

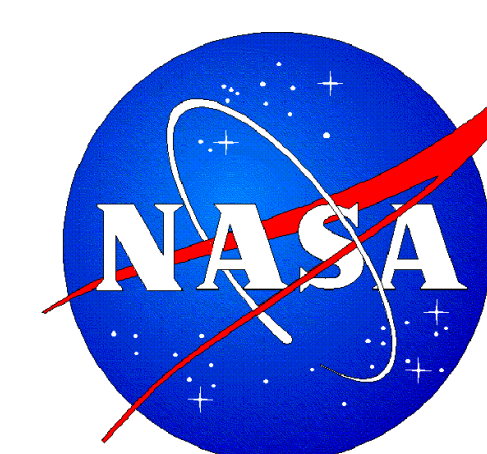


IVS Status Report 2008-2010

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IVS Goals and Structure

IVS is a service of

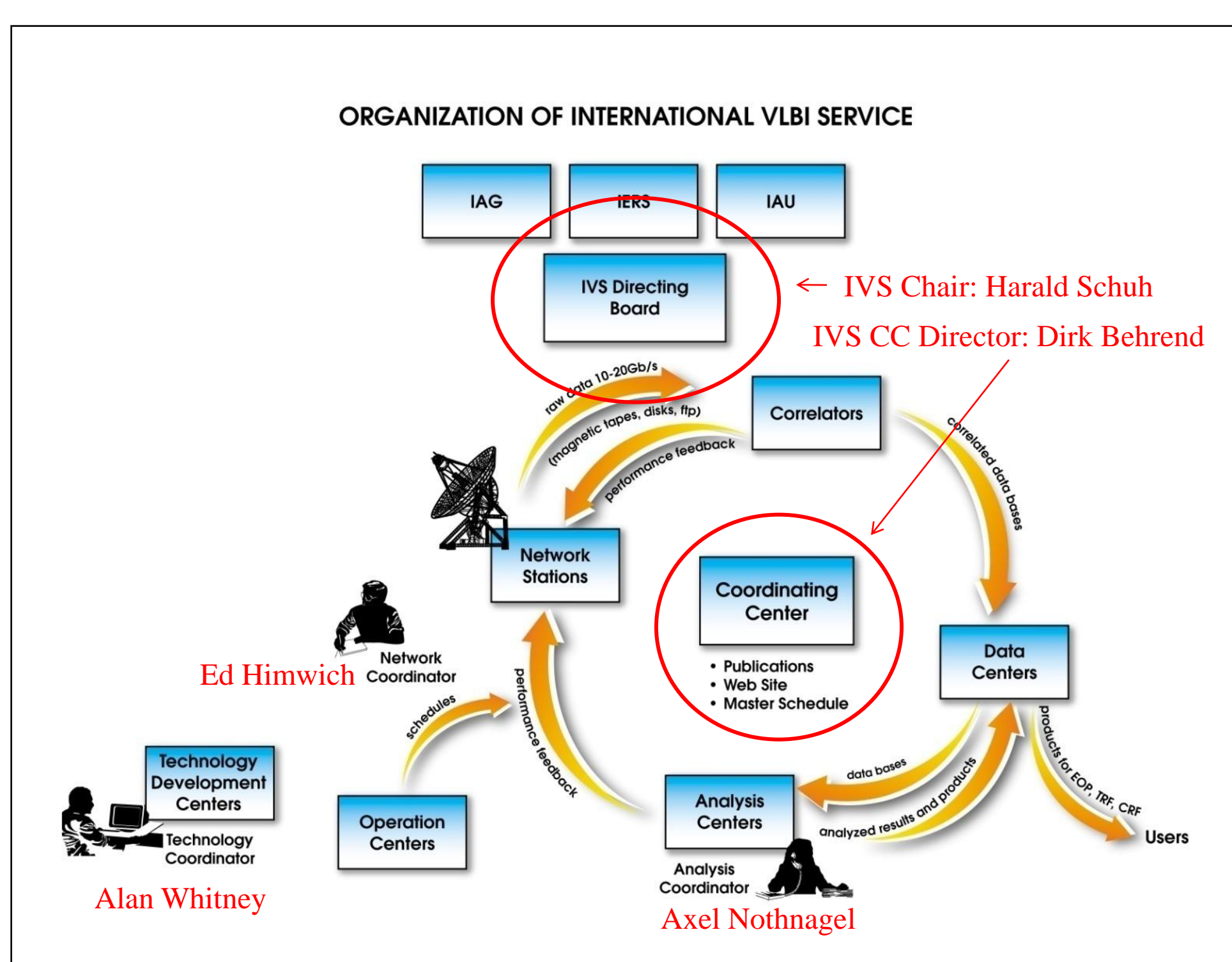
- IAG – International Association of Geodesy
- IAU – International Astronomical Union
- [FAGS – Federation of Astronomical and Geophysical Data Analysis Services (dissolved in 2009); the WDS (World Data System) is currently being created as successor organization]

