

REPORT ON THE ACTIVITIES RELATED TO THE JOINT CSTG/IERS DORIS PILOT EXPERIMENT

G. Tavernier, C. Noll, J. Ries, L. Soudarin, P. Willis

DORIS was developed for precise orbit determination and precise positioning on earth.

DORIS is one of the four techniques contributing to the International Earth Rotation Service (IERS). The 3 other techniques have an International Service to provide data and products to the scientific community. There is an increasing demand among the international scientific community for a similar service dedicated to DORIS.

The CSTG and IERS Directing Boards decided in July (IUGG99 - Birmingham) to initiate a DORIS Pilot Experiment. The aim of the Experiment is to assess the need and feasibility of an International DORIS Service, attaching a particular care to its international character and the long-term involvement of contributing organizations.

Steering Committee

The current Steering Committee is composed by the following individuals:

- Gilles TAVERNIER Gilles.Tavernier@cnes.fr CNES
chairperson
- Kristine LARSON kristine.larson@colorado.edu University of Colorado
Stations Selection Group chairperson
- Carey NOLL noll@cdis.gsfc.nasa.gov NASA GSFC
Data Flow coordinator
- John RIES ries@csr.utexas.edu University of Texas CSR
Data and Products formats Working Group chairperson, DORIS representative to IERS
- Laurent SOUDARIN Laurent.Soudarin@cls.fr CLS
- Pascal WILLIS pascal.willis@ensg.ign.fr IGN LAREG
DORIS representative and Coordinating Center to IERS

to be completed soon by an Analysis Coordinator

Data and Product Formats Working Group

- John RIES (chairperson)
- Jean-Paul BERTHIAS CNES, Toulouse, France
- Werner GURTNER Astronomical Institute, University of Bern, Switzerland
- Carey NOLL
- Pascal WILLIS
- Jean-Jacques VALETTE CLS, Toulouse, France

Stations Selection Group

- Kristine LARSON (chairperson)

The Group should include a representative of the DORIS Stations Installation and Maintenance Service (IGN SIMB) and scientists involved in various applications such as geodesy, geophysics, altimeter calibration, tide gauges, ITRF collocation ...)

The Products

Possible products of the future IDS are:

- High accuracy satellite ephemeris
- Three-dimensional coordinates and velocities of stations
- Time-varying geocenter coordinates
- Earth rotation parameters
- Static and time varying coefficients of the Earth's gravity field
- Surface meteorology, tropospheric and ionospheric information

Proposals

A Call for Proposals was broadcasted in September to prompt qualified organizations to submit proposals for components of the future IDS using:

- DORIS, IGS, ILRS and IVS Mails
- IERS Gazette
- a CDDIS web page : http://cddisa.gsfc.nasa.gov/dpe_cfp.html

We received proposals for the Central Bureau, Data Centers, Analysis Centers, existing satellites and new stations:

Central Bureau: 1

CNES / CLS / IGN - France	Gilles Tavernier
---------------------------	------------------

