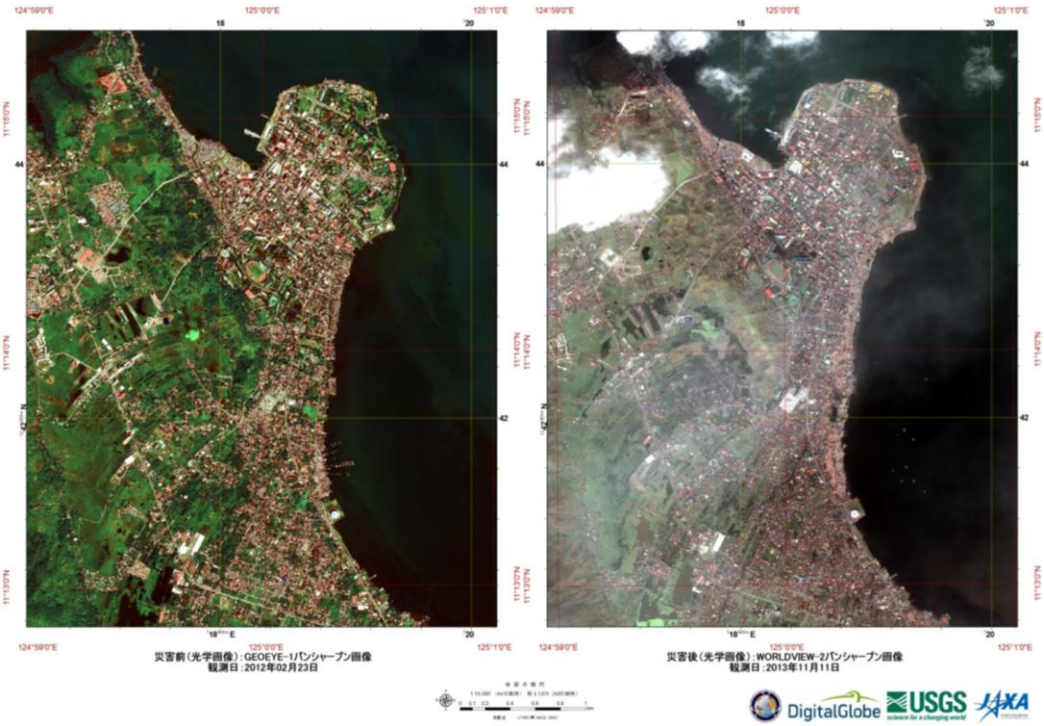
INTERNATIONAL CHARTER NEWSLETTER

20 February 2014 Issue 8

400 Activations for disasters around the world

The International Charter: Space and Major Disasters has been activated over 400 times over a period of almost fifteen years. From the first activation in 2000 to the latest activations in 2014, the Charter has provided satellite imagery free of charge for disaster response purposes around the world. See an example of Charter activation for Super Typhoon Haiyan in the Philippines, among the list of over 400 activations, filterable by disaster type and location on www.disasterscharter.org.



Comparative map of damage caused by Typhoon Haiyan. Date of Charter Activation: 8 November 2013. *Haiyan made landfall over the central Philippines. People have been killed and it is estimated that 12 million in 20 provinces could be affected. The category five storm brought winds as strong as 314 km/h and analysts believe it may be one of the strongest storms to make landfall in recorded history.*

Meeting of the International Charter in Argentina hosted by CONAE as lead agency

The 30th Meeting of the International Charter "Space and Major Disasters" was held from November 19 to 22, 2013 at CONAE´s Space Center, in the Province of Córdoba, Argentina. On the occasion, the Executive Secretariat and the Board members addressed operational issues for the short, middle and long term. Thirty-two representatives of space agencies from Europe, Asia, and North and South America participated in the meeting, with the objective to

Recent Activations

- Volcanic eruption in Indonesia
- Flood in Bolivia
- Flood and landslide in Burundi
- Snowfall in South Korea
- Flood in Zimbabwe
- Flood in England, UK

