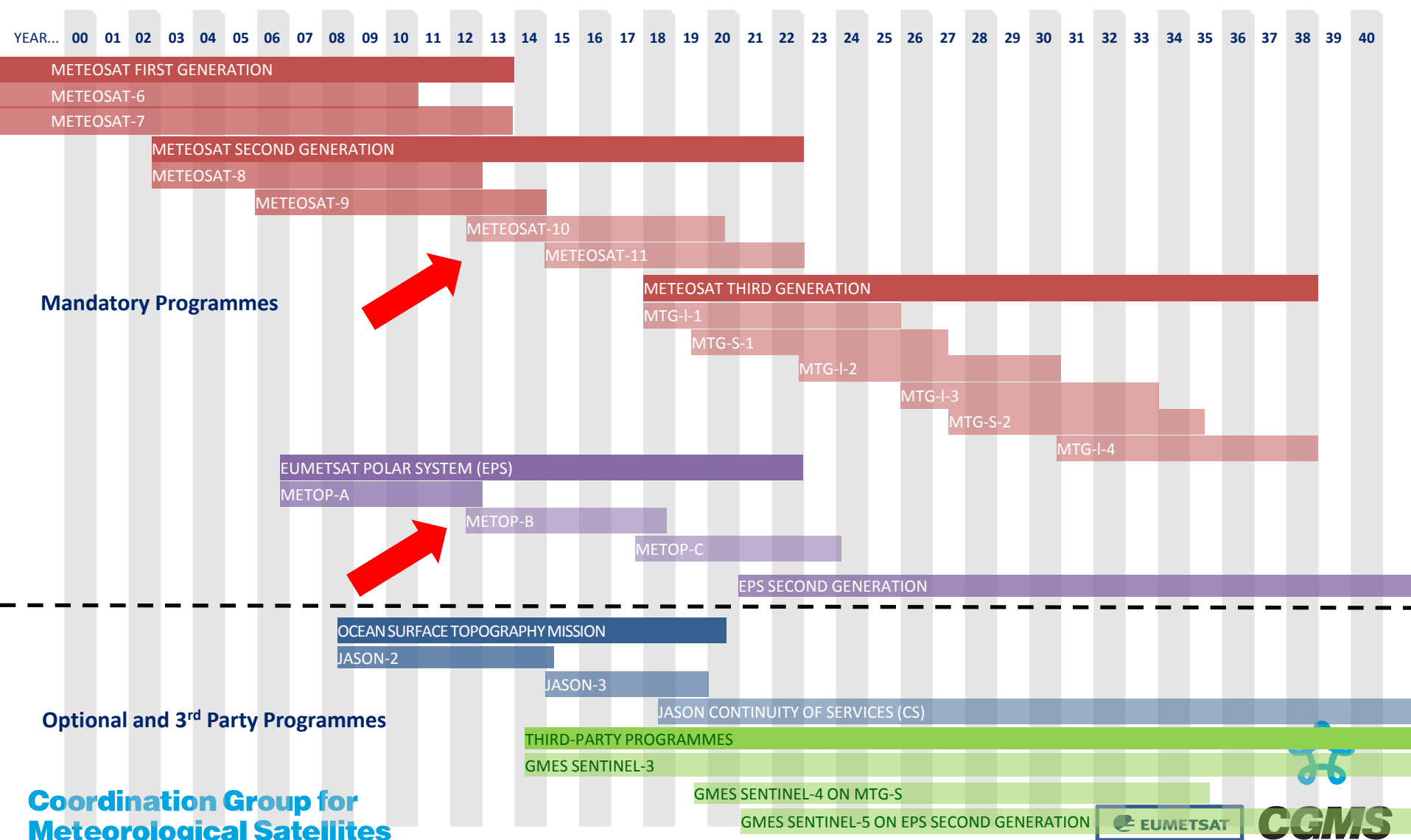


Update on EUMETSAT satellite programmes

Presented to CGMS-40 plenary session, agenda item III.1

Overview - Planning of EUMETSAT satellite systems

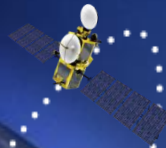


Current EUMETSAT satellites

METOP-A



JASON-2



METOP-A (98.7° incl.)

