



WMO OMM

World Meteorological Organization

Working together in weather, climate and water

WMO SPACE PROGRAMME AND ITWG: Why is ITWG important to WMO ?

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www.wmo.int/sat



WMO SP activities and ITWG

Requirements and gap analysis
 Space-based architecture
 Coordinated missions/orbit plan
 Instrument calibration (GSICS)

Observation system

Foster cooperation towards quality controlled, sustained products

Products

Cross-cutting

User awareness & Training

Training (Virtual Learning Environment)
 Information (Webinars, regional conferences)
 Regional projects

Dissemination and Access

Promote data services: content, timeliness, standardization (WIS) and related tools

- Topics of common interest
- WMO values ITWG recommendations
 - Encourage synthesized recommendations
- CGMS also wishes stronger interaction with ITWG
 - Same for IWWG, IPWG, IROWG
- Increased WMO SP emphasis on satellite applications
 - New staff : Stephan Bojinski
 - Expert Team on Satellite Utilization/Products (incl ITSC)



Highlights

- New CGMS agreed baseline for operational sat missions in the GOS
 - GEO, LEO/SSO, other LEO, new missions incl. RO, SCAT, altimetry, chemistry..
 - Contributes to WIGOS and to architecture for climate monitoring
- WMO SP's commitment to facilitate data access, with satellite operators
 - Data, information, software
 - **Extension of RARS to NPP & Metop (ITSC-18 Technical Subgroup)**
Support early use of CrIS/ATMS and IASI by sharing data acquired by direct readout stations and pre-processed by common software
- Online resources available
 - Observation requirements database <http://www.wmo-sat.info/db>
 - Database on satellite/instruments (~ 500 instruments ,~ 300 sat) will replace the "Dossier on space-based GOS"
 - GSICS (intercalibration) <http://gsics.wmo.int> delivers corrections to make datasets interoperable, and instrument bias monitoring
- Training: VLab network of 13 Centres of Excellence -
 - Expertise of ITWG would be very helpful (<http://vlab.wmo.int>)