Charter Members

- European Space Agency (ESA)
- Centre National d'Etudes Spatiales (CNES)
- Canadian Space Agency (CSA)
- Indian Space Research Organisation (ISRO)
- National Oceanic and Atmospheric Administration (NOAA)
- Argentina's Comision Nacional de Actividades Espaciales (CONAE)
- Japan Aerospace Exploration Agency (JAXA)
- US Geological Survey (USGS)
- DMC International Imaging (DMC)
- China National Space Administration (CNSA)
- German Aerospace Center (DLR)
- Korea Aerospace Research Institute (KARI)
- National Institute for Space Research (INPE)
- European Organisation for the Exploitation of Meteorological Satellites (EUMETSAT)
- The Russian Federal Space Agency (ROSCOSMOS)

Bringing together new and efficient space technologies to support disaster management

further improve the reactivity and performance of the Charter to support emergency response measures after major disasters worldwide. The meeting was organized by Argentina´s space agency, CONAE, during its leadership term for the Charter general coordination, between November 2013 and April 2014. This is the third time that CONAE takes the lead agency role, since it joined the Charter in 2003.

Charter Board and Executive Secretariat members at CONAE's Space Center, in Córdoba, Argentina. 21 November 2013.
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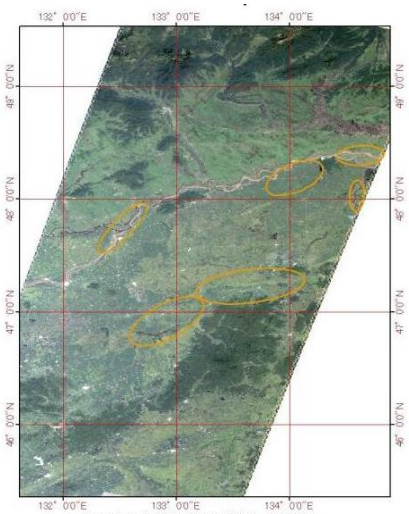
International Charter special side event at GEONETCast 2014

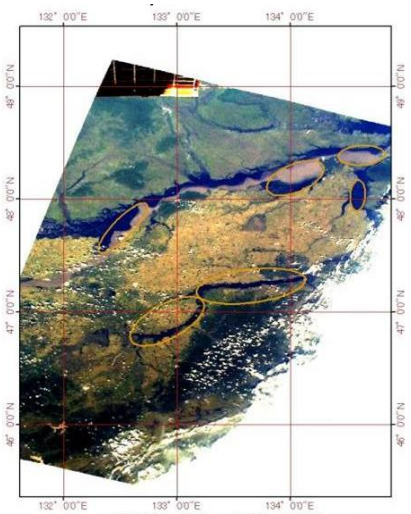
On 16 January 2014, during the Group on Earth Observations (GEO) Plenary Session and GEO Ministerial Summit in Geneva, Switzerland, EUMETSAT organised a special event to highlight the contribution of GEONETCast to the International Charter on Space and Major Disasters. In addressing the attendees, Barbara Ryan, the Secretariat Director of GEO, complimented the Charter on its achievements over the years, in particular the introduction of Universal Access, and she welcomed the integration of GEONETCast into the Charter processes. Speaking on behalf of the Charter Members, Pascale Ultre-Guerard, CNES, outlined the Charter's current activities. Alain Ratier, EUMETSAT Director-General, spoke about GEONETCast and the contribution it now makes to the Charter. The event was attended by around 60 participants from the GEO community.

Video Images from International Space Station to be provided to support disaster response

JAXA has started to provide high definition television (HDTV) video images for the International Charter. The images are acquired by a HDTV camera installed on the Exposed Facility of Japanese "Kibo" experiment module aboard the International Space Station (ISS). Although this HDTV camera is a commercial off-the-shelf (COTS) appliance, the ground coverage is approximately 200 km x 350 km in one frame, and its resolution is equivalent to 120m at x2 zoom mode. JAXA contributes to the ISS program with the "Kibo" module as well as by launching the resupply vehicles "Kounotori", and has contributed to the Charter with the "Daichi" or "ALOS" earth observation satellite. Daichi finished its mission in April 2011 just after the Great East Japan Earthquake, but JAXA goes on to provide imagery data from the Kibo/ISS.
The imagery is provided in video (movie) data and some geo-tiff images generated from the video data. These data are effective especially for disasters that require large area coverage, such as floods, oil spills or volcanoes. The observation of disasters on earth using the HDTV video data from the Kibo/ISS is quite new and JAXA will continue to support the Charter operations.



