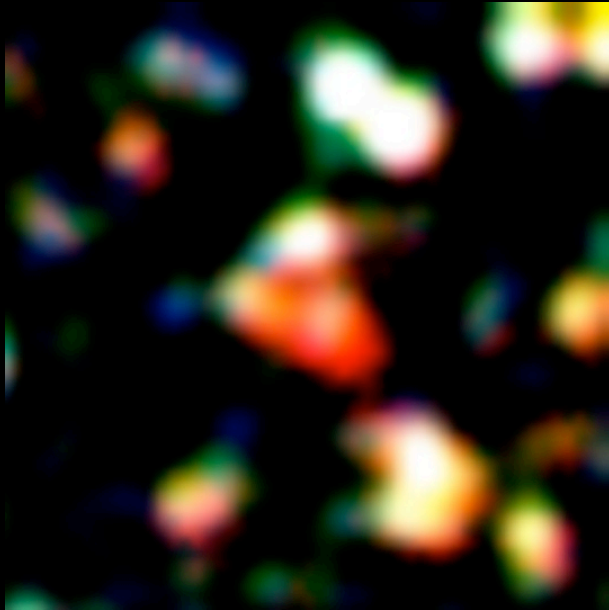




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September 2012



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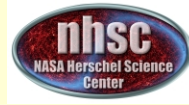
The starburst galaxy GN20, only 1.5 billion years after the Big Bang, or more than 12 billion years back into the history of the Universe.
Credit: ESA/GOODS-Herschel Team and R. Gobat,

THE ROLE OF THE NASA HERSCHEL SCIENCE CENTER (NHSC)

YOUR PORTAL TO EXCELLENT SCIENCE WITH HERSCHEL

Philip Appleton
NHSC Project Scientist
and Team Lead





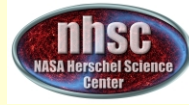
Topics

- WHAT DO WE DO?
 - NHSC SCIENCE WIKI
 - NHSC HELPDESK
 - REMOTE COMPUTING FACILITIES
 - SCIENCE ADVOCASY
 - HELP WITH ARCHIVE ACCESS
 - GOT COOL SCIENCE
- DO AN IMAGE OR PRESS RELEASE





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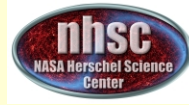


WHAT DO WE DO?





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Objective and Scope of the NASA Herschel Science Center

