

## **The role of e-Infrastructures supporting Solar System science within general research environments**

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### **Abstract**

Many aspects of Solar System science are related with phenomena observed on the Sun subsequently causing effects in other parts of the Solar System; similarly, effects that originate in heliosphere or the near planetary environments can have impacts low down in planetary atmospheres. However, combining and comparing observations from the different domains is more difficult than it should be, partly because the communities have evolved independently without any consideration of the need for interoperability.

A number of e-Infrastructures have been established to support the analysis in different aspect of science within the Solar System – some have been funded under FP7 including Europlanet RI and HELIO. Now that the Research Infrastructures are reaching maturity it is important to examine how they might work better together and be combined to support new types of science.

The infrastructure established by HELIO follows a service oriented architecture where required capabilities are implemented as independent services that can be combined as needed. If the capabilities of other infrastructures can be made available in a similar way then it is possible to consider them all as components in a larger and more general collaborative research environment that can be used to address science use cases that were previously not possible.

We discuss how this might be achieved and describe some of the ideas being developed under the Coordination Action for the integration of Solar System Infrastructure and Science (CASSIS).