#### Inter-commission Committees

- Inter-commission Committee on Theory. http://der.topo.auth.gr/icct
- Inter-commission Committee on Planetary Geodesv.
- Inter-commission Committee on Geodetic Standards.

# The IAG Project: IGGOS

- Integrated Global Geodetic Observing System
- Envisaged results
  - Global patterns of tectonic deformation
  - Global patterns of height changes on land, of ice covers and of sea level
  - Deformation due to mass transfer between atmosphere, hydrosphere and solid Earth
  - Separation of effects of mass changes from motion and thermal expansion
  - Separation of ocean effects from solid effects ("absolute" sea level)
  - Quantification of angular momentum exchange and mass transfer

### **Individual Membership Benefits**

- Substantial reduction on the individual subscription rate to the Journal of Geodesy
- Becoming a member of an IAG Commission of choice
- **Reduction of registration fee for IAG** meetings
- **Right to participate in the IAG election** process as nominator and/or nominee

### **IAG Services**



**International GPS Service** http://iqscb.jpl.nasa.gov International VLBI Service for Geodesv and Astrometry http://ivscc.gsfc.nasa.gov





International Laser Ranging Service http://ilrs.gsfc.nasa.gov

International Gravimetric Bureau http://bai.cnes.fr

International Geoid Service http://www.iges.polimi.it

**Systems Service** 

http://www.iers.org









International DORIS Service http://ids.cls.fr Time Section of the Int. Bureau of Weights



and Measures http://www.bipm.org

International Center for Earth Tides

Permanent Service for Mean Sea Level

http://www.astro.oma.be/ICET

http://www.pol.ac.uk/psmsl

IAG Bibliographic Service bkg http://www.leipzig.ifag.de

# For more information please visit the IAG website: http://www.iag-aig.org

#### **IAG Central Bureau**

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# The International Association Of Geodesy

An Association of the International Union of Geodesv and Geophysics

... advancing geodesy ...



# The Mission of IAG

is the advancement of geodesy, an Earth science that studies the size, shape, orientation and gravity field of the Earth, planets and their satellites including the temporal variations of these features.

# The IAG accomplishes its mission

- by advancing geodetic theory through research and teaching;
- by collecting, analysing and modelling observational data:
- by stimulating technological development; and
- by providing a consistent representation of the figure, rotation and gravity field of the Earth.

# **IAG's objectives**

- To foster research and development on
  - Definition of reference systems
  - **Rotation of the Earth and Planets**
  - **Positioning and Deformation**
  - Gravity field determination
  - Ocean and sea level variations
  - Time transfer.
  - Signal propagation through the planet's atmosphere.
- To Support and maintain geodetic reference systems.
- To Provide observational and processed data, standards, methodologies and models,
- To Stimulate development of space techniques to increase the resolution of geodetic data.
- To Initiate, coordinate and promote international cooperations.
- To promote the development of geodetic activities in the world, especially in developing

# The structure of IAG

Commissions. Inter-commission Committees. Services. IAG Projects, Communication and Outreach Branch

#### **Commission 1. Reference Frames** http://iag.dgfi.badw.de

- Establishment, maintenance, improvement of the geodetic reference frames.
- Advanced terrestrial and space observation techniques development.
- International collaboration for the deployment of space geodetic observatories.
- Theory and coordination of astrometric observations.



The EPN Network



#### **Commission 2. Gravity field**

http://www.ceegs.ohio-state.edu/iagcommission2

- Terrestrial, marine, and airborne gravimetry.
- Satellite gravity field observations.
- · Gravity field modelling.
- Time variable gravity field.
- Geoid determination.
- Satellite orbit modelling and determination.

## **Commission 3. Geodynamics and** Earth Rotation

http://www.astro.oma.be/IAG

- Earth orientation (Earth rotation, polar motion, nutation and precession).
- Earth tides.
- Tectonics and Crustal Deformation.
- Sea surface topography and sea level changes.
- Earth's precession and

nutation

- Planetary and lunar dynamics.
- Effects of the Earth's fluid layers (e.g. post-glacial rebound, loading).

# **Commission 4. Positioning and Applications**

http://www.gmat.unsw.edu.au/iag/iag comm4.htm

• Terrestrial and satellite based positioning system development, including sensor and information

fusion.

- Navigation and guidance of platforms.
- Interferometric laser and radar applications (e.g. InSAR).
- Application of geodetic positioning using three dimensional geodetic networks including monitoring of deformations.
- Application of geodesy to engineering.
- Atmospheric investigations using space geodetic techniques.



EnviSat (Photo: ESA)





GRACE Satellites