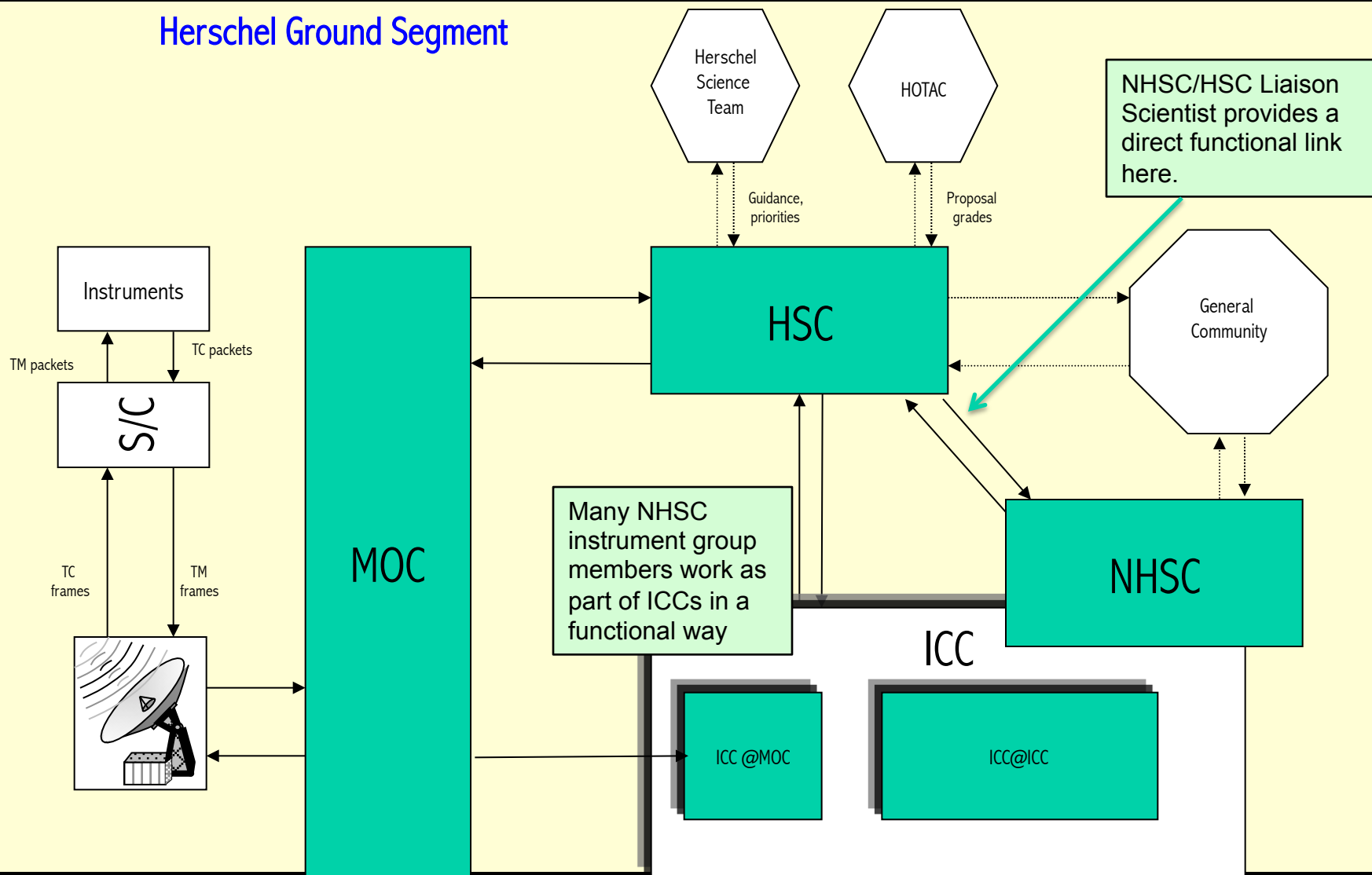
The NHSC has been established at the Infrared Processing and Analysis Center (IPAC) at the California Institute of Technology under support from NASA

NHSC began operations in 2001 and will continue to operate throughout the lifetime of the Herschel Mission, including the post-cryogen archival phase

The primary mission of the NHSC is to support the US-based astronomical community in exploiting the Herschel science opportunity, at a level equivalent to that provided to the European Community by ESA's Herschel Science Centre



Herschel Ground Segment





MAIN ROLES OF THE NHSC (From our Charter)

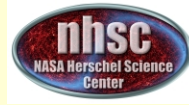


- ✓ Provide resources and tools to help US Community exploit Herschel science through scientists and software engineers embedded in project at all levels (resources include workshops, web-tutorials and on-line videos etc).
- ✓ Administration of data analysis grants for US-based observers.
- ✓ Preparation and support of Herschel-specific data reduction software.
- ✓ Observation planning support, including workshops and AOR revision and including support in the submission of observing proposals (NOW MAINLY DDT)
- ✓ Advocate US user needs within HSC and ESA, including membership of Data Processes sing Advocacy Group (DPUG), and hosting of NHSC User Group
- ✓ Program tracking, Data retrieval and Archival Support
- ✓ Facilitate US-based Community Engagement including Science with Herschel
- ✓ Provide facilities for special needs, such as large-scale computing, team wikis etc.





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SCIENCE WIKI PAGE

**A CENTRAL SOURCE OF
INFORMATION AND NEWS
ABOUT THE NHSC AND HERSCHEL**





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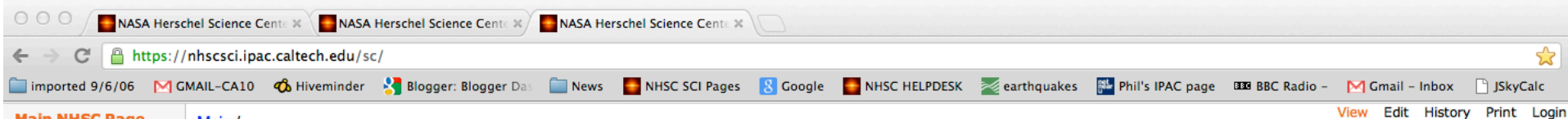