Data Centers: 2

NASA GSFC CDDIS - USA	Carey Noll
IGN LAREG - France	Pascal Willis

Analysis Centers: 8

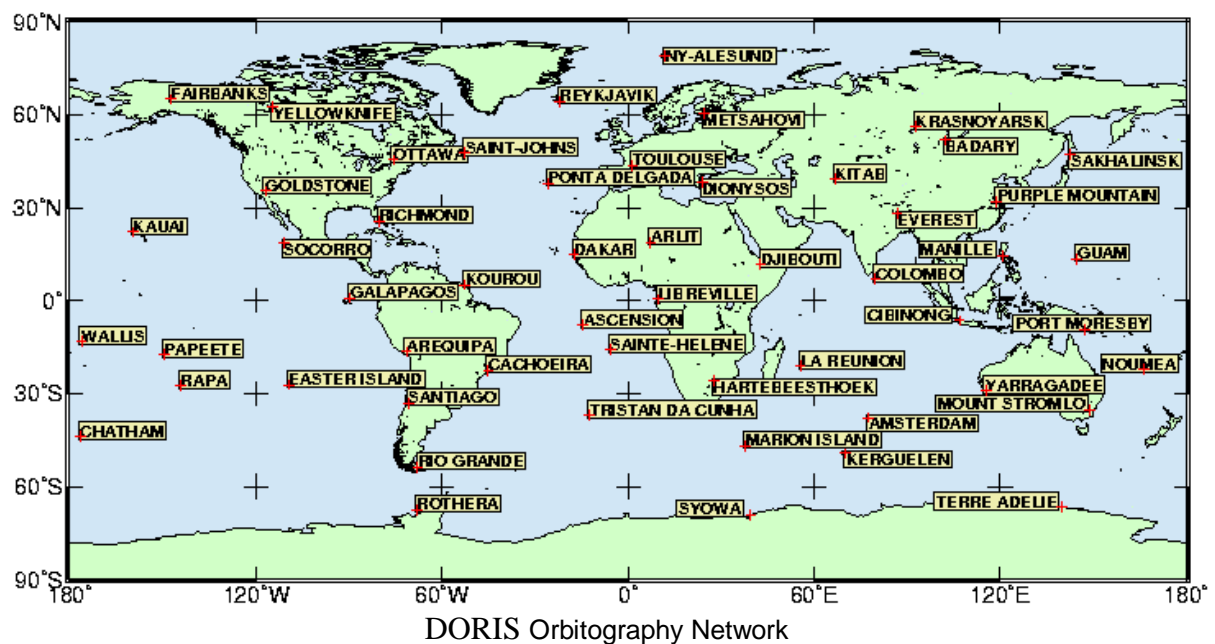
AUSLIG Australia	Ramesh Govind
CNES - France	Jean-Paul Berthias
CSR The Univ. of Texas at Austin - USA	John Ries
ESA ESOC Darmstadt - Germany	John Dow
Geodetic Observatory Pecny - Czech Republic	Jan Kostelecky
IAA St Petersburg - Russia	George Krasinsky
IGN LAREG - France	Pascal Willis
INASAN Moscow - Russia	Suriya Tatevian
LEGOS-GRGS / CLS Toulouse - France	Jean-François Crétaux

Satellites: 4 until now + 3 to be launched

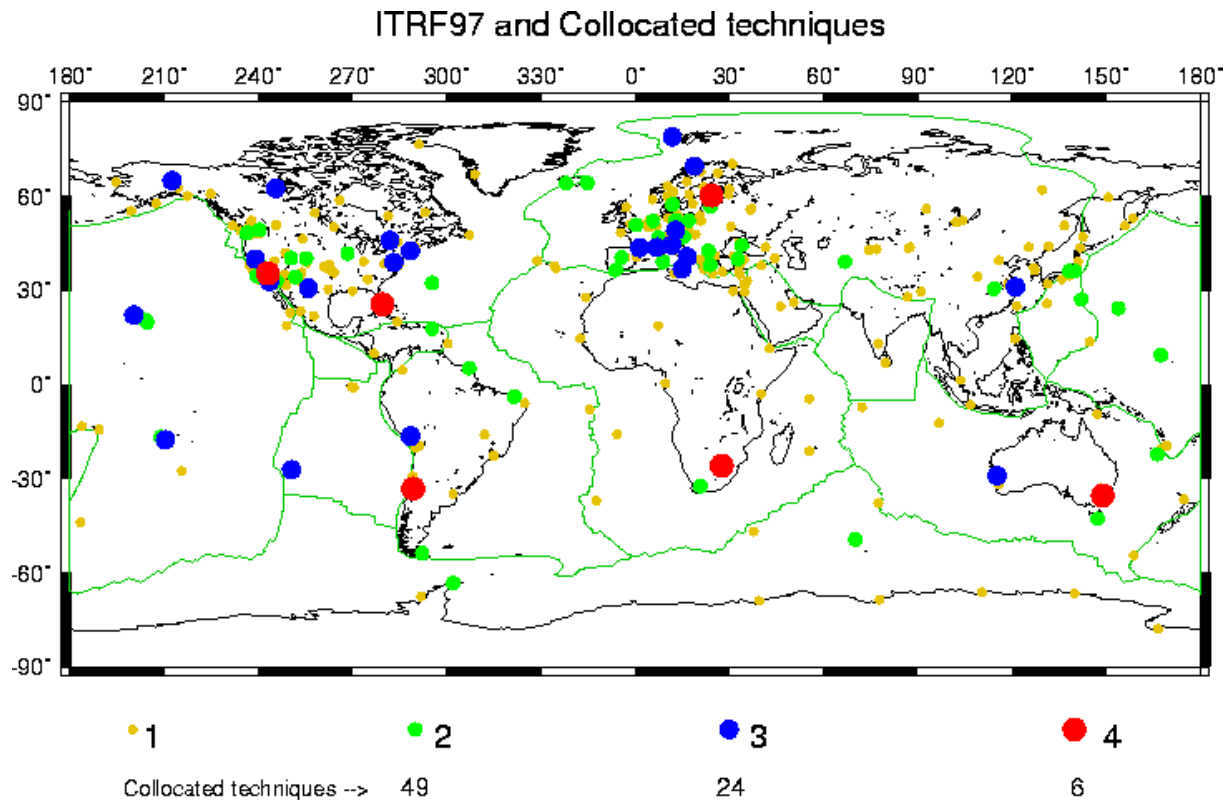
SPOT-2, 3 and 4
 TOPEX/POSEIDON
 JASON-1
 ENVISAT
 SPOT-5