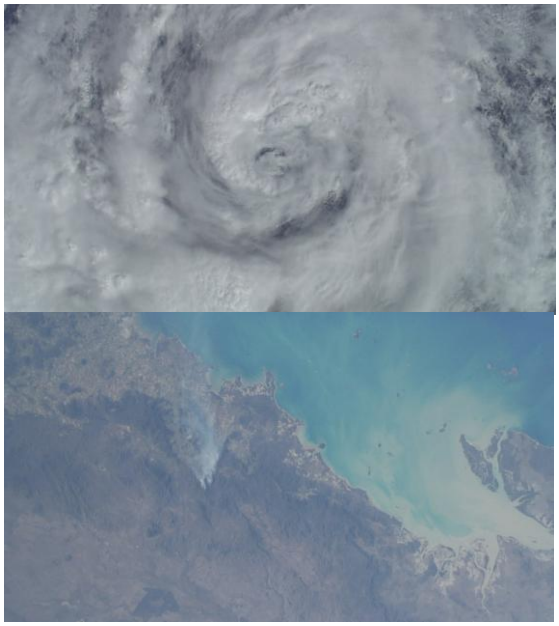
Landsat (optical) on 30 Aug 2006

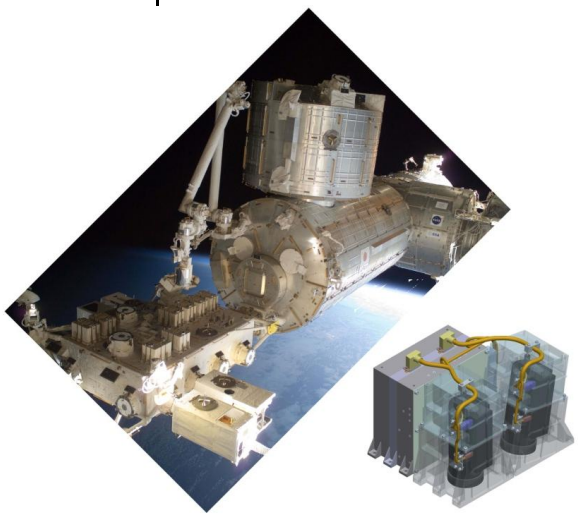


KIBO HDTV EF on 11 Sept 2013

Left: Image generated from HDTV video data. Example of study of the Disaster Monitoring near the area of Charter Call 449 (19 August 2013). Flood-swollen regions are marked with orange circles.

Bottom left: Sample Images acquired by HDTV camera: Hurricane Sandy in the Atlantic Ocean and Wildfire in Queensland, Australia. *Right*: Picture of Kibo Module and HDTV Camera.





