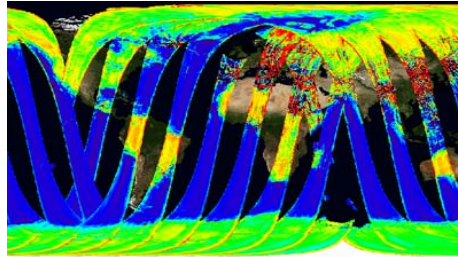
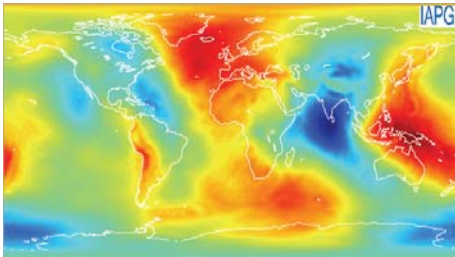


The ESA Earth Observation Programmes: **status overview**



Stephen Briggs

*Head of Programme Planning and Coordination Service,
Directorate of Earth Observation Programmes*

SIT-26 Meeting

24-25 May 2011

European Space Agency

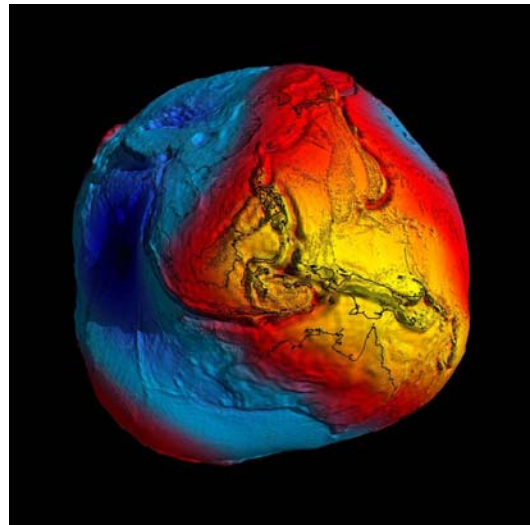
Overview of current ESA EO achievements

- Envisat 10th year in operation, ERS 20 years anniversary
- Envisat orbital change successfully performed (October 2010)
- Preparations ongoing for de-orbiting of ERS-2 in June / July 2011
- + 4000 scientific users / projects are served with Envisat and ERS-2 data
- Three Earth Explorer missions in space, GOCE has completed its nominal 2-year mission in March
- Next Explorer launch: Swarm in summer 2012



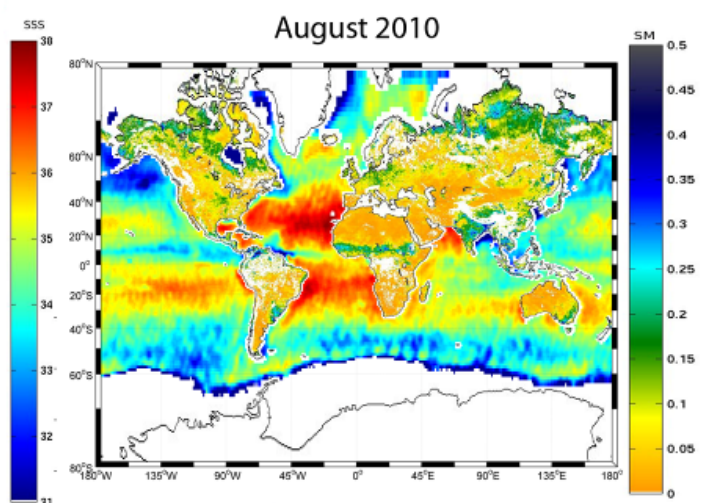
European Space Agency

- Completion of nominal mission (6 uninterrupted global measurement cycles) in March 2011
- Data give new high accuracy insight in the spatial structure of Earth's gravity field
- Also for ocean currency GOCE delivers on its promise.
- The next generation of GOCE based gravity products (from the complete nominal mission) will be issued in the October / November timeframe



