

The German Earth Observation Program

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THEME: PROG

KEY WORDS:

ABSTRACT:

Global change, a sustainable development of our habitats, an efficient use of resources, securing our mobility and our competitive position in the world of advanced technology, the need to deal with crises and to minimize the risks imposed on us by natural and technological hazards, all this puts mankind before huge challenges. Earth observation by satellite can help to stay on top of these tasks. Earth observation is a strategic benefit for policymakers, industry, and citizens. Current satellite technology enables users to see objects of less than a meter and a whole range of parameters can be remotely analyzed. Germany's Earth observation program covers the entire spectrum of these capabilities. Distinguished task of the German Space Agency is defining the German space planning on behalf of the federal government. The German earth observation activities are carried out in two main areas. First area is the International Program with contributions programs such as the Earth Observation Envelope Program at ESA, COPERNICUS at the EU or the operational EUMETSAT Programs. Second area is the National Program, which is complementary and is supporting missions, technologies, data exploitation and routine utilization. Hereby all disciplines are covered: Radar, Optics, Spectrometry and Lidar. In the field of X-band radar technology, the TerraSAR-X and TanDEM-X missions are among the world's best. With the Hyperspectral mission ENMAP for the first time in the world data with high spectral and geometric resolution, ranging from the Visible to Shortwave Infrared spectrum, will serve the global user community. METimage will be the European continuation of the NOAA-AVHRR mission while the French-German mission MERLIN will measure atmospheric Methane with a Lidar. The activities of the national Earth observation program, the main achievements and the plans for the future will be introduced.