



Help Documentation and Search Capabilities in the Herschel DP System

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(on behalf of the Herschel and Instrument Editorial Boards)

***Herschel Data Processing Spectroscopy/Photometry
Workshops***

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Presentation Outline

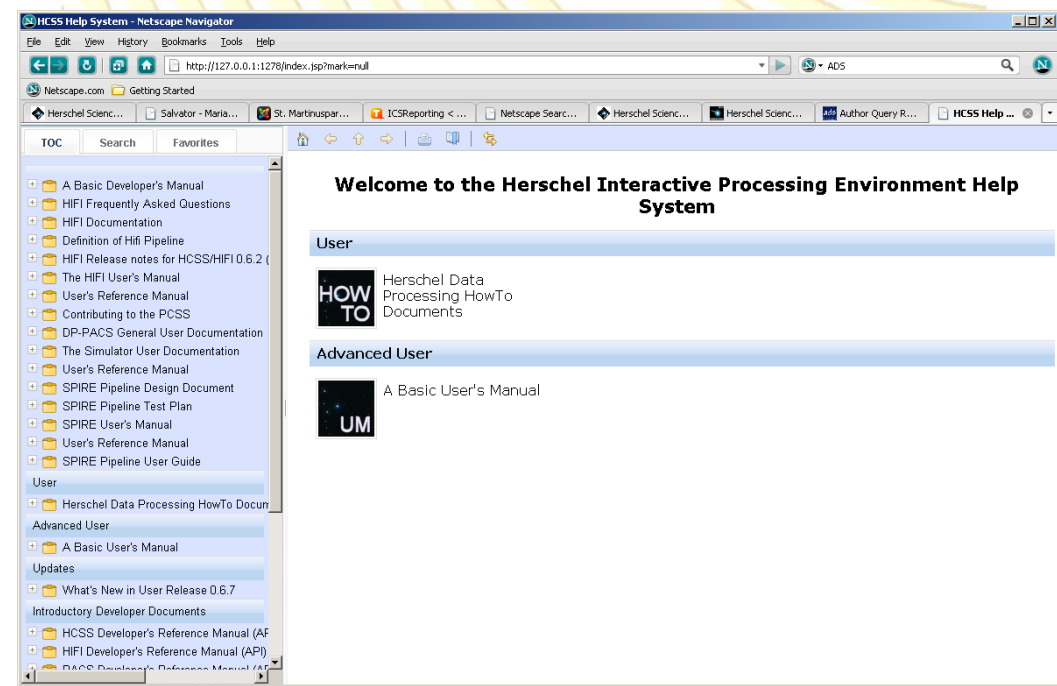
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- NOTE: *There is quite a bit of documentation → hierarchy.*
- 1. Documentation overview
- 2. User Manuals:
 - a. *HowTos for HIPE*
 - b. *User's Manual*
 - c. *User's Reference Manual*
- 3. Instrument-specific Documentation
- 4. Searching the Documentation
- 5. Help and Context Help
- 6. Contributions and Updates



Overview of DP Help Documentation for Users

- Within HIPE – 3 direct forms of help from main HIPE pulldown menu.
 - Contents (provides full overview of all documentation).
 - **Help appears in default browser – new tab.**



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Overview of DP Documentation Cont.

- Release notes and working in HIPE. These access specific components (*What's New* in a given release, and *How to use HIPE* component of the HowTos document).

The screenshot shows two Netscape Navigator windows. The left window is titled 'HCSS Help System - Netscape Navigator' and displays the 'Chapter 2. HIPE Introduction -- Using the Herschel DP Interface'. It features a table of contents with sections like 'Introduction', 'HIPE Philosophy', 'Installation and Startup of HIPE', and 'HIPE Perspectives'. The right window is also titled 'HCSS Help System - Netscape Navigator' and displays 'What's New in User Release 0.6.7 Herschel Data Processing' by Thanos Tsounis. It includes a table of contents with sections like 'Summary', 'HIPE', 'PlotXY', 'Product Access Layer', 'IA IO', 'HSA Pool', 'IA Dataset Image', 'IA Cui Image', 'IA Toolbox Image', 'Task', 'Standard Product Generation', 'Quality Control', and 'IA Toolbox Util'.

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I. User Docs: HowTos Documentation for HIPE

- The main introductory document for using the HIPE interface to the Herschel DP system. Includes:
 - Introduction to HIPE and how to work with it.
 - Basics of displaying spectra/tables/images
 - Basics of how to run instrument pipelines from an interactive session (high level).

To get to a PDF view.

Click 

On the Browser page of documentation. This provides a view of the PDF version of the manual – then print it!