EUMETSAT POLAR SYSTEM

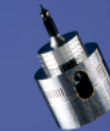
Mid-morning, sun synchronous orbit at 817km altitude

JASON-2 (66° incl.)

OCEAN SURFACE TOPOGRAPHY
Non-synchronous low Earth orbit at 1,336km altitude

METEOSAT-7 (57.5° EAST)

INDIAN OCEAN DATA COVERAGE
Operated in support of the Indian Ocean Data Coverage (IODC) mission, bridging an observational gap in this region



METEOSAT-7

METEOSAT-9 (0° LONGITUDE)

METEOSAT FULL DISC IMAGERY
Prime Meteosat full disc imagery service over the European continent, Africa and parts of the Atlantic and Indian oceans every 15 minutes

METEOSAT-8 (9.5° EAST)

RAPID SCANNING SERVICE (RSS)
Delivering the Meteosat Rapid Scanning Service over Europe and adjacent seas every 5 minutes

METEOSAT-9

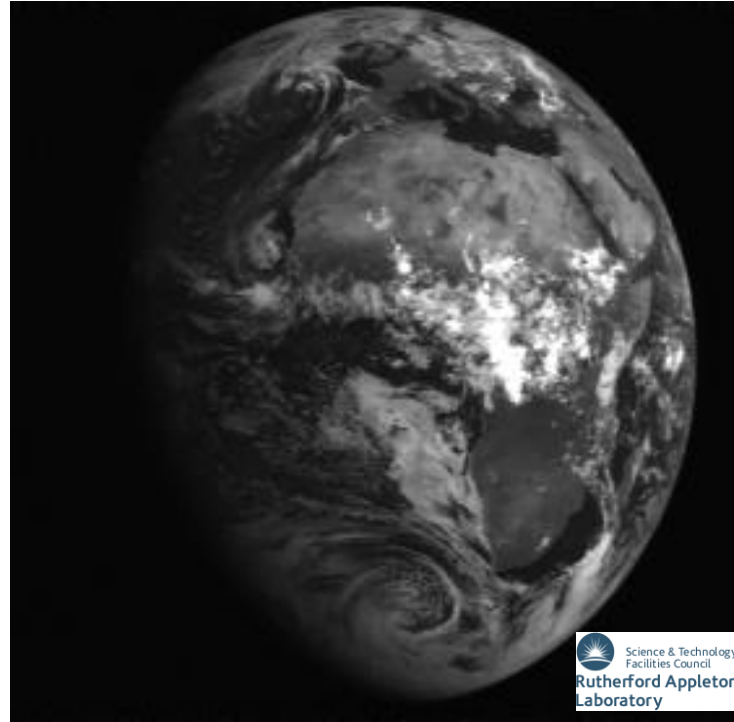
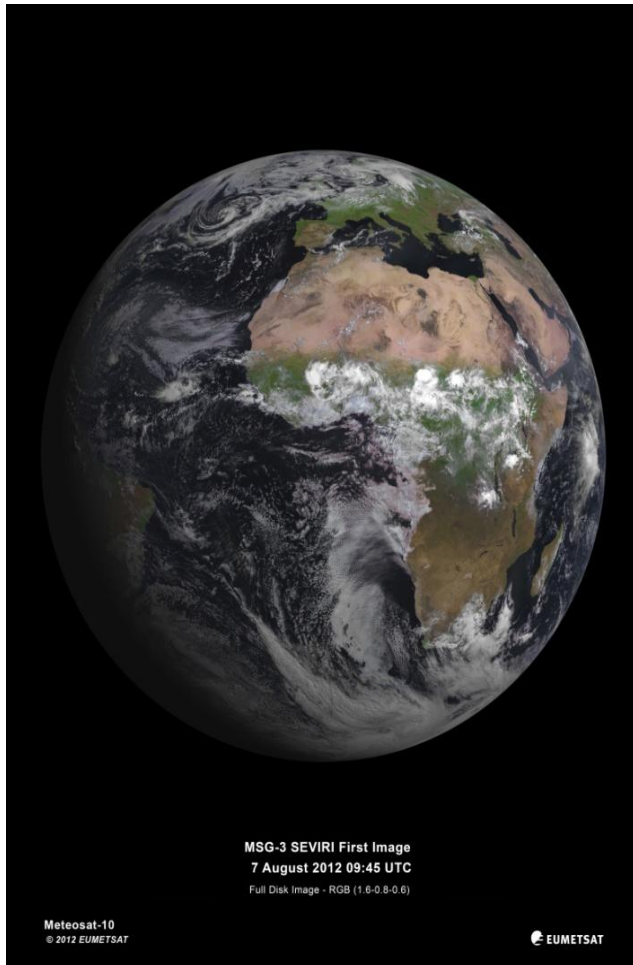
METEOSAT-8