SMOS science summary after 1 year in orbit

1. SMOS has provided the first global measurements of two key variables in the Earth's water cycle – soil moisture and ocean salinity
2. After one year of operations the SMOS instrument MIRAS has proven to be compliant to the system requirements
3. Level 1 data products: SMOS brightness temperatures observations are in good agreement with ground truth and the instrument model, proving measurement accuracy

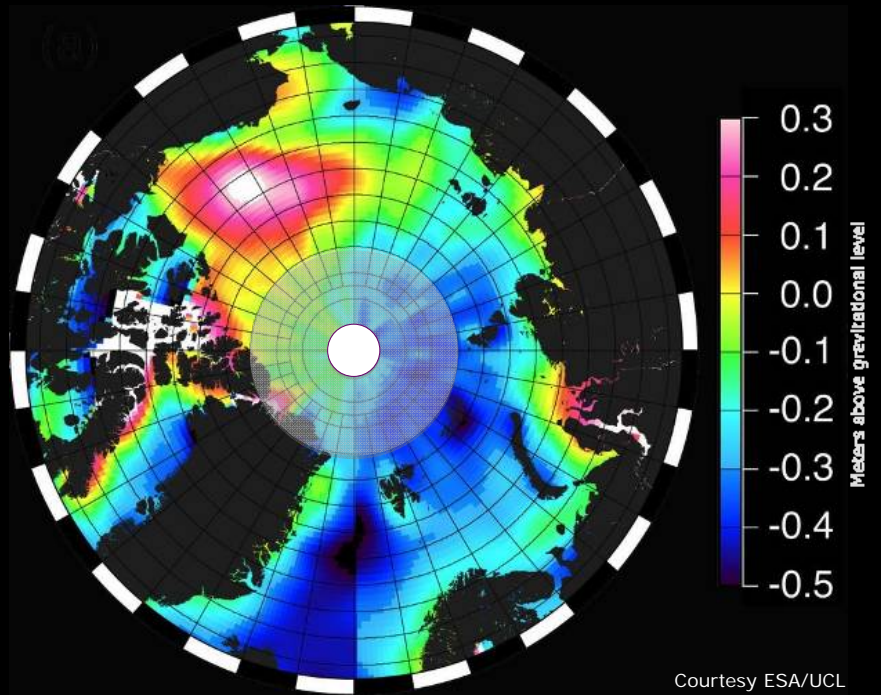


First global map of soil moisture and ocean salinity, August 2010

© CESBIO, IFREMER, CATDS



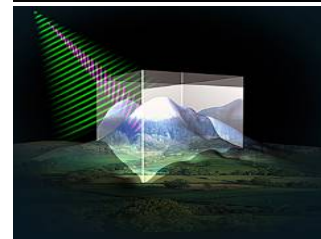
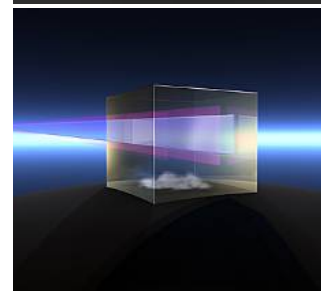
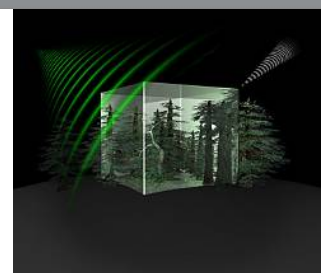
Revealed the first complete picture of ocean Dynamic Topography in the Arctic Ocean up to 88° latitude



