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Developing a data processing system for a world-class observatory: Sharing the Herschel experience



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Prof. Stephan Ott is the Herschel Science Data Processing Development Manager /Coordinator in the Herschel Science Centre, his responsibility is to steer the development to provide the Herschel community with the best means to exploit the Herschel data. He got his PhD degree in Astronomy and Astrophysics from the University "Pierre et Marie Curie" Paris 6 in 2002. He led the ISOCAM Instrument Dedicated Team during ISO operations and post-operations (1998-2002), and managed the development of the ISOCAM Interactive Analysis system and the Standard Product Generation software during ISO's Science Ground Segment development and its operational phase (1994 -1998).

Abstract

When the development of an observatory is planned frequently the attention is put only to develop the hardware, and the software systems to control the facility and to obtain and distribute the raw data. The expectation is that the users' community will take it on themselves to develop all software needed to analyse the data. This was the approach originally taken in 1997, when Herschel's Science Management Plan was approved. Over the years it was realised that the expectations of the astronomical community regarding deliverables from observatories, their data processing systems, data products, and archives had evolved and that an observatory must offer its users, the astronomical community, comprehensive means, beyond observing opportunities, to do science. In 2002, seven years before Herschel's launch, the first steps towards to a common Herschel Data Processing System were initiated. In 2005 additional funding for an “extended Data Processing System” was approved. The goal was a to develop a single “cradle to grave” data analysis system which supports the needs of both the project team and the general astronomical community starting from early instrument level tests, covering pre-launch system operational verification tests, check-out and performance verification phase, operations, post operations and finishing with the population of the Herschel legacy archive. We will summarise the main ideas that drove the development of this major software system, address the main challenges, reflect on what went well, what needed to be adapted and our remaining open points. We will conclude our talk by sharing our view whether the efforts that were put into the development of the Herschel data processing system paid off.



All are welcome! Tea, coffee, biscuits will be served at 2:45 P.M.