

HIPE DOCUMENTATION OVERVIEW

Davide Rizzo, on behalf of the DP Editorial Board



- **Bidushi Bhattacharya (NHSC)**
- **Katrina Exter (PACS)**
- **Anthony Marston (HSC)**
- **Carolyn McCoey (HIFI)**
- **Brian O'Halloran (SPIRE)**
- **Chris Pearson (SPIRE)**
- **Davide Rizzo (HSC)**
- **Russell Shipman (HIFI)**
- **Ivan Valtchanov (HSC)**

STARTING HIPE HELP

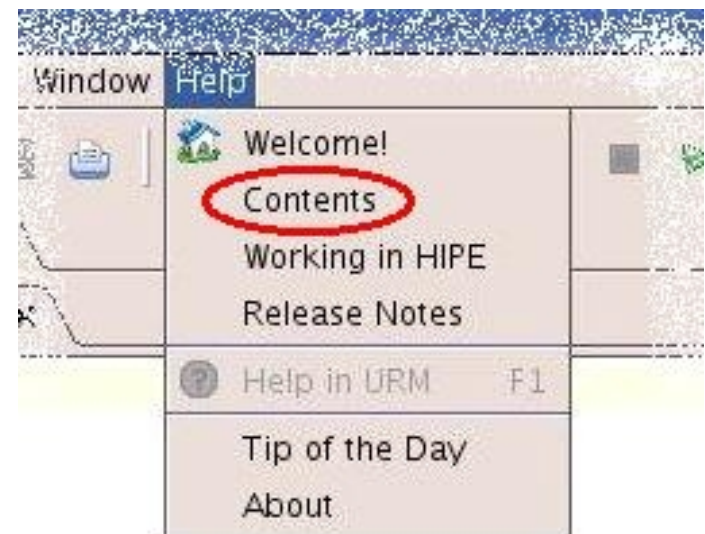
Processing Environment!



Access Data



Documentation



[TOC](#)
[Search](#)
[Favorites](#)

- Introductory
 - Herschel HIPE Owners Guide
 - Read Me First
 - Quick Start Guide
 - What's New in User Release 2.0
 - Frequently Asked Questions
- Analysis Tools
 - Herschel Data Analysis Guide
 - Scripting and Data Mining
- Reference
 - HIFI User's Reference Manual
 - HCSS User's Reference Manual
 - SPIRE User's Reference Manual
 - PACS User's Reference Manual
 - Herschel Products Definitions Document
- HIFI
 - The HIFI User's Manual
 - HIFI Pipeline Specification
- SPIRE
 - SPIRE User's Manual
- PACS
 - PACS Data Reduction Guide
 - The Simulator User Documentation
 - Contributing to the PCSS
 - DP-PACS General User Documentation
 - The PACS Advanced User Manual
- Developer Reference
 - PACS Developer's Reference Manual (API)

Welcome to the Herschel Interactive Processing Environment Help System

Introductory

Herschel HIPE Owners Guide
 Read Me First
 Quick Start Guide

What's New in User Release 2.0
 Frequently Asked Questions

Analysis Tools

Herschel Data Analysis Guide
 Scripting and Data Mining

Reference

HIFI User's Reference Manual
 HCSS User's Reference Manual
 SPIRE User's Reference Manual

PACS User's Reference Manual
 Herschel Products Definitions Document

- **Read Me First**
- **Quick Start Guide**
- **HIPE Owner's Guide**
- **Frequently Asked Questions**
- **What's New**
- **Data Analysis Guide**
- **Scripting and Data Mining**
- **Product Definition Document**
- **User Reference Manuals**
- **Developer Documentation**



Read Me First

1. Welcome to HIPE!

Welcome to HIPE, the Herschel Integrated Processing Environment.



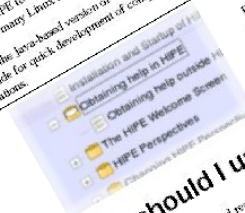
An integrated graphical environment
HIPE brings several applications together under a common, consistent interface. From data retrieval to plotting, from image analysis to scripting, powerful utilities are one click away.

From raw data fresh off the Herschel Archive to publication-ready plots, all you need to get science out of your observations.

