

## THE COSMO-SKYMED BACKGROUND MISSION

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### ABSTRACT

In 2007 and 2008 ASI (Agenzia Spaziale Italiana/Italian Space Agency) launched three out of four X-band SAR satellites of the COSMO-SkyMed (CONstellation of small Satellites for Mediterranean basin Observation) Mission. The completion of the constellation is foreseen for the end of 2010.

The four SAR satellites constellation mission is devoted to Earth Observation, by providing data, products and services for a wide range of applications, such as Risk Management, Scientific and Commercial Applications and Defence/Intelligence Applications.

The onboard SAR instruments can be operated in different modes:

- SPOTLIGHT Mode, allowing SAR images with spot extension
- STRIPMAP Mode (HIMAGE and PingPong), achieving medium resolution and wide swath imaging
- SCANSAR Mode (WIDE and HUGE REGION), achieving radar imaging with very large extension and a lower spatial resolution

The COSMO-SkyMed background mission covers institutional and commercial goals, reaching different objectives:

- Coverage over extended areas for mapping and change detection scopes. Selected areas are characterized by high natural hazards risk coefficients or by geo-political and humanitarian crisis risks
- Monitoring of selected areas of interest for other kind of thematic like Topographic mapping, Land user/cover mapping, Agriculture, Forestry, Hydrology, Geology, Ocean and ice, Archaeology
- Temporal series collection of interferometric acquisition over areas subject to subsidence in order to analyze the terrain variations
- Development of new research themes and applications
- Other

Selected areas are chosen even on the basis of possible future institutional and commercial agreements.

This paper describes the COSMO-SkyMed Background mission and the status of the archive.

## REFERENCES

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