Coordination Group for Meteorological Satellites



CURRENT GEO SATELLITES

- Successful launch of MSG-3 on 5 July 2012, in commissioning



MSG-3 first images (SEVIRI & GERB)

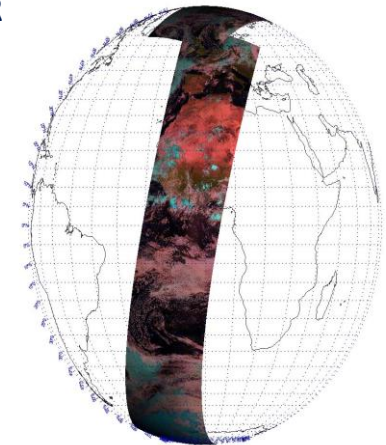


CURRENT LEO SATELLITES

- Successful launch of Metop-B on 17 September 2012, in commissioning

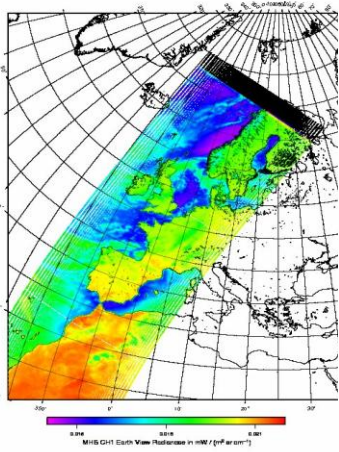


22 September 2012 : First full orbit AVHRR

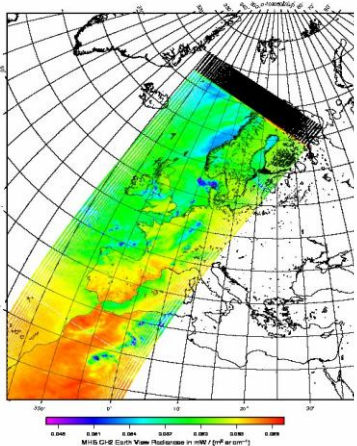


MHS Channels 1 to 5 (24-27 October 2012)

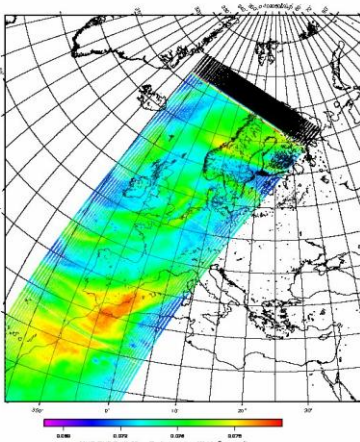
Metop-B MHS, Orbit 110, 25/09/12 10:06:51 to 10:24:51



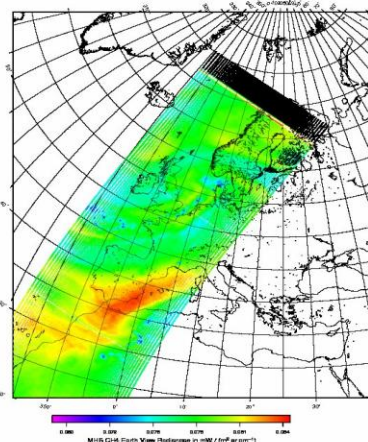
Metop-B MHS, Orbit 110, 25/09/12 10:06:51 to 10:24:51