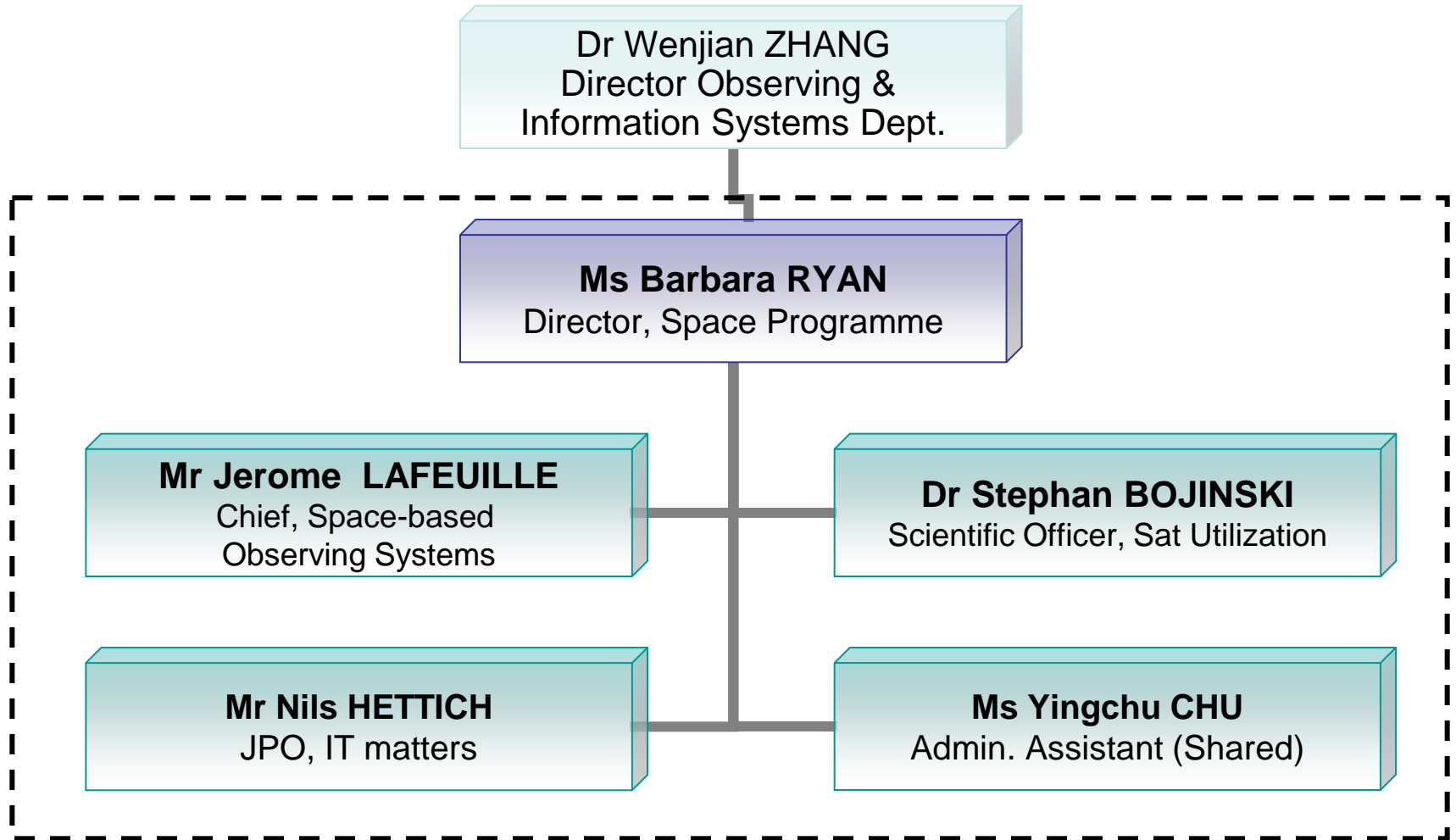


Thank you!

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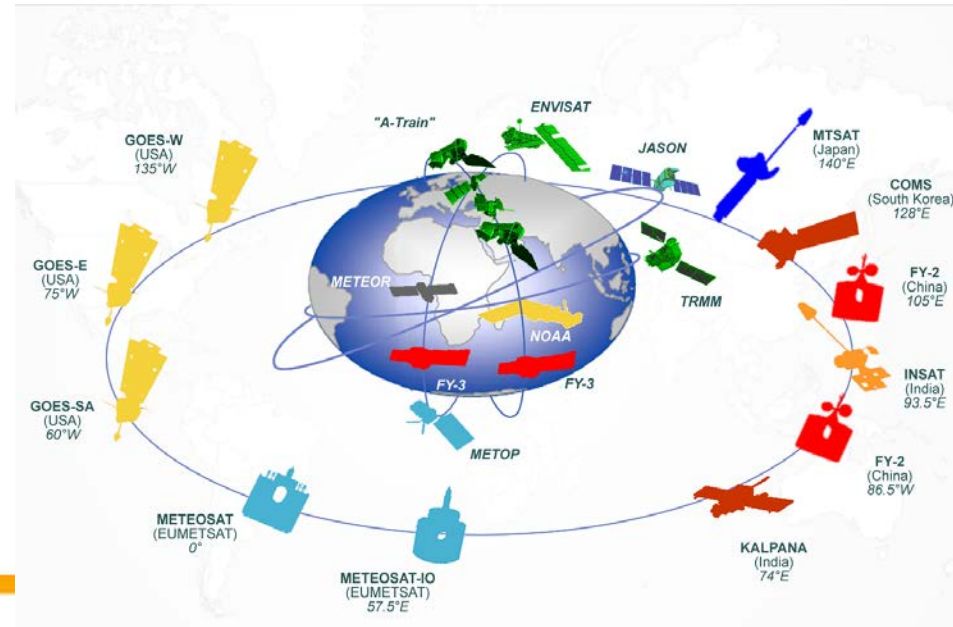


