HELP Data Workshop, 15–17 April 2015

The Herschel Extragalactic Legacy Project (HELP)'s main objective is to provide a rich new data set characterising the physical properties of hundreds of thousands of distant galaxies. This will bring together a vast range of data from many different astronomical observatories. The focus is on the images produced by the ESA's Herschel mission. These images chart the star formation enshrouded in dust, and our work will allow us to unlock the full potential of those images.

Our aim is to provide new techniques, tools and data to enable astronomers in Europe to capitalise on the surveys of the distant Universe made by the ESA mission Herschel.

herschel.sussex.ac.uk

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Objective:

Address main data challenges for HELP to steer data gathering and data product creation through the project.

Date & Times:

- Weds 15th April 13:30 – 18:30
- Thurs 16th April 08:30 – 18:00
- Friday 17th April 09:00 – 13:00

Location:

Laboratoire d'Astrophysique de Marseille
http://www.lam.fr/?lang=fr

Agenda:

Items for discussion

1. Science use cases: mini pitches from collaborators
2. Data audit (needs and availability) for HELP
3. Data homogeneity across the project
4. Usability of HELP data products: Selection functions
5. Usability of HELP data products: User interface and tools
6. Project co-ordination and planning
7. Dissemination & outreach for HELP

To register:

To express an interest in attending the workshop, please contact the Project Manager and Administrator, Louise Winters
L.Winters@sussex.ac.uk

Or the Project Co-ordinator, Professor Seb Oliver
S.Oliver@sussex.ac.uk

Accommodation and workshop dinner

- The recommended hotel for workshop attendees is the Residhome Apart Hotel Saint-Charles
  http://www.residhome.com
- We have also arranged for all attendees to go out together for the workshop dinner on Thursday 16th April at approximately 7:30pm at Restaurant de l'UNM, 34, bd Livon – 13007 Marseille
- Please contact Louise to inform her of any dietary preferences (e.g. vegetarian, food allergies etc):
  l.winters@sussex.ac.uk

Full agenda & schedule

Wednesday		
Start	**End**	**Session & discussion points**
12:00	13:30	**Arrival, welcome and lunch**
13:30	15:45	**#1 Science use cases** Overall objective: identify actual science use cases for HELP data and products and identify how best to articulate those use cases so they are useful in shaping the project work. 1.1 All attendees are invited to present a 5 minute pitch for a project to use HELP data 1.2 Identify any use cases or main uses that are missing 1.3 Prioritise and select most relevant use cases for HELP 1.4 Agree template to capture relevant information on each use case for dissemination and planning within the HELP team 1.5 Presenters to complete template for their pitch ideas (post session)
15:45	16:15	**Coffee break**
16:15	18:30	**#2 HELP data audit** 2.1 Review & clarify available data of relevance for HELP 2.2 Review & clarify planned HELP data products 2.3 Review & clarify HeDaM features
18:15		**Dinner / social event**

Thursday		
Start	**End**	**Session & discussion points**

08:30	10:30	**#3 Data homogeneity across HELP**
		Session outcomes:
		   - Each WP to define ONE method of extracting photometric catalogues which will work on all fields. - Select one science case, e.g. LF and use our catalogues. - Define ONE astrometric reference for the whole project - Collect additional requirements from WP7 & WP11. - Define who does what in the data flow. 3.1 What is homogenous in HELP?
		    a. Brief summary of what we have achieved so far.
		3.2 Photometry methods. Needs and priorities.
		    a. Discuss pros & cons of current tools used in different surveys and WPs
		    b. Measurements which are needed in catalogues (possibly from WP8 and WP9).
		    c. Extras common to all WPs to be added in WP11 (?).
		3.3 Astrometry methods. Needs and priorities.
		    a. Reference all data products to a single reference system (e.g. 2MASS) or each field to its own.
		    b. Band merging methods. Needs and priorities.
		3.4 Discuss current tools and methods.
		3.5 Focus on the end user. How "internal" products are different to "end user release products"

10:30	10:45	**Coffee break**

10:45	12:30	**#4 Usability of HELP products: Selection functions**
		
		4.1 Use cases of selection functions
		    - Luminosity Functions
		    - Conditional LF
		    - Clustering Analysis
		    - Conditional selection from external catalogs
		
		4.2 What should HELP selection functions provide?
		
		4.3. A roadmap to HELP selection function
		step 1 : mask (1/0) of coverage
		step 2 : flux limit as a function of position from the map
		step 3 : flux limit as a function of position given detected sources in the map (combines map and catalogs)
		step 4 ?

12:30	13:30	**Lunch**
13:30	15:15	**#5 Usability of HELP products: User interface and tools** 5.1 Are current search tools relevant for the scientific use cases we want to address? 5.2 Can/shall we provide general analysis tools to help solve these use cases? 5.3 How can we make the most of XID+ for scientific use cases? 5.4 How can we make the probabilistic framework available to do additional science?
15:15	15:30	**Coffee break**
15:30	17:00	**#6 Project Co-ordination and planning** Main objective: update project flow document to inform co-ordination and project management. 6.1 Review project flow and interdependencies between WPs & external data providers for Phases 2, 3 & 4 6.2 Agree platform for file sharing and version control 6.3 Review milestones and identify main risks to project completion within planned timeframes
17:00	18:00	**HELP General Assembly meeting**
19:30		**Dinner / social**

Friday		
Start	**End**	**Session and discussion points**
09:00	10:45	**#7 Dissemination & outreach for HELP** Overall objective: Clarify & identify outreach / publication goals and opportunities 7.1 Current state & goals of the website (short summary presentation) 7.2 Future useful content for website Publication plan; discussion of planned HELP papers/timeline to publication 7.3 Brainstorm outreach opportunities & materials (e.g., school curriculum materials, public talks)
10:45	11:00	**Coffee break**
11:00	12:00	**LAM Seminar**
12:00	13:00	**Wrap up and closing remarks**