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MAIN SCIENCE WIKI AT NHSC

URL nhscsci.ipac.caltech.edu



Main NHSC Page

- News & Events
- Help Desks & Services
- Computer Support
- Observations
- Data Reduction
- Instruments
- HIFI
- PACS
- SPIRE
- Mission Links
- Science Links
- Related Links
- Outreach
- NHSC User Panel

Contact us

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NHSC Astronomer's Web Site



[Our Events Calendar](#)



[Join us on TWITTER](#)

Announcements

[Open Time 2 Data Processing Workshop: Registration is open](#)

The NHSC is hosting a Data Processing workshop from September 10 to 14, 2012, in Pasadena, California. The workshop is intended for new users of Herschel and for those who need a refresher course on data reduction techniques for the PACS, SPIRE and HIFI Instruments. Registration is now open. See the [workshop page](#) for details.

[NHSC Webinars/On-line Workshops Scheduled for Herschel DP 2012](#)

The Webinars/On-line workshops are geared mainly for intermediate or advanced users and include topical sessions as well as general sessions of data reduction pipelines etc.

Upcoming sessions:

- Tuesday, August 14th, 10am-noon Pacific, [Analyzing PACS Spectral Data Cubes with the new and improved HIPE v9.0 Spectrum Explorer](#)

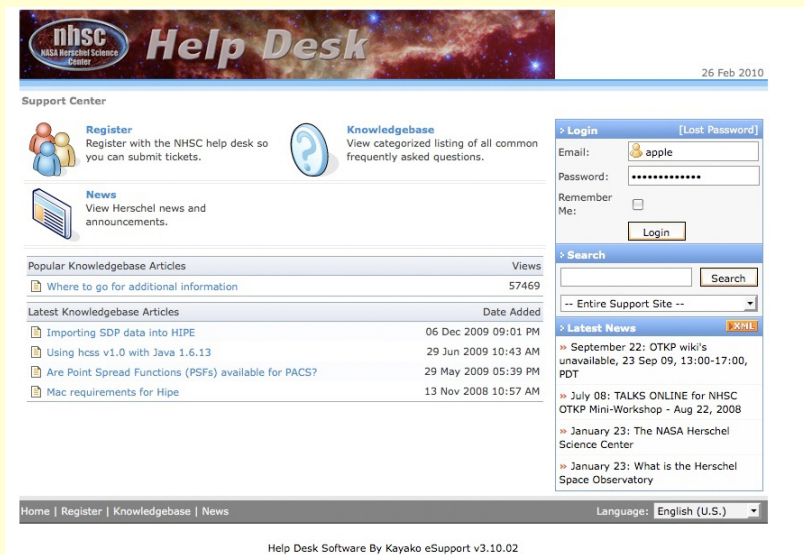
The release of HIPE 9.0 includes a new and improved version of the Spectrum Explorer, which is a key display component of HIPE. This tool has the capability of displaying, plotting and analyzing spectral cubes of the type produced by all PACS spectroscopic observations. The revised module has amalgamated the functionality of the old Spectrum Explorer, the former Cube Spectrum Analysis Tool Box, (CSAT), the Spectrum Toolbox, and the Spectrum Fitter GUI. In this webinar, we will use HIPE online with real data to exercise and demonstrate the model's operation leading from Level 2 Cubes to reduced intensity and velocity maps, and related products.

NHSC Helpdesk

- NHSC Helpdesk is the first-stop for US users
- Tickets handled quickly by local staff and HSC staff occasionally
- Should get a response within 2 working days—often within minutes



NHSC Helpdesk <http://nhsc.ipac.caltech.edu/helpdesk>



- Has been fully operational since Jan 2007
- NHSC Response:
 - Departments allow targeted messages
 - Department “Lead” issues acknowledgment
 - Ticket processed in area of expertise
 - Response issued within 2 working days (Average < 1 day, often few hours)
 - In rare case that we are unable to assist, we open and follow-up with European help desk ticket.
 - HSC actively monitor our helpdesk

