

SYMPOSIUM ON NEW TECHNOLOGIES FOR FUTURE SPACE ASTRONOMY MISSIONS (A7)  
Lessons Learned (5)

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LESSONS LEARNT OF THE HERSCHEL / PLANCK PROGRAMME

**Abstract**

The development of the Herschel and Planck Programme, the largest scientific space programme of the European Space Agency (ESA), has culminated in May 2009 with the successful launch of the Herschel and Planck satellites onboard an Ariane 5 from the European Spaceport in Kourou. Both satellites are operating flawlessly since then and the scientific payload instruments provide world-class science.

The Herschel/Planck Programme is a multi national cooperation with the managerial lead being taken by the European Space Agency with the major contributions from European industry, under the lead of Thales Alenia Space as Prime Contractor for the spacecraft development, and from scientific institutes, organized in five international consortia, for the payload instruments.

The overall project complexity called for various, adapted, management approaches to resolve technical and programmatic difficulties. Some of these management experiences of the decade of realization of the satellite program will be presented with the lessons learnt and recommendations for future programmes with the similar complexities, e.g. next Cosmic Vision programmes in the Science domain.

The paper will first recall the main programmatic and managerial challenges which were solved to implement the Herschel/Planck programme with the numerous technical difficulties being only one aspect. The ultimate challenge actually was to get both spacecraft including their telescopes and scientific instruments from the variety of suppliers, ready at the same time for the common launch. It will then highlight the major risks management experiences though the various development phases, it will emphasise the main causes of the encountered difficulties in view to improve the quality and efficiency of future activities.