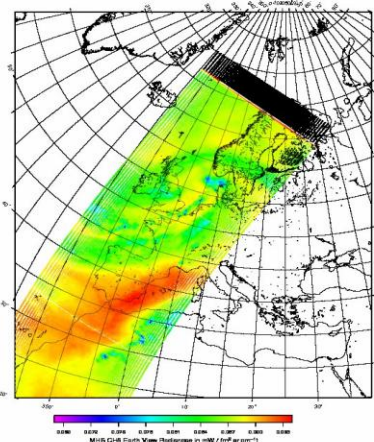
Metop-B MHS, Orbit 110, 25/09/12 10:06:51 to 10:24:51



Metop-B MHS, Orbit 110, 25/09/12 10:06:51 to 10:24:51



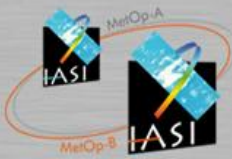
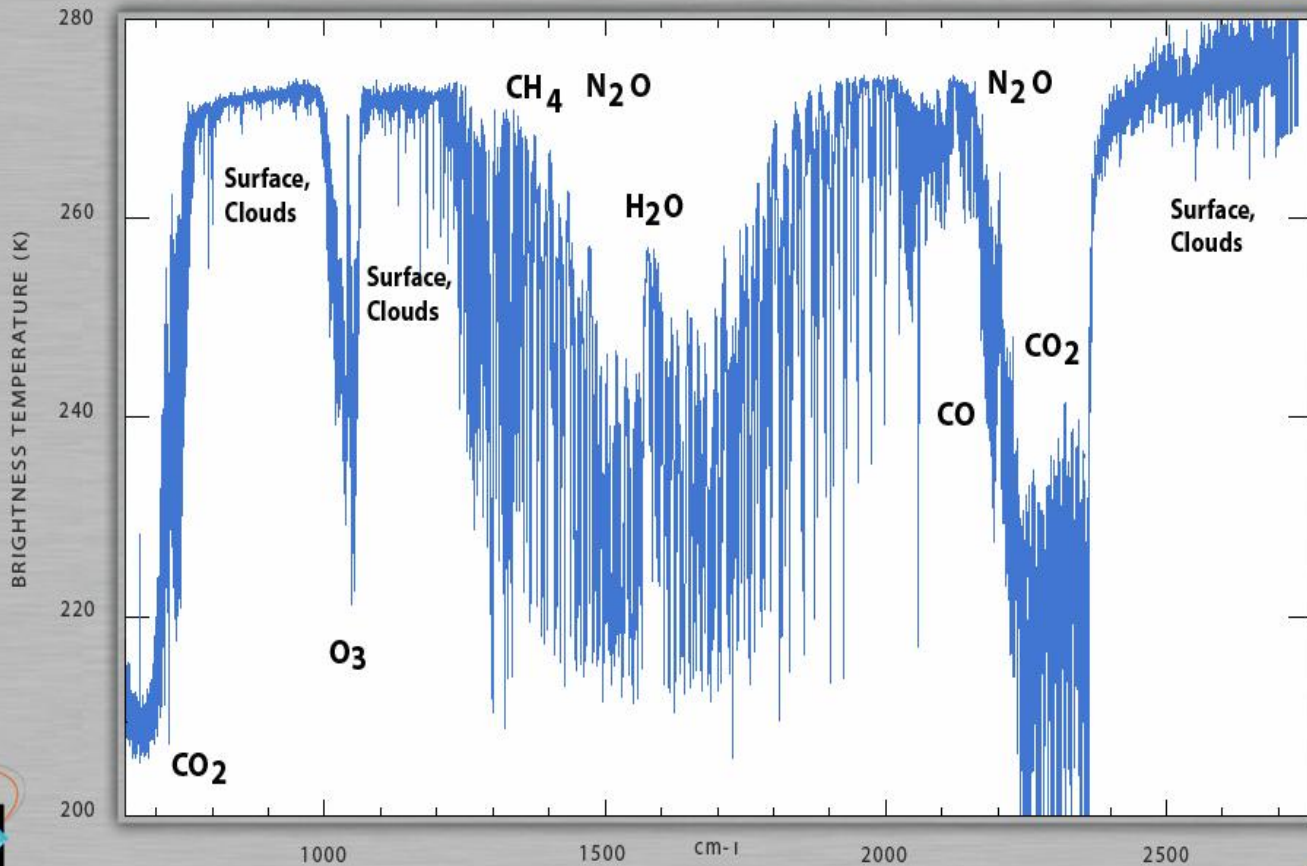
Metop-B MHS, Orbit 110, 25/09/12 10:06:51 to 10:24:51



