

### 3.7.4 IERS/IVS Working Group for the Second Realization of the ICRF

**Membership** The IERS/IVS Working Group had the following membership:

O. Titov, Australia	Z. Malkin, Russia
R. Heinkelmann, Austria	E. Skurikhina, Russia
G. Wang, China	J. Sokolova, Russia
F. Arias, France	V. Zharov, Russia
P. Charlot, France	S. Bolotin, Ukraine
A.-M. Gontier, France	D. Boboltz, USA
S. Lambert, France	A. Fey, USA
J. Souchay, France	R. Gaume, USA
G. Engelhardt, Germany	C. Jacobs, USA
A. Nothnagel, Germany	C. Ma, USA, chair
V. Tesmer, Germany	L. Petrov, USA
G. Bianco, Italy	O. Sovers, USA
S. Kurdubov, Russia	

**Activities** The activities of the Working Group included generation of VLBI results in preparation for the new realization, presentations at various scientific meetings, and two working meetings.

In order to facilitate the distribution of relevant VLBI results directories were established in the IVS data system, procedures were established for submitting files, and standard formats were devised. The following groups generated and submitted source position time series:

- Geoscience Australia
- Paris Observatory
- BKG (Germany)
- DGFI (Germany)
- Institute of Applied Astronomy (Russia)
- Main Astronomical Observatory (Ukraine)
- Goddard Space Flight Center (USA)
- U.S. Naval Observatory

These time series are to be analyzed to decide the criteria for selecting defining sources and to identify unstable sources that will require special handling. In addition, the following groups generated and submitted source position catalogues:

- Geoscience Australia
- Main Astronomical Observatory (Ukraine)
- Goddard Space Flight Center (USA)
- U.S. Naval Observatory

These catalogues are to be used to identify systematic errors and to determine the actual level of uncertainty of the source positions as a group.

## Meetings

Relevant presentations were made by Working Group members at the following meetings:

*18<sup>th</sup> meeting of European VLBI for Geodesy and Astrometry, April 12–13, Vienna*

Sokolova, J., Malkin, Z.: On comparison and combination of radio source catalogues

Tesmer, V.: Effect of various analysis options on VLBI-determined CRF

*Journées 2007, September 17–19, Meudon*

Ma, C.: Progress in the 2nd realization of ICRF

Charlot, P. et al.: Selecting ICRF-2 defining sources based on source structure

Malkin, Z., Yatskiv Ya.: Next ICRF: Single global solution versus combination

Titov, O.: Reference radio source apparent proper motions

Bolotin, S.: Influence of different strategies in VLBI data analysis on realizations of ICRF

Sokolova, J.: Effect of the reference radio source selection on VLBI CRF realization

*IAU Symposium 248, A Giant Step: from Milli- to Micro-arcsecond Astrometry, October 15–19, Shanghai*

Ma, C.: The second realization of the ICRF with VLBI

Charlot, P.: Source structure: an essential piece of information for the next generation ICRF

The Working Group had short meetings at the Vienna Technical University on April 12 and at the Paris Observatory on September 19 to discuss some the issues related to the next ICRF. The major issues to be addressed are:

- Selection of defining sources
- Treatment of source position variations
- Improvement of geophysical and astronomical modeling
- Selection of data
- Integration of ICRF, ITRF and EOP
- Generation of final catalogue

*Chopo Ma*