The International DORIS Service: Current status and perspectives

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SUMMARY
http://ids-doris.org

- Historical considerations
- Current status
- Possible evolutions and perspectives

The International DORIS Service (historical considerations)

- DORIS was part of IERS (as observer) since 1994
- July 1999, creating of an DORIS Pilot Project by the International Association of Geodesy (IUGG Birmingham) to foster international cooperation
- July 2003, creation of the International DORIS Service as a service of the International Association of Geodesy (IUGG Sapporo)

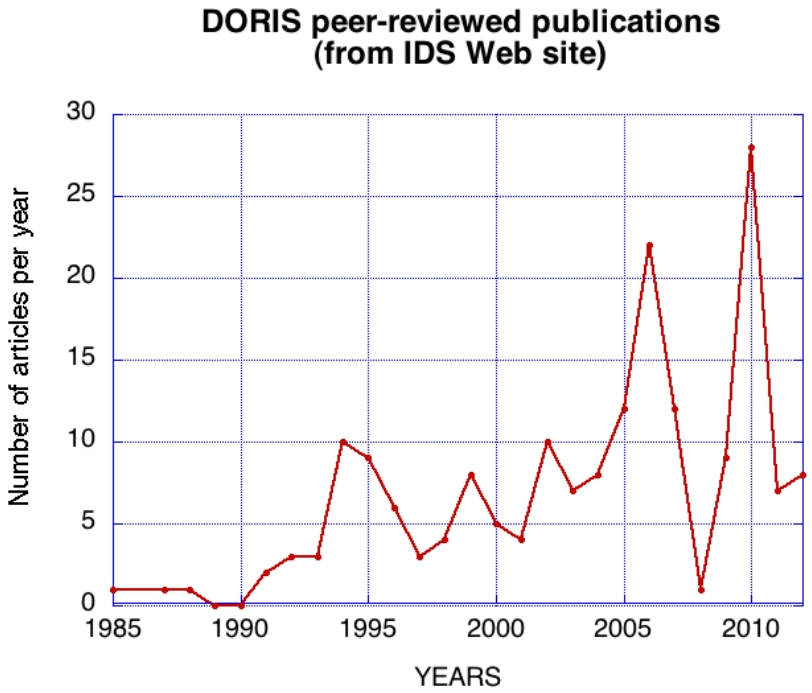
Current IDS organization (similar to other IAG Services)

- 1 Central Bureau (Laurent Soudarin, CLS)
- 2 Data Centers (Carey Noll, CDDIS/USA + Bruno Garayt, IGN/France)
- 1 combination Center (Guilhem Moreaux, CLS), Analysis Coordinator (Frank Lemoine, NASA)
- 8 Analysis Centers :
  - ESA (Germany), GAU (Australia), GFZ (Germany), GSC (USA), IGN (France), INASAN (Russia), GOP (Czech Rep.), LCA (France)
- 1 Governing Board

IDS Context

- More DORIS satellites
- Stable DORIS tracking network
- Global Geodetic Observing System (GGOS)

- More groups using DORIS data



From http://ids-doris.org/report/publications/peer-reviewed-journals.html

Current IDS products

- Time series of station coordinates
  - New utility = http://ids-doris.org/plot-tools.html
- Derived products :
  - Earth Orientation Parameters, geocenter time series, velocity fields
- Satellite orbits
- Metadata related to DORIS data processing : station site logs, geodetic local ties, satellite maneuvers, etc.

Current IDS users

- Main user is IERS (ITRF-product center) to regularly derive new ITRF-realizations
- Also internal IDS users
- Few real external users

Current IDS products
Possible ways of improvements

- Better online documentation
- Validation / combination of products
- Timeliness of delivery

- Need to increase the current number of users (from internal users to external users, eg. geophysicists using time series of DORIS station coordinates or global velocity fields)

Possible IDS new products (long-term perspective)

- DORIS-derived tropospheric results (ZTD) and/or horizontal tropospheric gradients
- DORIS meteorological data (P, T, %)
- DORIS ionospheric results
- Combined results with other techniques (orbit, ZTD, etc.)

- Pros :
  - global permanent tracking network → possible use for climatological studies
- Cons :
  - no use for DORIS-only products. It should be done in addition to existing GPS/GNSS products

CONCLUSIONS

- IDS is now a well-recognized technique-oriented service for IERS
- Organization is now stronger and more international (8 ACs + combination)
- Evolution of products is still needed in the future :
  - New products (tropo /iono, others?)
  - Better products (documentation, combination, timeliness of delivery)