The power of Java and Jython

HIPE is based on Java, one of the most powerful programming languages. The multi-platform nature of Java allows HIPE to work flawlessly under Windows, Mac OS and many Linux and UNIX flavours.

Jython is the Java-based version of Python, used worldwide for quick development of complex applications.



Help at your fingertips

Extensive documentation on HIPE is available for viewing in your web browser or printing in PDF format. Powerful search and bookmarking facilities will ensure you never get lost.

2. Why should I use HIPE?

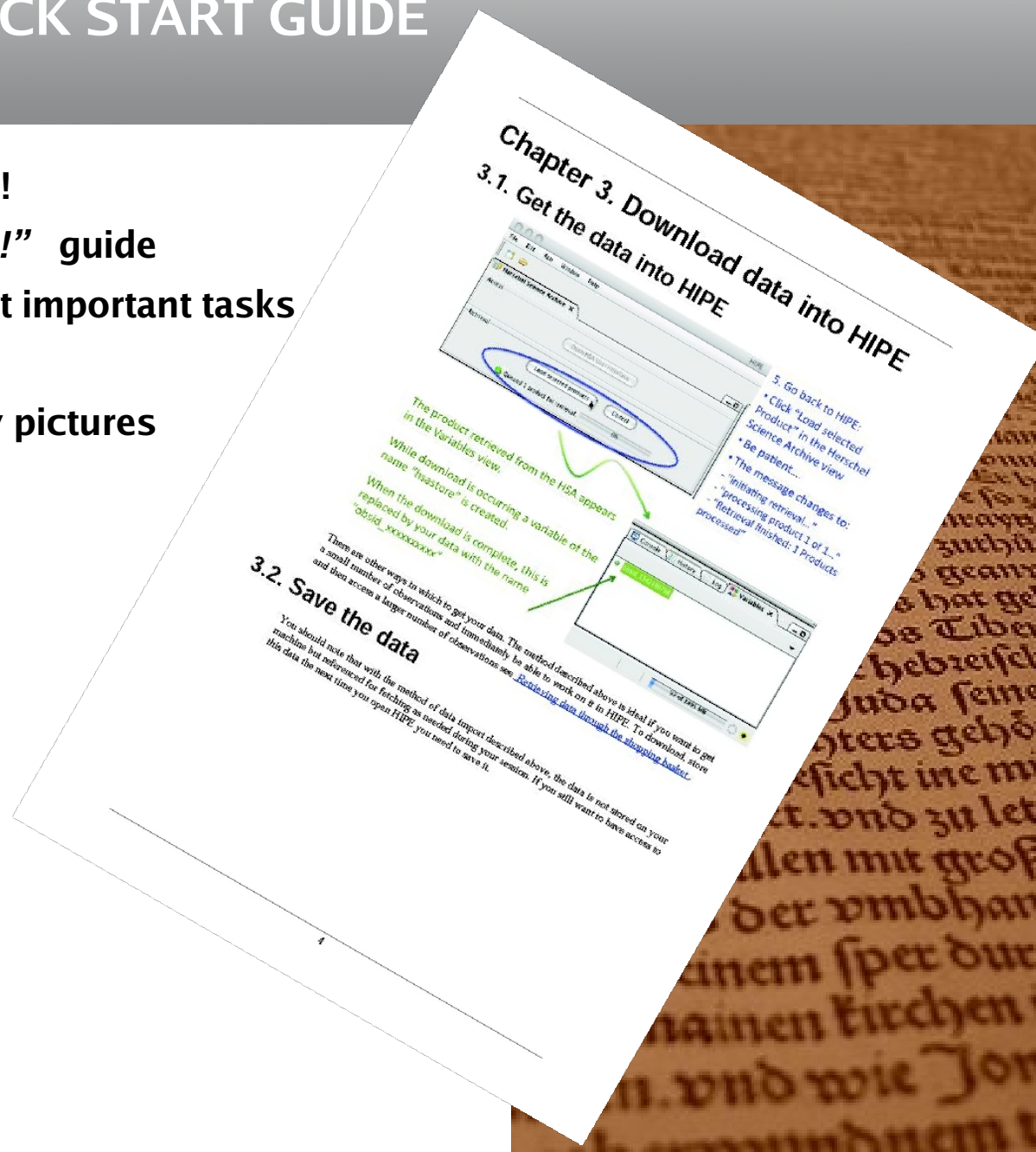
There are several good reasons why HIPE is the best choice for reducing Herschel data. Here are a few we thought of:

- It was especially developed to handle Herschel data types!
- It includes all the routines you need to go from off-the-shelf satellite data format to publication-ready results.
- It's the best place to develop your own reduction routines, thanks to the Python language and the wealth of available functions.
- It is a modern and actively developed application. This ensures fast help and resolution of problems.

THE QUICK START GUIDE



- New in HIPE 2.0!
- Our *‘Dont panic!’* guide
- Covers the most important tasks
- Just the steps
- Little text, many pictures



- Comes from the old HowTos
- Few task-related chapters
- Brings together material from other manuals

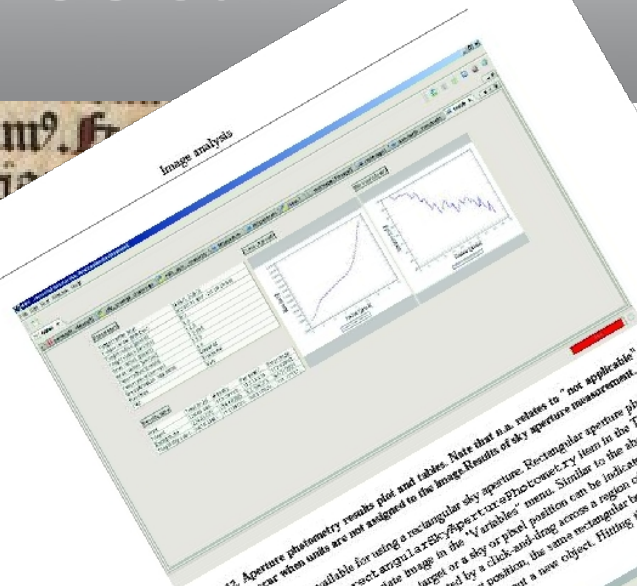


Figure 4.12: Aperture photometry results plot and tables. Note that a \times relates to 'not applicable' and typically will occur when units are not assigned to the Image Results of sky aperture measurement.

