor
9 February 1999