



Copernicus Space Component: Status and Evolution

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The Copernicus environment-monitoring programme with its fleet of Sentinel satellites forming the heart of the programme's space component, entered its operational phase in 2014 with the launch of the first dedicated satellite, Sentinel-1 A.

In the meantime three more spacecraft have been launched in 2015 and 2016 and other three will be launched this year. To complete the caravan of Sentinel satellites, eight more spacecraft and 5 additional Sentinel instruments, embarked on European meteorological satellites, will be put in orbit and will cover all environmental domains.

The data are distributed free of charge as part of a European policy seeking to stimulate downstream value-added Earth observation-related business. With this space configuration, an uninterrupted data delivery to users is guaranteed until at least 2030. Over 54000 users world-wide are accessing Sentinel data from several data access hubs developed by ESA. Over 13 PB of data have been already downloaded with an average of several TB of data products downloaded every day, making Copernicus a Big Data challenge. These figures will grow as new satellites will be put in orbit.

In the meantime, and thinking of a near term future, new priorities have been introduced in the EU policies and new societal needs and challenges have arisen requiring new observations. This will lead to what has been called the Sentinels' expansion.

The expansion of the Sentinel family is a joint EU-ESA endeavour which just started concerning the investigation of new domains/techniques for future satellite missions like a greenhouse gases emissions mission, polar ice/ocean interferometric altimetry, thermal Infrared, soil moisture or hyper-spectral land imaging.

This presentation will therefore give an overview of the current status of the space component and corresponding data access, and some hints on the future perspectives of the Copernicus space component.