IVS goals:

- to provide a service to support geodetic, geophysical and astrometric research and operational activities
- to promote research and development in the VLBI technique
- to interact with the community of users of VLBI products and to integrate VLBI into a global Earth observing system

Main tasks of the IVS are: coordinate VLBI components, guarantee provision of products for CRF, TRF, and EOP

- IVS inauguration was on March 1, 1999
- IVS 10th Anniversary event on March 25, 2009
- 75 Permanent Components supported by 39 institutions in 18 countries
- ~280 Associate Members



IVS Directing Board (until February 2011)

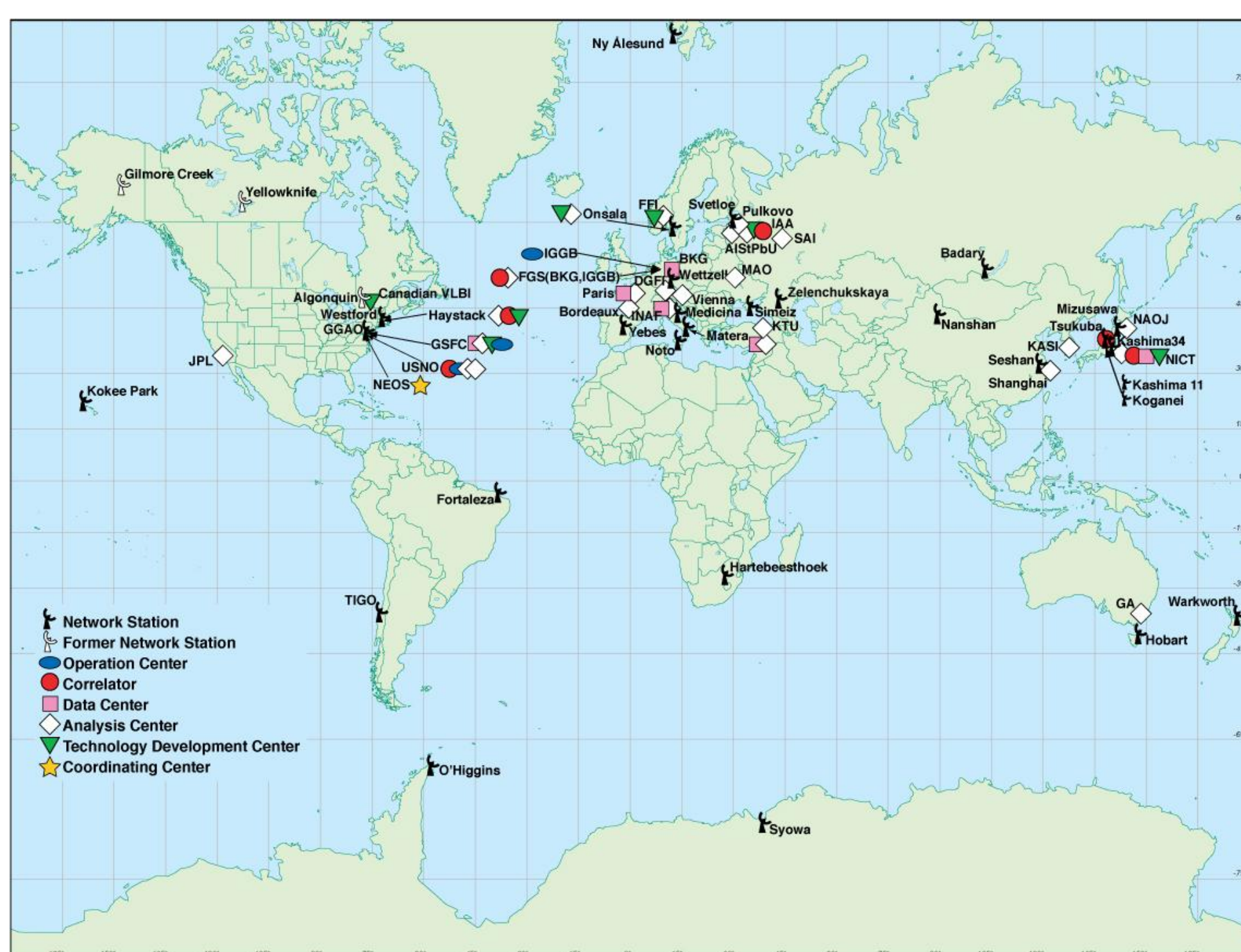
- Harald Schuh, Austria (Chair)
- Dirk Behrend, USA
- Patrick Charlot, France
- **Andrey Finkelstein, Russia***
- Rüdiger Haas, Sweden
- **Hayo Hase, Chile/Germany***
- Ed Himwich, USA
- **Kerry Kingham, USA***
- Chopo Ma, USA
- **Ray Norris, Australia****
- Axel Nothnagel, Germany
- **Kazuhiro Takashima, Japan***
- Gino Tuccari, Italy
- Oleg Titov, Australia
- Alan Whitney, USA
- **Xiuzhong Zhang, China***