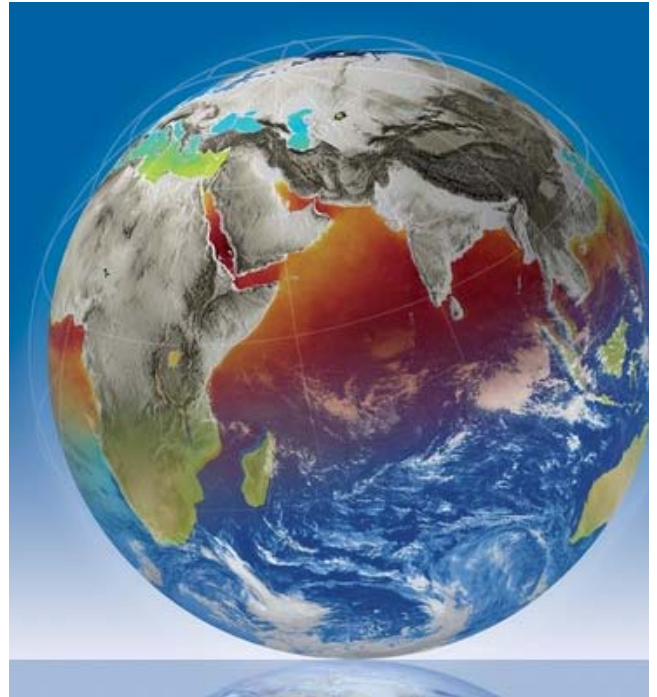
Courtesy ESA/UCL
European Space Agency

Earth Explorer 7 status

- Status: Industrial Phase A system studies for the 3 missions are progressing well and have passed the stage of the Prel. Concept Review
- Closure of Preliminary Requirements Review (PRR) foreseen in 4Q 2011
- Thereafter, preparation of reports for selection will start



- The procurement process for the Phase A/B1 activities for both mission candidates has started.
- At the end of this, the two candidate missions will be presented again to the user community. They will be evaluated by dedicated scientific peer review groups and by the ESAC
- The call for MAG membership applications for FLEX and CarbonSat has been released in mid of February 2011 and was closed in March.
- The groups are currently being formed. The first MAG meetings will take place in the second half of May (FLEX) and early June (CarbonSat).



European Space Agency

- **The MTG industrial consortium negotiations were successfully concluded in autumn 2010**
- The Phase B2 was formally kicked off on 18 November (under a Preliminary Authorisation to Proceed)
- **with a nominal duration of 6 months**



- Phase 1 Contracts started during Q3-4 2010, each of 3 years duration
- The Programme Mid-term review will be held Q1 2013
- Phase 2 Contracts will be based on results of phase 1; they will again be of 3 years duration and should start in Q3-4 2013 (for continuity with phase 1).
- Annual collocation meetings will be held in autumn of each year (scientific meeting of project teams)