Existing Stations: 54

Orbitography Network CNES/IGN - France	Hervé Fagard
Yarragadee, Mount Stromlo AUSLIG - Australia	Ramesh Govind
Badary, IAA - Russia	Zinovy Malkin
Kauai, Fairbanks NASA GSFC - USA	John Bosworth
Metsahovi, Finnish Geodetic Institute - Finland	Matti Paunonen

**New Stations**

Australia, Antarctica AUSLIG - Australia	Ramesh Govind
Dome C, Antarctica	Christian Vincent
Grasse, Ajaccio - France	Pierre Exertier
Gavdos TU Crete - Greece	Stelios Mertikas
Greenbelt NASA GSFC - USA	John Bosworth
Herstmonceux - UK	Phil Moore
Iran	Faramarz Nilforoushan
Irkutsk VS NIIFTRI - Russia	Vjacheslav Zalutsky
Geodetic Observatory Pecny - Czech Republic	Jan Kostelecky
San Fernando - Spain	Jose Martin Davila
Svetloe, Zelenchukskaya , IAA - Russia	Zinovy Malkin
Terra Nova Bay - Italy/Antarctica	Alessandro Capra
Warsaw University of Technology - Poland	Janusz Sledzinski
Wetzel, TIGO - Germany	Wolfgang Schlueter
Wousi, New Hebrides	Stéphane Calmant



The joint CSTG/IERS DORIS Pilot Experiment Terms of Reference were presented and discussed at the CSTG Executive Committee Meeting held during the AGU Fall Meeting (San Francisco- December 1999).

Planned activities for the coming year

DORIS Days will be held in Toulouse (May 2-3, 2000), with the purpose to promote exchanges between different designers, operators and users of the DORIS system by presenting the results obtained since the system was placed in orbit.

This second version of these DORIS Days will in particular be devoted to a review of the start-up of the Doris Pilot Experiment and of presenting the technological changes which have been made to the system (Jason, Envisat and SPOT5 missions, 3rd generation beacons). Two workshops will give the opportunity to discuss on:

- the organization of the Experiment and the interaction between scientific research & services
- the DORIS system and performances evolutions as planned as well as needed by the users

The Central Bureau will implement a DORIS Pilot Experiment Website.

Data Centers will compare available measurements, add ancillary information and Exchange formats should be adopted to allow Analysis Centers to start to process data and compare their products.

The Stations Selection Group will propose a list of stations according to the number of beacons available for the Experiment.

The Steering Committee will propose the statutes of the future Directing Board and Associate Members.