*Positions to be re-elected in December 2010 Board Elections

**Position discontinued with FAGS being dissolved

At its first meeting in 2011, the new Directing Board will elect the IVS Chair for the next four years.

IVS Components



New IVS Components in 2008-2010:

- **New Combination Centers:**
 - BKG/DGFI Combination Center, Germany
 - KASI Combination Center, South Korea
- **Analysis Centers:**
 - DGFI Operational AC (upgrade from Associate AC), Germany
 - Sternberg Astronomical Institute (SAI), Russia
- **Network Stations:**
 - Warkworth Observatory, Auckland University of Technology, New Zealand

CONT08 Campaign



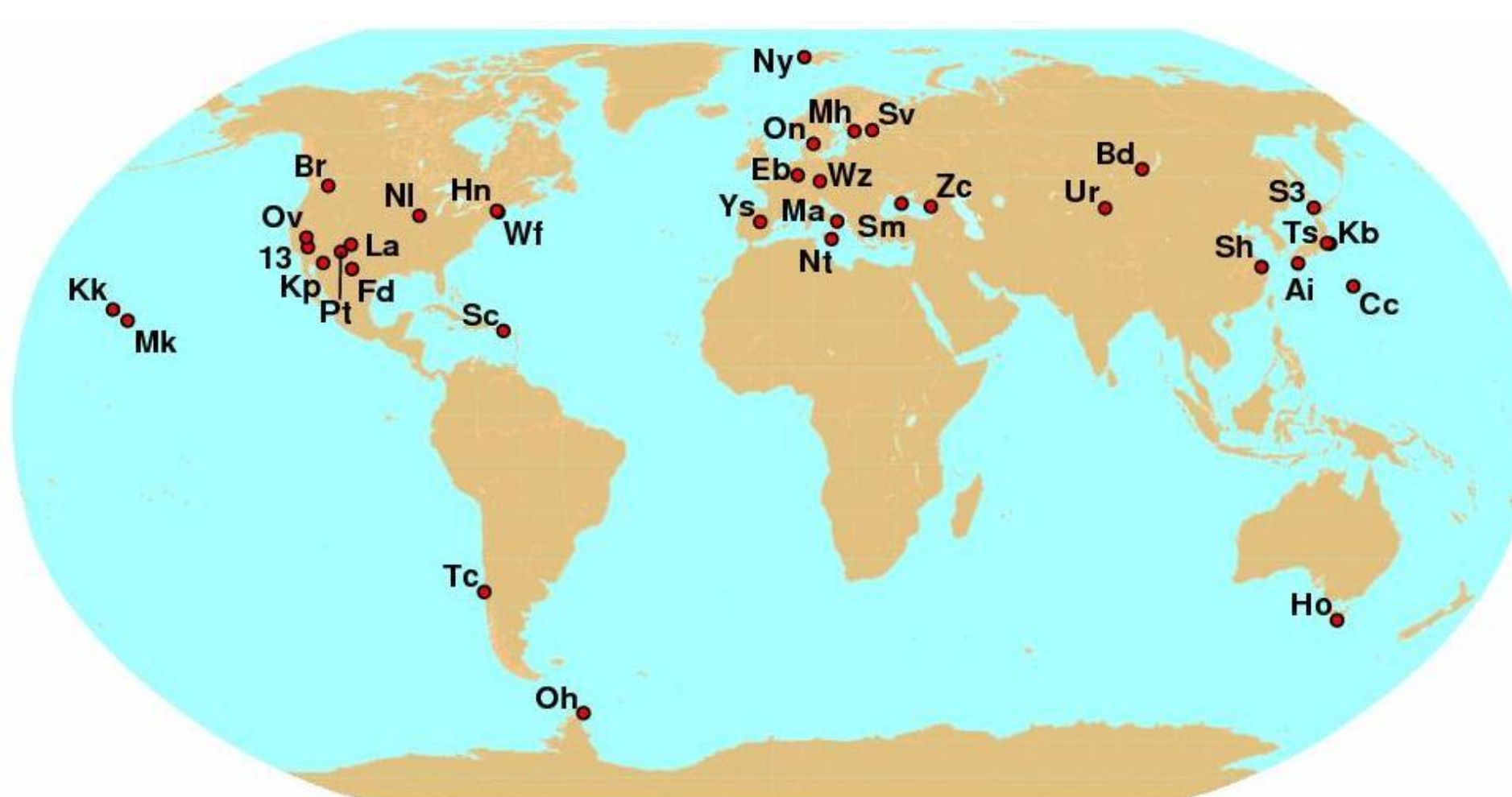
- Observation period: August 12-26, 2008
- 0-24 UT observation days
- 15 days of continuous VLBI observations at 11 stations
- observation rate: 512 Mbps
- logistics of campaign and session schedules done at Coordinating Center
- correlation performed at Washington Correlator
- Call for **Special Issue "CONT08" in Journal of Geodesy**
 - issued after successful pre-call indicated sufficient interest
 - deadline of manuscript submissions: **31 May 2010**
 - manuscript submission to Editorial Manager at <http://www.editorialmanager.com/joge>
 - guest editors: **A. Nothnagel, U. Hugentobler, D. Salstein**