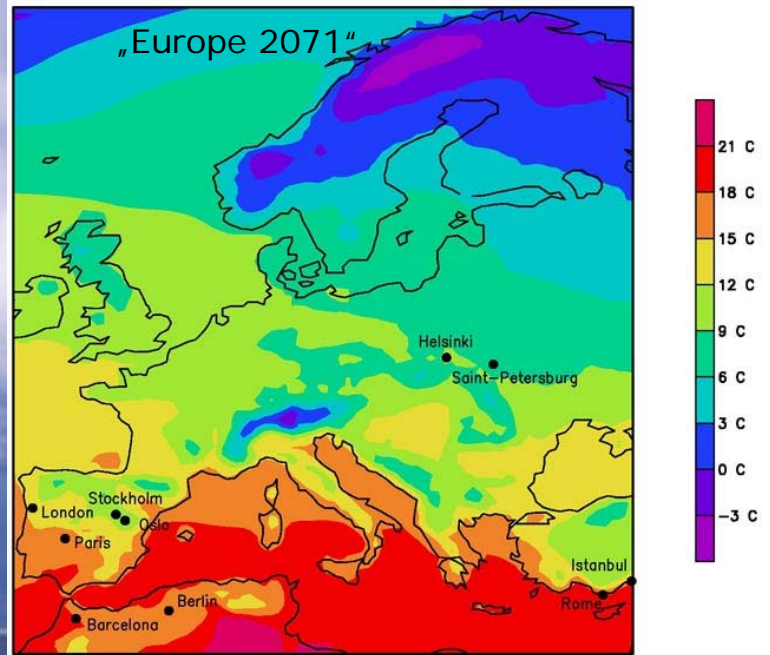
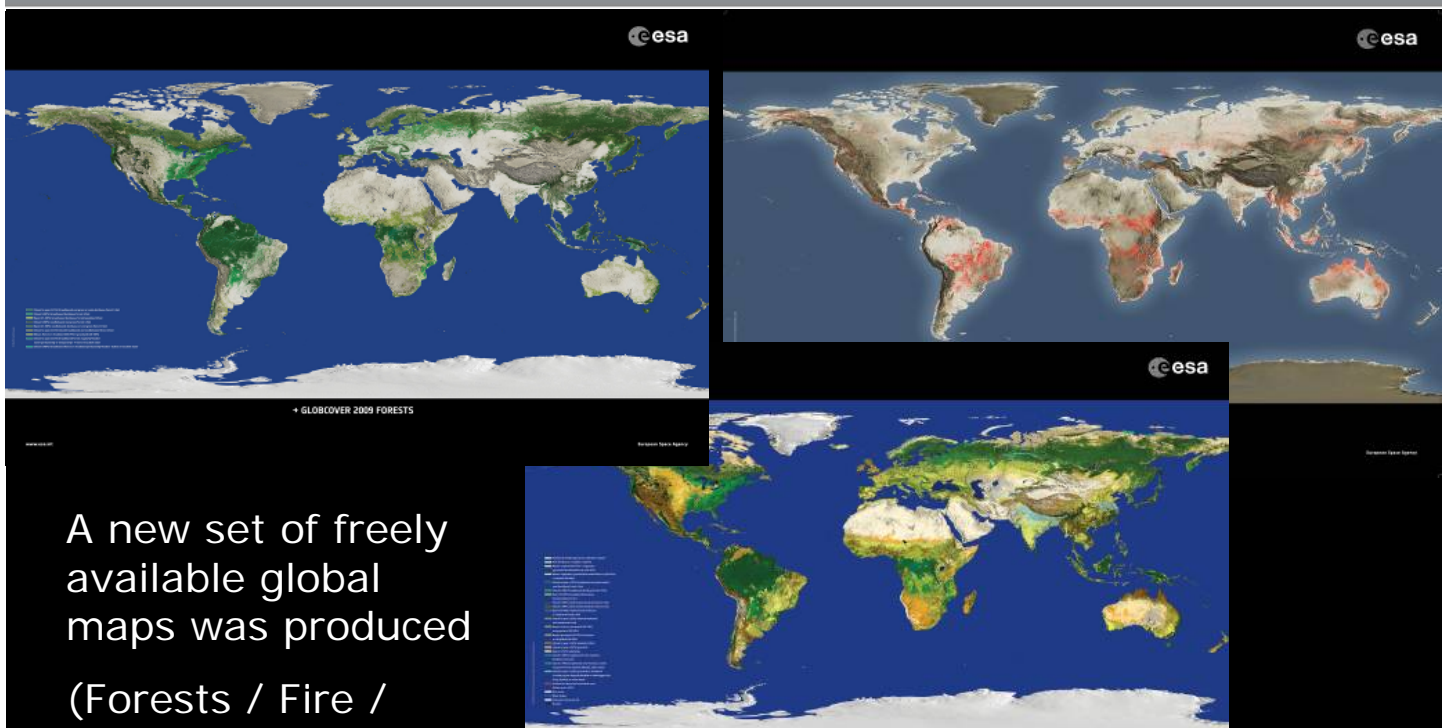


Image: Centre International de Recherche sur l'Environnement et le Développement and Ecole Nationale de la Météorologie, Météo-France
 Source: guardian.co.uk

Examples of recent application results: GLOBCOVER products



A new set of freely available global maps was produced (Forests / Fire / Landcover)

-> +60.000 downloads since December 2010!

The **Sentinel-Satellites** (1A/B, 2A/B, 3A/B, 4 and 5 "Precursor") are under **development**, Sentinel-5 in the definition phase

- **June Council** – approval of agreement with EC on GMES Initial Operations
- *The amount transferred to ESA for budget implementation purposes is 61 M€ from the GMES Regulation, in addition to an increase of 43 M€ of budget appropriations from FP7.*
- The **Ground Segment** is being **implemented**
- **Sustainability** of an operational GMES system remains the most important political **challenge** for the next years, incl. ownership and data policy



- **EOEP-4**
- **MetOp Second Generation**
- **GMES Next Programmatic Period**

Jason-CS

Sentinel-5

Studies: next generation security

- **LoR Elements**

Earthnet

Long Term Data Preservation