The WMO Space Programme Office

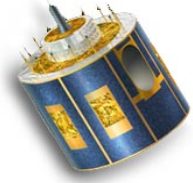


Status of the space-based GOS (Feb 2012)

- **12 operational geostationary satellites** (plus back-up)
for permanent weather watch with quasi-global coverage
USA (3), EUMETSAT (3), China (2), India (2), Japan, Rep. Korea
- **6 operational sun-synchronous** (plus back-up)
global VIS/IR/MW imagery, IR/MW sounding, scatterometry, GNSS radio-occultation
USA (3), China (2), EUMETSAT
- **R&D satellites in sun-synchronous orbit**
for land/ocean surface, O₃, GHG, clouds, aerosols, radiative balance...
- **Missions in inclined orbits**
for altimetry, GNSS RO, precipitation radar
- **Global inter-calibration system**



Strategy towards effective use of satellite data



- *Satellite observation capability*
- Data access systems
 - Dissemination services (IGDDS, RARS initiatives)
 - User receiving / processing equipment and software tools
- Adapting the services to the needs
 - Formulate user requirements
 - Dialogue between users and providers to include new data/products
 - Developing and sharing products
- User awareness and training
 - Information on systems, products, access
 - Training on data/product access and applications



Web-based User Information

- <http://www.wmo.int/sat>
 - [satellite status](#)
 - with links to data access information
 - Dossier on the space-based GOS
 - Product Access Guide (in development)



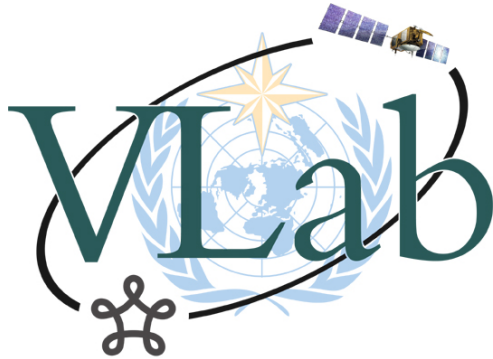
- Virtual Laboratory : <http://vlab.wmo.int>




The screenshot shows the WMO Space Programme website. At the top, there is a navigation bar with links for HOME, CONTACT, US, LIST OF TOPICS, LINKS, CLIMATE, STATISTICS, FAQs, and ACCESSIBILITY. The main header features the WMO logo and the text "World Meteorological Organization Working together in weather, climate and water". Below this, there is a section for "WMO Space Programme" with a sub-header "Programmes > Space > Home". The main content area includes a "Latest News and Announcements" section with two entries: "Suomi-NPP HRD direct broadcast service started" and "2012 Summer Colloquium on Data Assimilation, Santa Fe". There is also a "Quick Access" section with links to "Observing Requirements Database", "Satellite Status", "Working Documents for Meetings", "Dossier on the space-based Global Observing System (GOS)", and "Virtual Laboratory for Education and Training in Satellite Meteorology (VLAB)". The bottom of the page features four main components: "The space-based Observing System", "Access to Satellite Data and Products", "Awareness and Training", and "Space Weather Coordination". A sidebar on the right contains a "Programme Overview" section with links to "Space-based GOS", "Data access & use", "Awareness & Training", "Space Weather", "Regional Activities", "Information Resources", "Partners", "CGMS", "GOS", "WIGOS", "WIS", and "Observing Requirements DB".



Education and Training Capacity building



A network of Centres of Excellence sponsored by satellite operators

- To provide training on meteorological and environmental satellite systems, data, products and applications;
- To foster research and the development of applications for societal benefit at the local level by the NMHS.