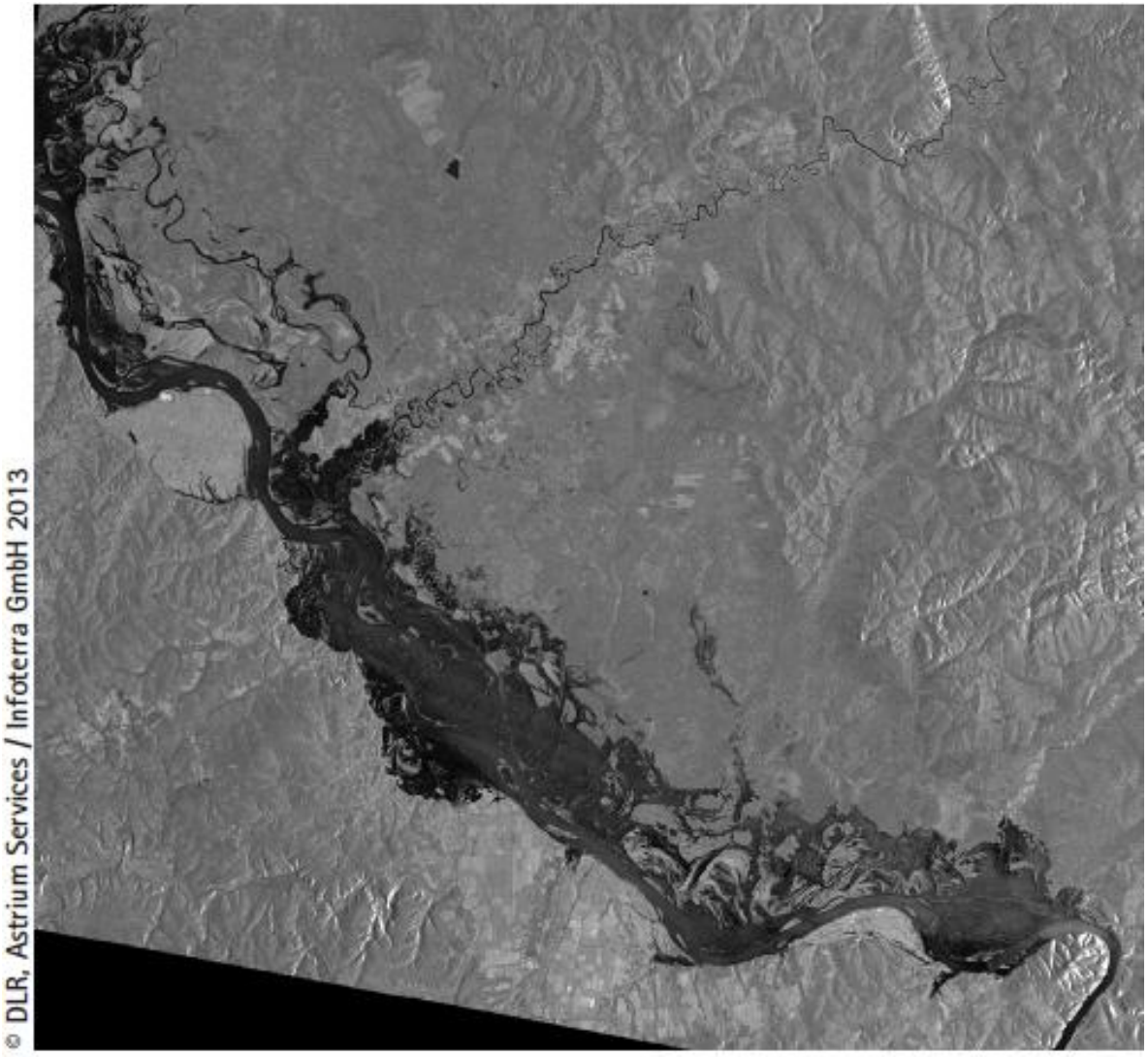
About Kibo HDTV-EF, please visit:
http://iss.jaxa.jp/en/kiboexp/news/cots_hdtv_ef.html

TerraSAR-X new image mode

The German radar satellite TerraSAR-X could nominally have been out of service for over a year and a half – that's how long it has exceeded its intended lifespan. But engineers at the German Aerospace Center (DLR) have switched the satellite, which was launched into space on 15 June 2007, to yet another mode: TerraSAR-X can now record image strips over 200 kilometres wide. This new Wide ScanSAR mode provides an overview of an area of up to 400,000km² within a single acquisition - anywhere and independent of weather conditions.
TerraSAR-X and its "twin satellite" TanDEM-X make important contributions to the International Charter 'Space and Major Disasters'. The new mode will mainly be used for large-scale flood disasters.

Outline:

- Spatial resolution: 40m
- Scene size (width x length): 270km x 200km
- Scene length extendable to 1,500km
- Ideally suited for ship tracking, oil spill detection, sea ice monitoring, flood observation



Excerpt from a TanDEM-X scene showing the flood of the river Amur in the East of the Russian Federation on 21 August 2013.