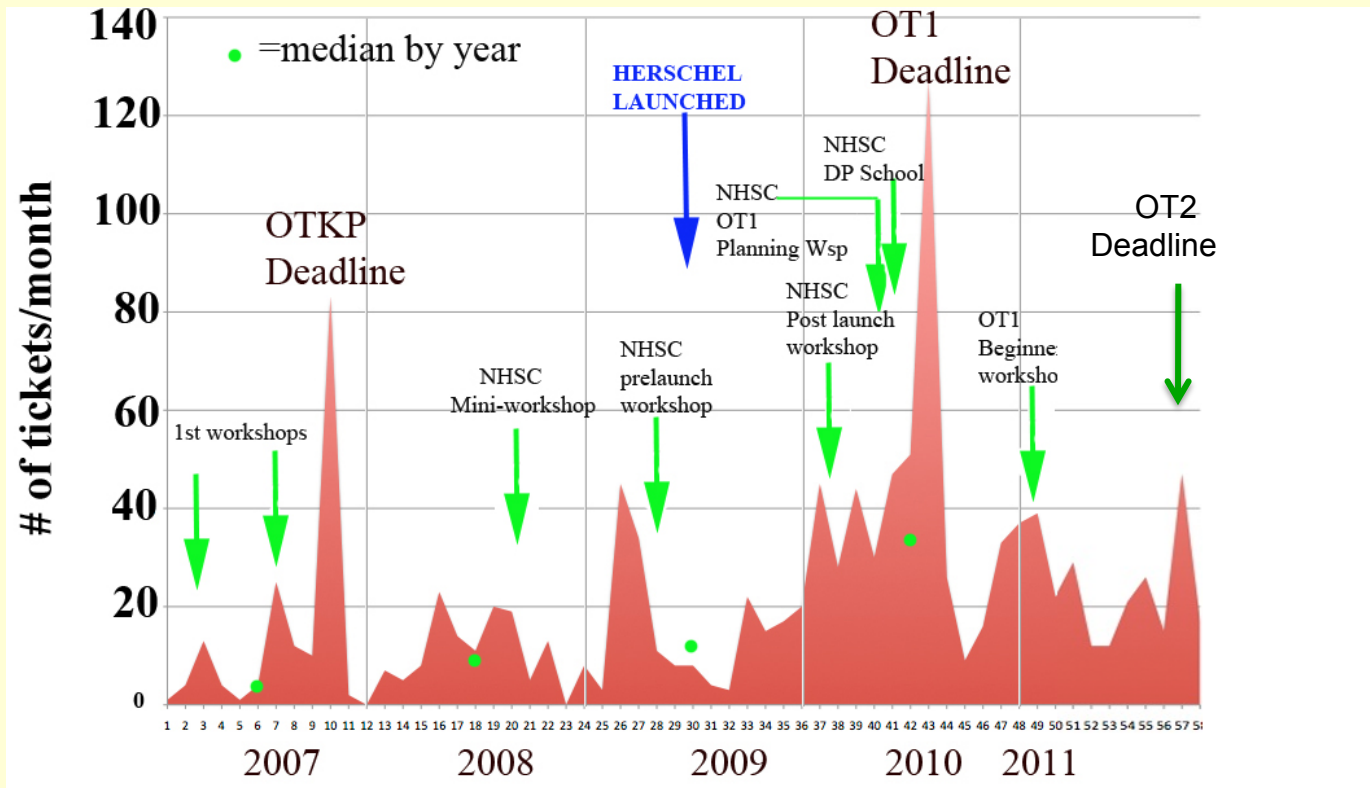
Extended Use

- Used for email communications to user groups
- Used to allow conference/workshop registration
- Registration of remote computation requests
- European helpdesk now allows direct ICC involvement in tickets