CURRENT LEO SATELLITES – METOP-B FIRST IASI INTERFEROGRAMME

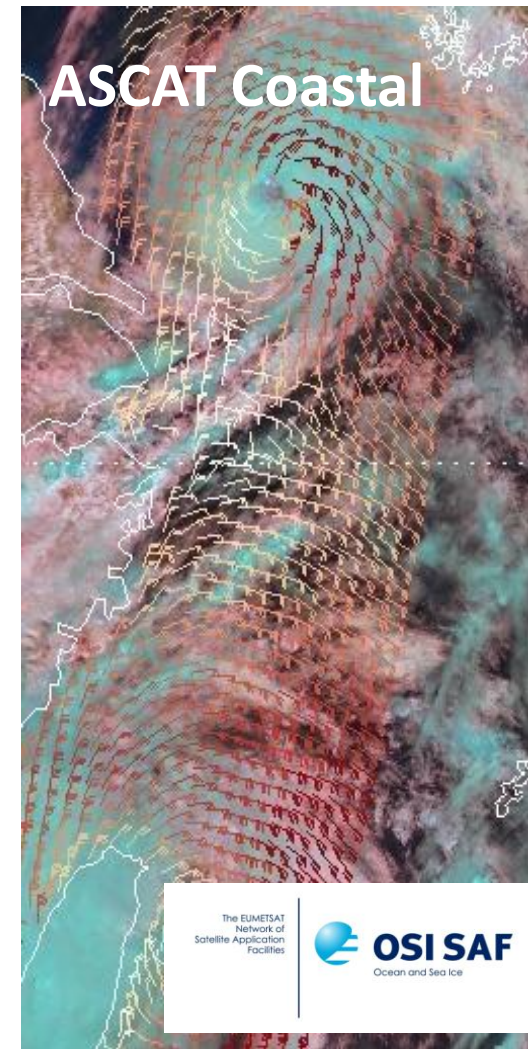
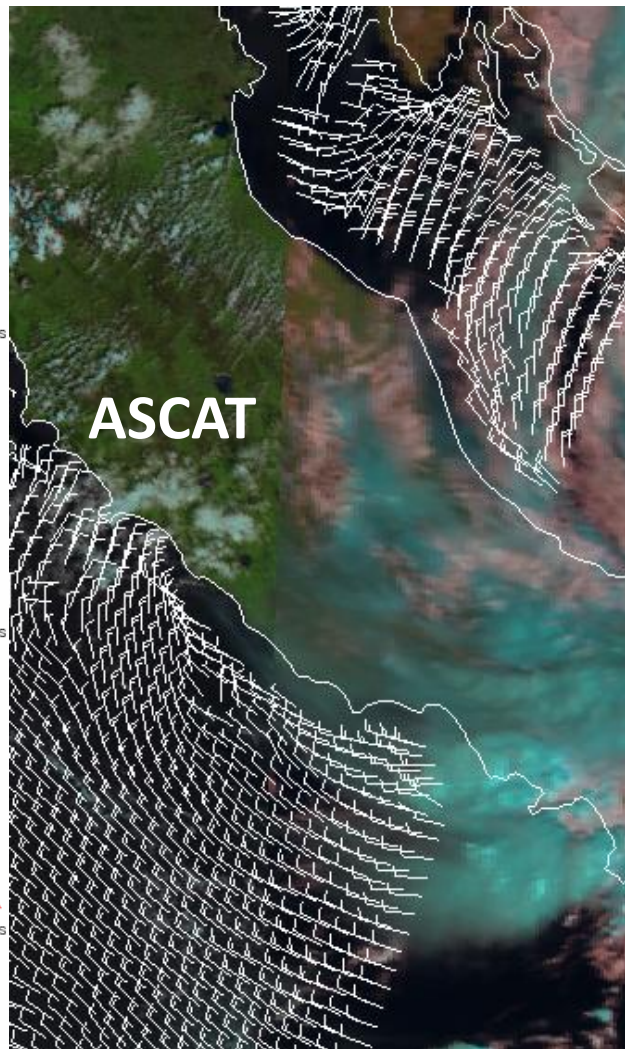
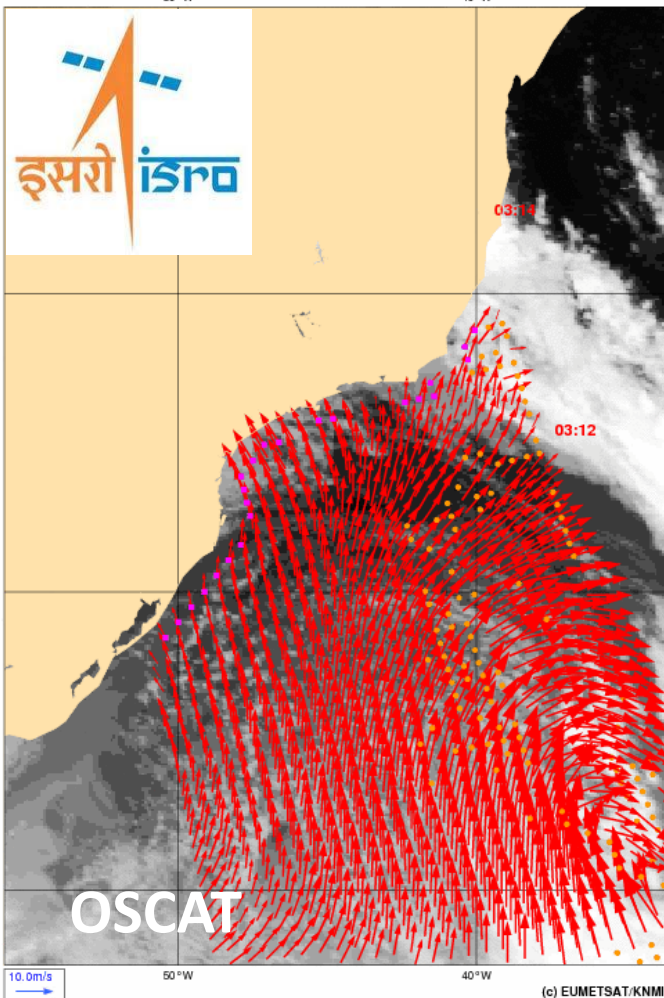


