

Matera CGS VLBI Analysis Center

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Abstract

This paper reports the VLBI data analysis activities at the Space Geodesy Center (CGS) at Matera from January 2003 through December 2004 and the contributions that the CGS intends to provide for the future as an IVS Data Analysis Center.

1. Introduction

The Matera VLBI station became operational at the Space Geodesy Center (CGS) of the Italian Space Agency (ASI) in May 1990. Since then it is active in the framework of the most important international programs. VLBI data analysis activities are performed at CGS for a better understanding of the tectonic motions with specific regards to the European area. The CGS, operated by Telespazio on behalf of ASI, provides full scientific and operational support using the main space geodetic techniques: VLBI, SLR, LLR and GPS.

2. Analysis Activities in 2003

The VLBI data analysis activities at the CGS in the year 2003 were directed towards the realization of a global VLBI analysis, named *cgs2004a*, using the *CALC/SOLVE* software (developed at the GSFC). The *cgs2004a* will be included in the IVS solutions “pool” and its main characteristics are:

- Data span:
1980.04.11 - 2003.10.30
- Estimated Parameters:
 - Celestial Frame:
right ascension and declination as global parameters for 554 sources and as local parameters for 17 sources.
 - Terrestrial Frame:
Coordinates and velocities for 44 stations as global parameters and as local parameters for 66 stations.
 - Earth Orientation:
Unconstrained X pole, Y pole, UT1, Xp rate, Yp rate, UT1 rate, $d\psi$ and $\delta\psi$.

The CGS is contributing to the IVS project “Tropospheric Parameters”.

3. Future Plans

- Participate in the IVS pilot project “Time series of baseline lengths”
- Continue and improve the realization of global VLBI analysis.
- Continue to participate in IVS analysis projects.

4. Staff at CGS contributing to the IVS Analysis Center

- Dr. Giuseppe Bianco, Responsible for CGS, ASI (primary scientific/technical contact).
- Dr. Cecilia Sciarretta, Responsible for scientific activities, Telespazio.
- Dr. Roberto Lanotte, Geodynamics data analyst, Telespazio.