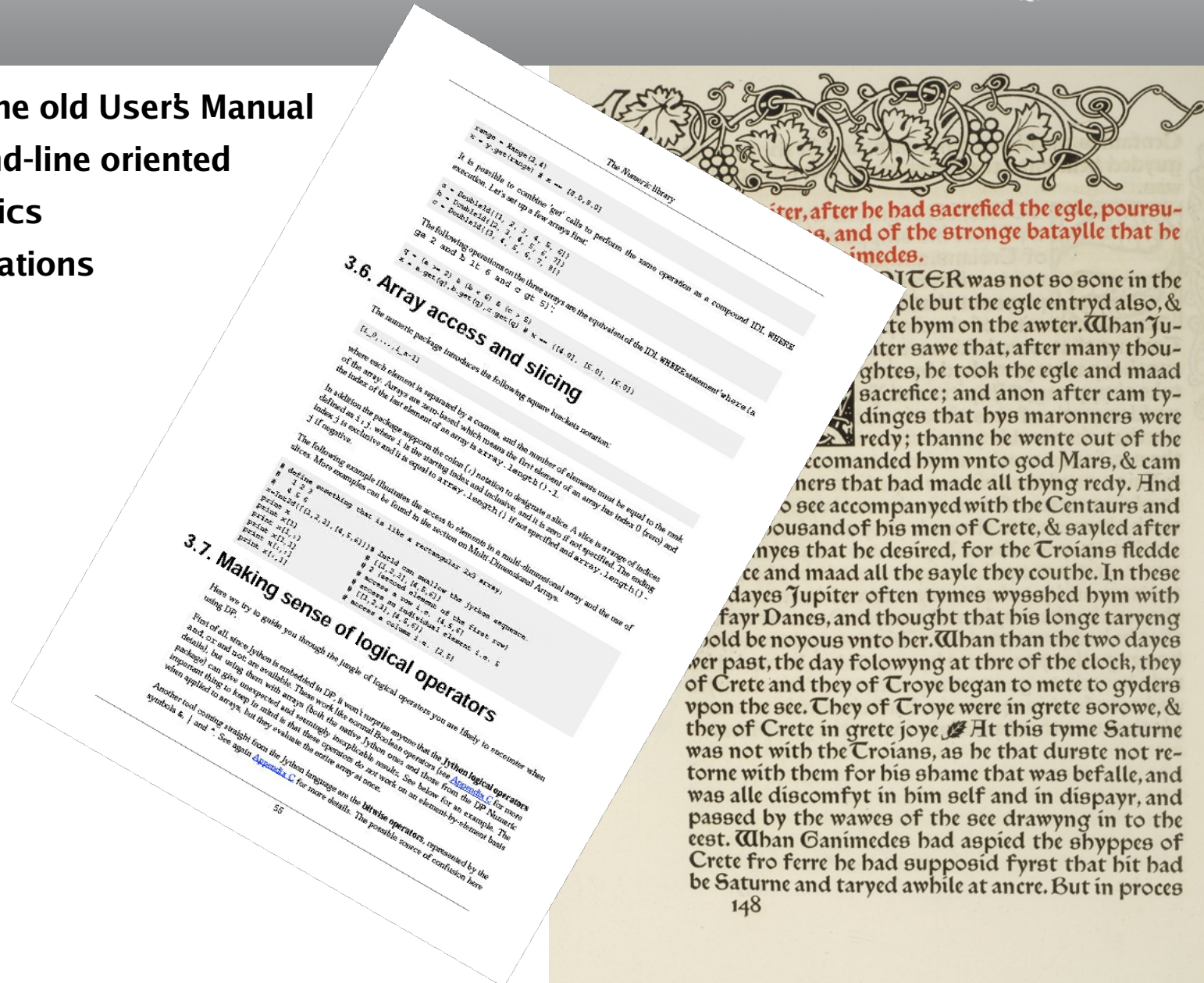
A similar capability is available for using a rectangular sky aperture. Rectangular aperture photometry can be done by choosing the `RectApert` item in the Tasks menu. Similar to the above, a single mouse click can be used to identify the target or a sky or pixel position can be indicated by the user. A rectangular sky aperture can then be selected by a click-and-drag across a region of the image (see Figure 4.13). Following the calculation for the first position, the same rectangular box can be used for the sky and a further single click on the image picks out a new object. Fitting the 'Accept' button allows another result for this new position.



Figure 4.13: Aperture photometry with an annular sky aperture as displayed in IMPE.

The results for both aperture photometry tasks provide the curve of growth. This is a plot of the target flux as a function of the target radius. Such a plot can be used to see whether a valid target radius has

- Comes from the old User's Manual
- More command-line oriented
- Advanced topics
- Legacy applications