First IASI/METOP-B spectrum 24/10/2012 at 03:04 PM



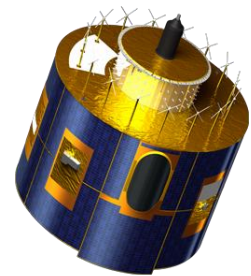
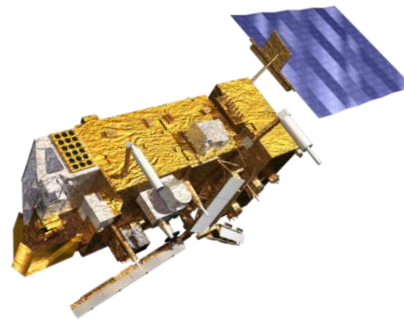
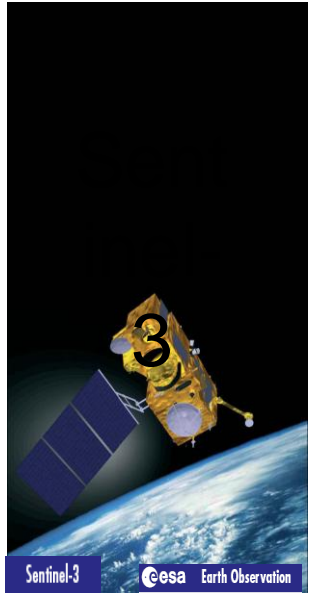
CURRENT LEO SATELLITES – SCATTEROMETER WINDS METOP-B AND OCEANSAT-2

