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Using HELIO to address multi-spaceraft science use cases

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The Heliophysics Integrated Observatory, HELIO, is a research infrastructure funded under Capacities programme of the EC's 7th Framework Programme (FP7). It is creating a collaborative environment where scientists can discover, understand and model the connection between solar phenomena, interplanetary disturbances and their effects on the planets.

HELIO provides integrated access to metadata from the domains that constitute heliophysics - solar, heliospheric, magnetospheric and ionospheric physics - in order to track the effects of solar phenomena as they propagate through inter planetary space and affect the planetary environments. The project is designed around a service-oriented architecture with resources are being established as stand-alone services that support metadata curation and search, data location and retrieval, and data processing and storage.

We will report on the status of HELIO and the services that are already available. We will also outline how these resources can be used to address use cases involving multiple spacecraft and modelling.

The first HELIO Coordinated Data Analysis Workshop (CDAW) involving the community will take place in April 2011. In this Workshop we demonstrate the capabilities of the project and participants will be able to use them to address science use cases related to phenomena propagating from the Sun and being observed by at least two observatories in different parts of the inner Solar System. Two further CDAWs will be held before the end of the project.

The HELIO Consortium includes thirteen groups from the UK, France, Ireland, Italy, Switzerland, Spain and the US; the project started in June 2009 and has a duration of 36 months