



## Communicating Herschel Key Programs in Solar System Studies to the Public

M. Rengel (1), P. Hartogh (1), T. Müller (2) and the "HssO" and "TNOs are Cool" Teams

(1) Max-Planck-Institut für Sonnensystemforschung (MPS), Katlenburg-Lindau, Germany (rengel@mps.mpg.de / Fax: +49-5556-979-244 (2) Max-Planck-Institut für extraterrestrische Physik (MPE), Garching bei München, Germany

### Abstract

The Herschel Space Observatory, one of the cornerstone missions of the European Space Agency (ESA) with participation from NASA, is delivering a wealth of far-infrared and sub-millimeter observations of the cold Universe. A considerable part of the observing time for the nominal three year mission lifetime has been awarded in the form of Key Programs. Between the 42 key programs (guaranteed and open times), only two key programs are dedicated to study the Solar System: "Water and Related Chemistry in the Solar System", also known as Herschel Solar System Observations (HssO) project [1], and "TNOs are Cool: A Survey of the Transneptunian Region" [2]. In the framework of these Programs, a series of public outreach activities and efforts of its results are being carried out. We present some of the outreach strategies developed (e.g. press releases, web pages, logos, public lectures, exhibitions, interviews, reports, etc.) and some plans in this direction. Our activities introduce people to knowledge and beauty of solar system research and wider the opportunities for the public to become more involved in topics like solar system studies, specially in the times of frequent exo-planet discoveries.

### 1. Introduction

The Herschel Space Observatory, voted as one of the greatest inventions of 2009 by Time magazine, is a cornerstone mission of the European Space Agency (ESA) with participation of the NASA. It was successfully launched on 14th May 2009 and currently operates as an observatory facility open to the worldwide scientific community [3]. Herschel is the only space facility ever developed to cover the far-infrared to sub-millimeter parts of the electromagnetic spectrum (55-672 micron range) to capture the thermal radiation of celestial objects. Applications for Proposals to observation time for Herschel have to be prepared including an engagement in public outreach. Furthermore,

over the lifetime of a mission, there are many occasions in which teams must communicate with non-specialists about their research. In the framework of the "HssO" and "TNOs are Cool" programs, Herschel is revealing important hints in the study of the formation and evolution of the solar system, key studies to better understand exo-systems. Studies of water in the Solar System are of particular interest, as this molecule is closely related to the origin of life on Earth. Herschel is also revealing physical properties of the poorly known objects orbiting beyond Neptune. To increase awareness of Herschel's projects, a coherent outreach plan strategy has been already developed, here we report our efforts and activities we have developed in communicating the highlight of the projects to the public and non-specialists, and we close with plans in this direction.

### 2. Strategies and Plans

In order to disseminate the progress, advances and results of the Herschel key programmes in Solar System studies to the public and non-specialists some outreach activities and efforts have been already performed. They include:

- Press releases and notes, activity been realized in close collaboration with public outreach teams of ESA, and national institutes (e.g. the Max-Planck-Society and Observatoire de Paris). A number of international media organizations (news, magazines, blogs, TV, etc.) have picked up "HssO" and "TNOs are Cool" stories.
- Public Web pages and logos (Figs. 1–2):  
HssO: <http://www.mps.mpg.de/projects/herschel/HssO/index.htm>  
TNOs : <http://www.mpe.mpg.de/~tmueller/index.htm>
- Talks-colloquiums-Public Lectures. several international public lectures have been already of-

ferred, hosts cover universities, high-schools and planetariums.

- Herschel Stand/exhibition during the "Open doors" day event celebrated at the Max-Planck-Institut für Sonnensystemforschung in Katlenburg-Lindau, 12 September 2009.
- Postcards and TV-newspapers Interviews
- Reports
- Etc.



Figure 1: Logo of the "HssO" project



Figure 2: Logo of the "TNOs are Cool" project

Analysis of the Herschel data certainly will continue during and after the mission lifetime. Current and future Herschel results will require to continue active efforts in the outreach. Production of printed material and press releases (including visual) will be produced and disseminated using the standard distribution channels. The Herschel funding agencies have in place their own Public Outreach and Education programs, we will continue providing to these programs with all relevant materials related to our Key Programs.

### 3. Conclusion

Studies of Solar System objects spark a high level of enthusiasm and excitement, not only in the scientific community, but in the general public. Herschel is delivering a set data of the solar system, our general but active and modern outreach strategies introduce people to knowledge and beauty of solar system research. Yet this is just a step in improving the opportunities for the public to become more involved in topics like solar system and exo-system studies.

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### References

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