OSCAT: 20111004 02:42Z HIRLAM: 2011100400+3 lat lon: -26.45 -44.73 IR: 03:00

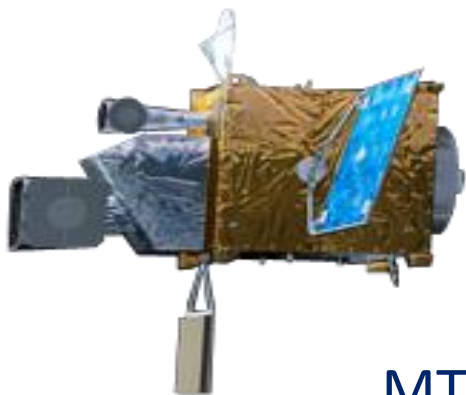


NEAR FUTURE - GEO AND LEO SATELLITES

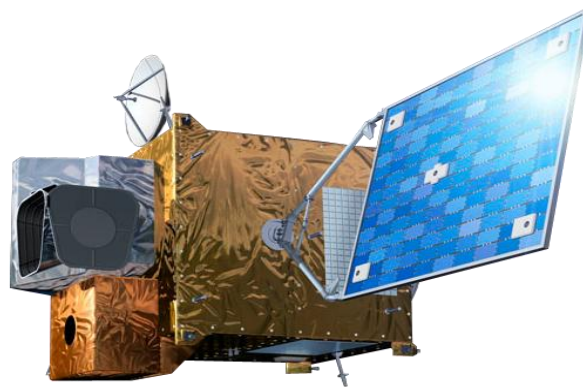
- **Jason-3** launch (with CNES, NOAA and NASA) end 2014
- EUMETSAT will operate **GMES Sentinel-3** (Marine Mission) after commissioning by ESA, end 2014
- **MSG-4** launch early 2015 (for in orbit storage)
- **Metop-C** launch planned in Feb 2018 (TBC)



FUTURE 2018-2040 TIMEFRAME - GEO AND LEO SATELLITES



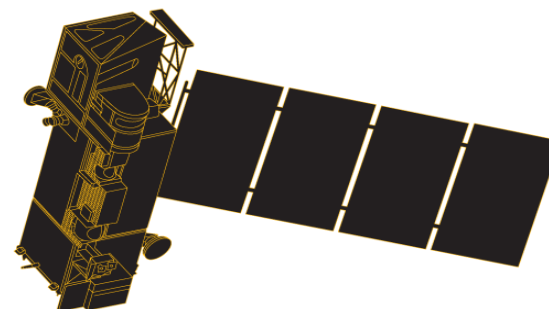
MTG: Approved



Jason-CS : Planned



EPS-SG : planned



Meteosat Third Generation

- 4 imaging (MTG-I) and 2 sounding (MTG-S) satellites, start of operations in 2019 and 2020
- Operational exploitation: 2019 – 2039
- Full MTG mission implemented by two MTG-I satellites and MTG-S satellite in orbit
- Imagery mission implemented by a two-satellite MTG-I system:
 - Full disk imagery every 10 minutes in 16 spectral bands
 - Fast imaging of European weather every 2.5 minutes
 - new Lightning Imager (LI)
- Hyperspectral infrared (IRS) sounding mission:
 - 3D mapping of water vapour, temperature, O₃ every 1 hour
 - Air quality monitoring and atmospheric chemistry
 - in synergy with GMES Sentinel-4 Ultraviolet Visible



EPS Second Generation

- Two satellites in orbit configuration:
 - Metop-SG A : optical imagery and sounding mission
 - Metop-SG B : microwave imaging mission
- Continuation of polar orbiting service 2021 – 2040
 - Number of satellites to be determined (3+3, 3+2)
- Primary mission: further improvement observational inputs to Numerical Weather Prediction models
- Significant improvements of other applications
 - Nowcasting at high latitudes
 - Marine meteorology and operational oceanography
 - Operational hydrology
 - Air quality monitoring
 - Climate monitoring