Chapter 8. HIFI Calibration Products

8.1. HIFI Predefined Calibration Products

8.1.1. CalHrsPOWCorr

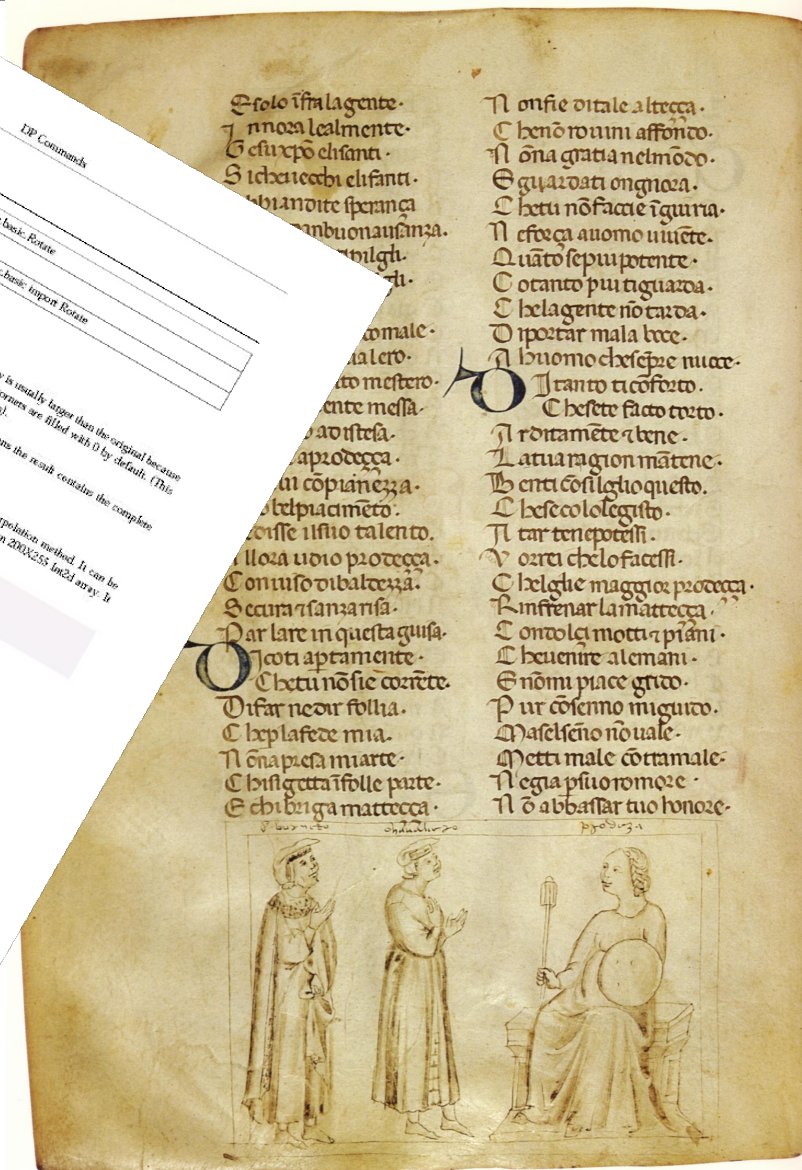
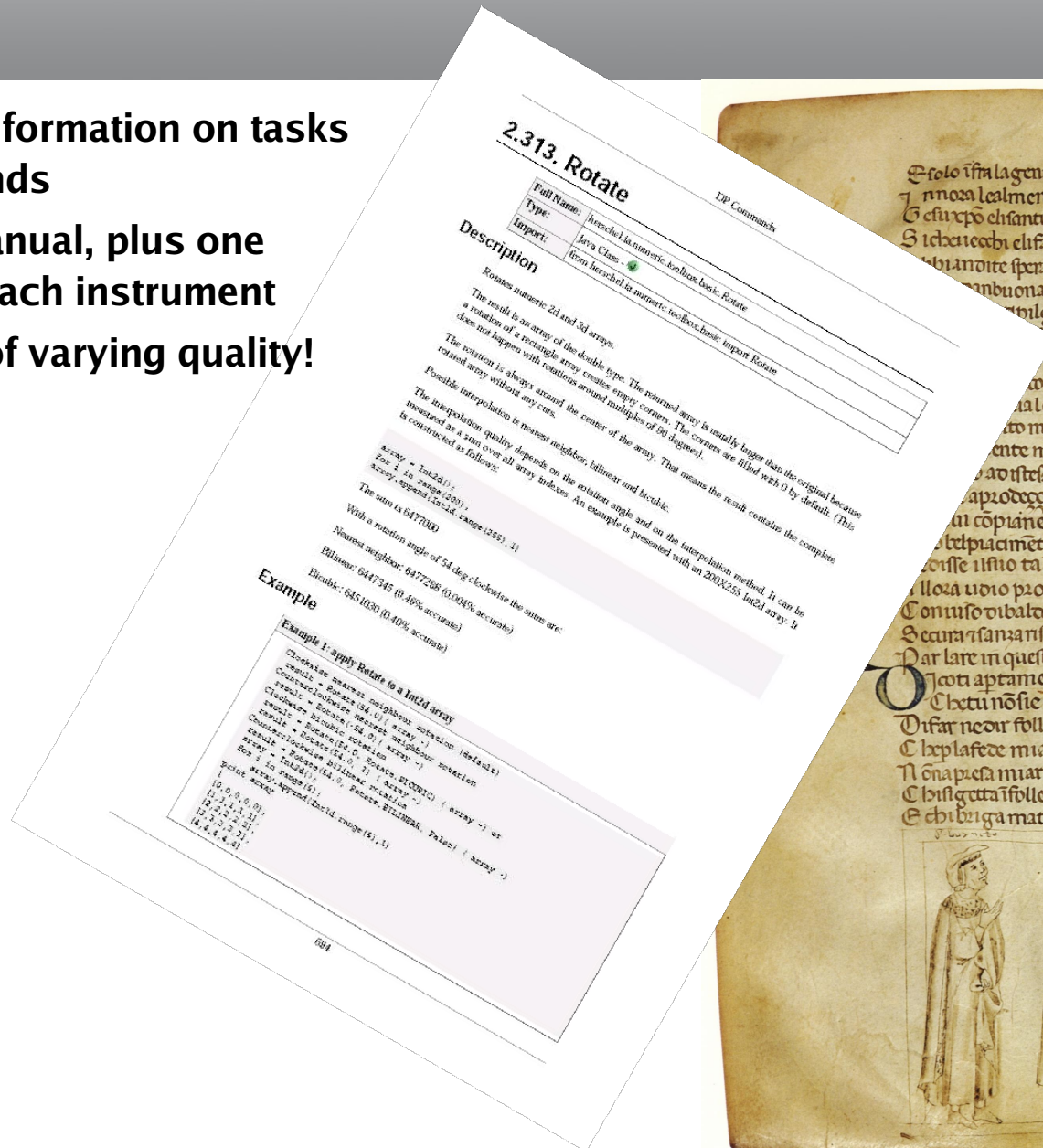
product (type="CalHrsPOWCorr", description="Values for Power gain non-linearity correction")	
Metadata	
StringParameter	creator (description="Product Type Identification")
StringParameter	creationDate (description="Creation date of this product")
DateParameter	description (description="Name of this product")
StringParameter	instrument (description="Instrument attached to this product")
StringParameter	modelName (description="Model name attached to this product")
StringParameter	startDate (description="Start time of this product")
DateParameter	endDate (description="End time of this product")
StringParameter	version (description="Version of this product")
LongParameter	name (description="Name of this product")
StringParameter	filename (description="Disk filename used to create this product")
StringParameter	description="Sigma Vector of the CalHrsPOWCorr Product"
table	
Metadata	
DoubleId	"Sigma (description="Sigma Vector of the CalHrsPOWCorr Product")
table	
DoubleId	gain (description="gain Vector", quantity="none")
Metadata	
DoubleId	