Herschel Data Processing
HowTo Documents

version 0.4, Document Number: HERSCHEL-HSC-DOC-1199
14 November 2008



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II. User Manuals: DP Basic User's Manual



- The DP system can be scripted. Running scripts can be done in either the HIPE or JIDE (development) environments.

A Basic User's Manual

Scripting in the Herschel Data Processing System

version 0.24.1730, Document Number: HERSCHEL-HSC-DOC-0517
14 October 2008

Table of Contents

[The Herschel Common Science System and Data Processing \(DP\)](#)

- [1. Brief Overview](#)
- [2. Availability of DP and Operating Systems](#)
- [3. Related Documentation](#)
- [4. Versioning](#)
- [5. What's New and Previous Versions of DP User's Manual](#)
- [6. List of Contributors](#)

[1. HCSS Downloading and Installation](#)

- [1.1. Introduction](#)
- [1.2. Platform](#)
- [1.3. Minimum System Requirements](#)
- [1.4. Pre-Installation Requirements](#)
- [1.5. User Installation Procedure](#)
- [1.6. DP Property Initialisation](#)

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III. User's Manuals: User's Reference Manual

- This contains help on all task commands to be found in the system.

User's Reference Manual

Herschel Data Processing

version 0.2.226 , Document Number: HERSCHEL-HSC-DOC-0935
14 November 2008

Table of Contents

- [I. Categorized view of Commands](#)
- [II. The Herschel Common Science System and Data Processing \(DP\)](#)
 - [II.1. Brief Overview](#)
 - [II.2. Availability of DP and Operating Systems](#)
 - [II.3. Related Documentation](#)
 - [II.4. Versioning](#)
- [1. Numeric](#)
 - [1.1. Introduction](#)
 - [1.2. Quick Start](#)
 - [1.3. Import statements](#)
 - [1.4. Arrays](#)
 - [1.5. Toolboxes](#)
- [2. Product Access Layer](#)
 - [2.1. Introduction](#)

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Instrument Specific DP Documentation

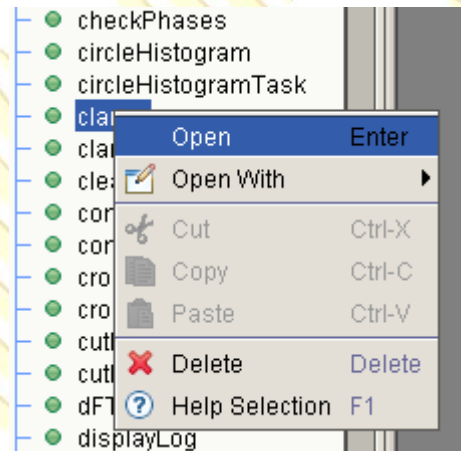
- For each of the ICCs there is a set of documentation that has *primarily* been created for their own *instrument and calibration scientists*.
- User manuals from the ICCs often contain developing or instrument-specific interactive software documentation.

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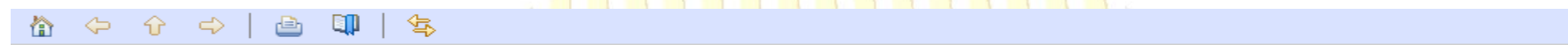
Help on a Given Task

- A right click on the Task name in the HIPE Tasks or Variables view provides a pull-down menu of options.
- Use of this context help takes the user to the User Reference Manual entry for the task.





Context Help



3.125. GaussFitTask

Full Name:	herschel.ia.toolbox.fit.GaussFitTask
Alias:	GaussFitTask
Type:	Java Task -
Import:	from herschel.ia.toolbox.fit import GaussFitTask
Category:	generic task

Description

generic module: GaussFitTask

Task shell around the package herschel.ia.numeric.toolbox.fit. Both a command line and a GUI interface are provided. With the GUI interface there is more of the Fitter package accessible than on this tasks command line. However not everything possible within the fitter package is accessible via this task, GUI or otherwise. Most text fields in the GUI accept either numerics or JIDE variables or JIDE expressions.