IYA 2009 Astrometric Session



Largest astrometry session ever observed:

- A 34-station network observed most of the ICRF2 defining sources in a single 24-hour session.
- The previous record was 23 stations.



Scientific and outreach goals:

- Science goals:
 - strengthen the ICRF2 by observing as many ICRF2 defining sources as possible (243 out of 295) in one single session
 - provide the arc lengths between all sources without relying on source overlaps
- Outreach activities:
 - press releases through IYA2009 (IAU), IVS, and other organizations
 - news coverage in regional and national media
 - open doors at stations
 - watching progress of session via Internet in real time
- Repository of information at IVS Web site: <http://ivscc.gsfc.nasa.gov/program/iya09/>

Dynamic Web page at Bordeaux Observatory:



Major Meetings 2008-2010

- **5th IVS General Meeting (GM2008)**
3-6 March 2008, St. Petersburg, Russia
- **VLBI2010 Workshop on Future Radio Frequencies and Feeds (FRFF2009)**
18-21 March 2009, Wettzell, Germany
- **IVS 10th Anniversary Celebration**
25 March 2009, Bordeaux, France
- **5th IVS Technical Operations Workshop (TOW2009)**
27-30 April 2009, MIT Haystack Observatory, MA, USA
- **6th IVS General Meeting (GM2010)**
7-13 February 2010, Hobart, Tasmania, Australia

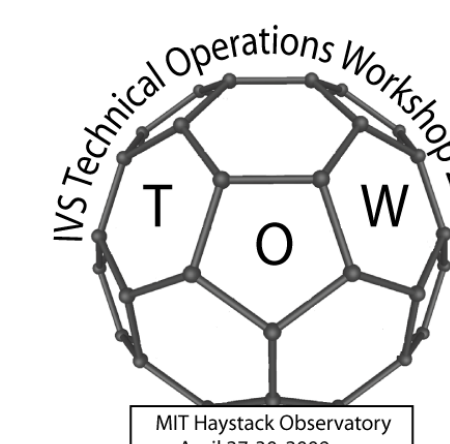
IVS 10th Anniversary Celebration



- 25 March 2009, Bordeaux, France
- almost 100 participants
- program with 14 talks, reception, and dinner
- event streamed online
- **A big thank you to Patrick Charlot and his team!**