8.1.2. CalHrsQDCFast

product (type="CalHrsQDCFast", description="Values for Fast Quantization Distortion Correction")	
Metadata	
StringParameter	creator (description="Product Type Identification")
StringParameter	creationDate (description="Creation date of this product")
DateParameter	description (description="Name of this product")
StringParameter	instrument (description="Instrument attached to this product")
StringParameter	modelName (description="Model name attached to this product")
StringParameter	startDate (description="Start time of this product")
DateParameter	endDate (description="End time of this product")
StringParameter	version (description="Version of this product")

- New in HIPE 2.0!
- All about the internals of data products

- **Reference information on tasks and commands**
- **One core manual, plus one manual for each instrument**
- **Entries are of varying quality!**



WHAT TO EXPECT



- Less duplication, more consistency
- More links between sections and manuals
- Improvements to the URM
- Video tutorials

WE NEED YOUR HELP!



- Please raise issues!
- Internal users: use JIRA
- Open issues on ia_manuals_*, hifi_manuals_* etc.
- Or contact your Editorial Board representative:
 - HIFI: Carolyn McCoey
 - PACS: Katrina Exter
 - SPIRE: Brian OHalloran
 - NHSC: Bidushi Bhattacharya
 - HSC: Davide Rizzo
- External users: use the Helpdesk
- Everyone: feel free to contact me at Davide.Rizzo@sciops.esa.int



Thank you
Any questions?