Example

```


Example 1: GaussFitTask
<pre>
from herschel.hifi.generic.task import GaussFitTask
# Assume that `tt` and/or `data` are DoubleIcd's
# usage on command line:
ft = GaussFitTask() ( x=tt, y=data )
ft.fitter = "LevenbergMarquardtFitter"

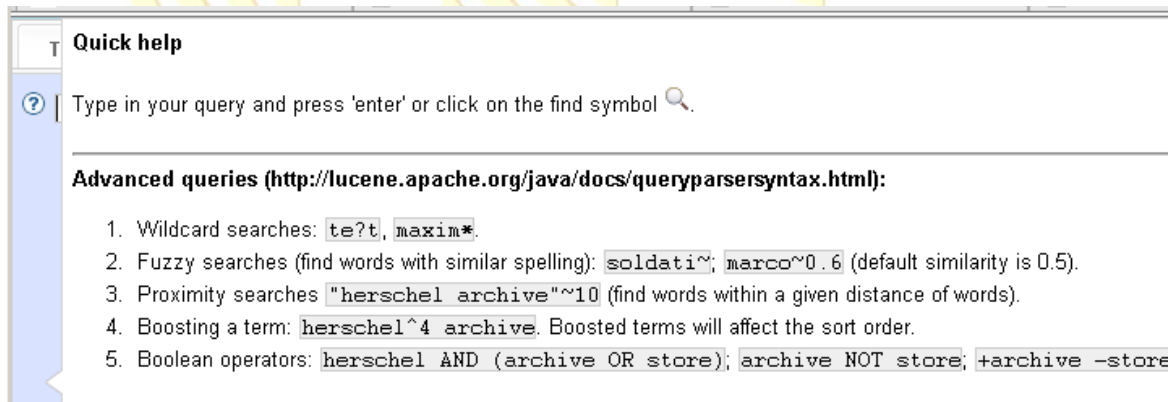
```

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Searching the Documentation

- By default – Table of Contents (TOC) shown.
- Click on “Search” tab within the browser window to search for appropriate documentation.
- Hovering mouse over the  button provides information on possible search queries.



Quick help

 Type in your query and press 'enter' or click on the find symbol .

Advanced queries (<http://lucene.apache.org/java/docs/queryparsersyntax.html>):

1. Wildcard searches: `te?t`, `maxim*`.
2. Fuzzy searches (find words with similar spelling): `soldati~`; `marco~0.6` (default similarity is 0.5).
3. Proximity searches `"herchel archive"~10` (find words within a given distance of words).
4. Boosting a term: `herchel^4 archive`. Boosted terms will affect the sort order.
5. Boolean operators: `herchel AND (archive OR store)`; `archive NOT store`; `+archive -store`.



Search Results

- Results are provided with the first **dark blue line** providing a link to the area of the documentation where the search result was found.
- Click on the link to show in the window.

TOC Search

clamp

2 hits in 1.61s

howtos - 14.6. Image Transformations
14.6. Image Transformations Image representations can be adjusted in the following ways: **Clamp**: or clipping an image. **Crop**: extract a subsection of an image. **Clamp**: or clipping an image. **Rotate**

urm - 3.95. clampTask
- Import: from herschel.ja.toolbox.image import ClampTask Category: task/image Description The **Clamp** ... image by constraining the range of pixels to defined "low" and "high" values. The **clamp** algorithm

14.6. Image Transformations

Image representations can be adjusted in the following ways:

- Clamp: or clipping an image.
- Crop: extract a subsection of an image.
- Clamp: or clipping an image.
- Rotate: rotate image by an arbitrary angle
- Scale: image rescaling in user-selected factors in X and Y.
- Translate: move positive or negative pixel or sky amount of image within the frame.
- Transpose: flip or rotate by n x 90 degrees

14.6.1. Applying Image Transformations

All image transformations can be applied in the same way. First, select a `simpleImage` in the "Variables" view, then go to the "Tasks" view and select -- from the Applicable Tasks folder -- the appropriate image transformation (*crop*, *clamp*, *rotate*, *scale*, *translate* or *transpose*). To select one of the transformation tasks, double-click on its name on the Tasks view. This will bring up a dialog for the task.



Contributors and Updates

- *Herschel Editorial Board* (includes representatives from all parts of the system):
 - Monthly telecons
 - Updates to User's Manual and HowTo's approx. every 3 months
 - Future:
 - More HowTos on high-level tasks
 - Instrument-specific data reduction guides/manuals.
- *HIFI/PACS/SPIRE Editorial Boards*
 - Responsible for instrument-related manuals.
 - Typically can feed in to User's Manual and HowTo's.

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More Help

- A set of Frequently Asked Questions (FAQs) is available in the documentation browser, and here we hope to get your contributions too – over the next 5 years or so.
- Website – with much general information as well as DP information – for HSC at
 - <http://herschel.esac.esa.int>
- Helpdesk:
 - If it isn't apparently documented, then you can ask the HSC Helpdesk
 - This is available via the HSC website at ESAC. Or more directly at.
 - <http://herschel.esac.esa.int/esupport/>
 - Login and post your question.
 - Note: further Helpdesk FAQs also presented here on general aspects of interacting with the HSC (not just Herschel DP).

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