Technical Operations Workshop 2009

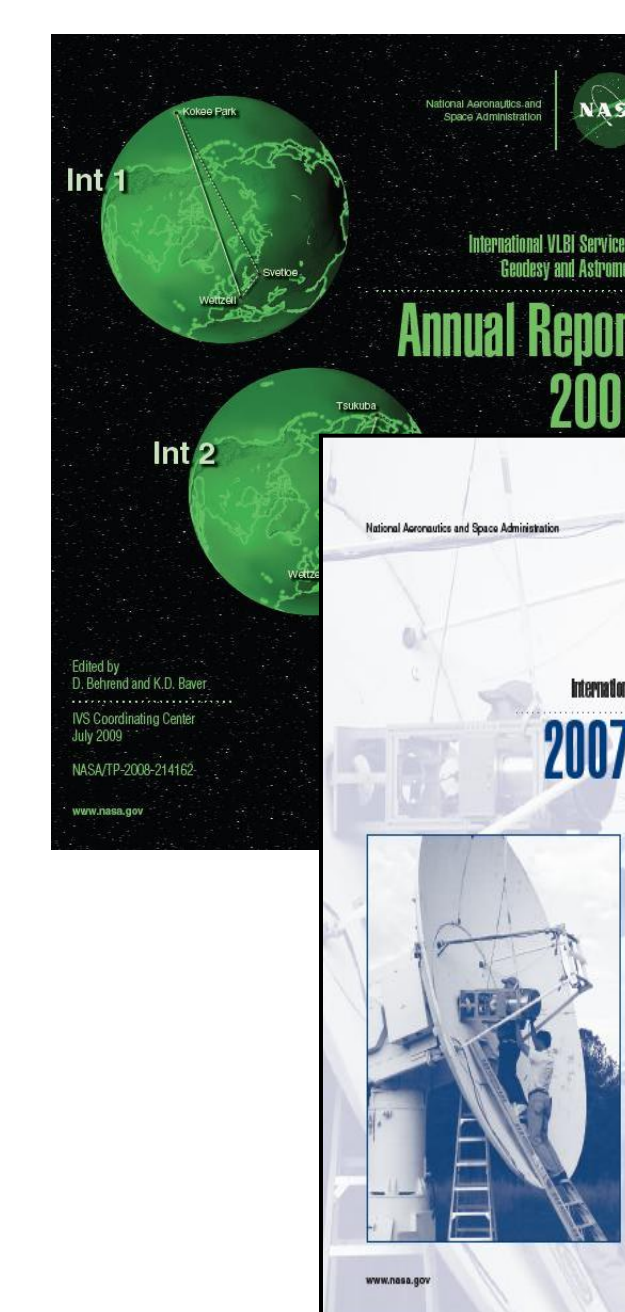
- MIT Haystack Observatory
- April 27-30, 2009; 60 participants
- hands-on training for station personnel



➢ Notebook:
<http://ivscc.gsfc.nasa.gov/meetings/tow2009/notebook.html>

➢ TOW movie:
<ftp://ivscc.gsfc.nasa.gov/pub/TOW/tow2009/pictures/dbb/TOW2009movie.m4v>

Publications



- **Annual Reports**
 - AR2007, AR2008 published
 - AR2009 in preparation
 - print and electronic versions
- **General Meeting Proceedings**
 - GM2008 volume printed in Russian "Science" series
 - electronic version on IVS Web site
 - **GM2010 Proceedings:** deadline for manuscript submission **31 March 2010**



- **IVS Newsletter**
 - Tri-annual issues (April, August, and December)
 - paper copies mailed to IVS community
 - online version:
<http://ivscc.gsfc.nasa.gov/publications/newsletter/>

VLBI2010 and Future Outlook



Progress Report of the IVS VLBI2010 Committee

- published in June 2009, 58 pages
- NASA/TM-2009-214180
- <ftp://ivscc.gsfc.nasa.gov/pub/misc/V2C/TM-2009-214180.pdf>

VLBI2010 Project Executive Group (V2PEG)

- established at Board meeting in Bordeaux (March 2009)
- members: H. Hase (chair), D. Behrend, C. Ma, B. Petrachenko, H. Schuh, and A. Whitney
- first action: collecting information about the various VLBI2010 activities to create development matrix
 - completeness and timeliness of VLBI2010 developments
- coordination of a VLBI2010 demonstration session which is tentatively scheduled for spring 2012
 - complete end-to-end operation demonstration
- promotion of expansion of network
- guidance for deployment of next generation systems and transition to full VLBI2010 operations

Future

- VLBI2010 is expected to perform significantly better than the legacy (S/X) system
- VLBI2010 will be a key technique within the Global Geodetic Observing System (GGOS)
- geographical gaps will be closed/reduced
- IVS will expand with new components (network stations and analysis centers, among others)