NHSC HELPDESK USAGE



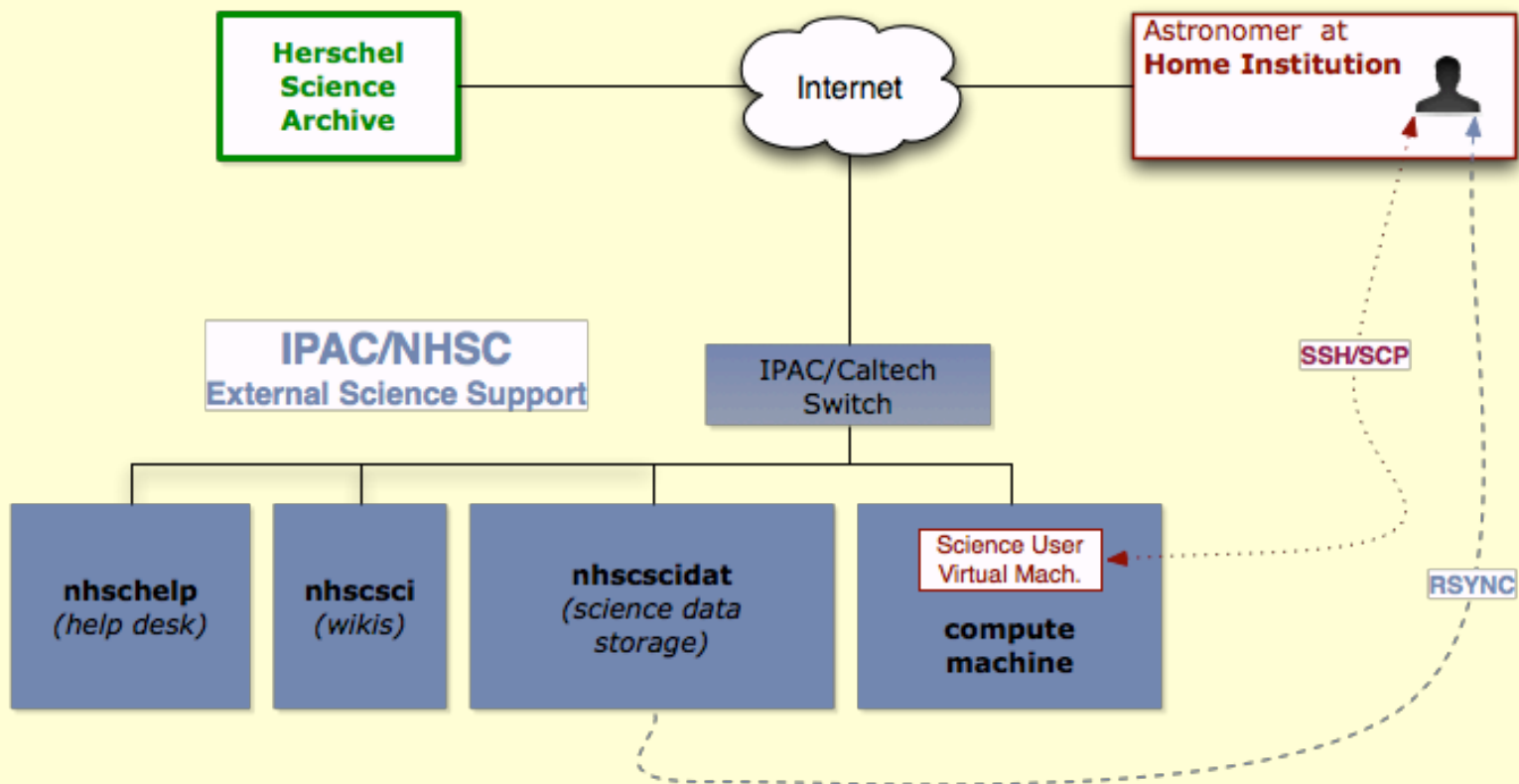


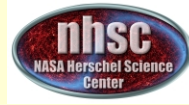
NHSC Remote Computer Facilities

- Remote Access Virtual Machines
- Team Wikis
 - We help teams set up team wiki
 - Can arrange a lot of local storage



Remote Access Conceptual view





Remote Computing Facilities

- Up to 25 virtual machines can be available at a time.
- Secure and low overhead (virtual machine destroyed after use).
- Plenty of memory, plenty of power.
 - 3 machines with 64 GB memory
 - 2 machines with 128 GB memory
 - each machine has 8 processors (modern AMD Shanghai CPUs)
 - supports both Rsync and sftp for fast data sharing.
 - VNCManager allows ease of use – can initiate job, log out and log back in easily. Jeff Jacobson will give a brief demo of how this works later
- Both local and remote support available—we can log in and monitor activity of external users





Detailed Instructions on how-to-use



NASA Herschel Science Center

https://nhscsci.ipac.caltech.edu/sc/index.php/HelpResources/HomePage

imported 9/6/06 GMAIL-CA10 Hiveminder Blogger: Blogger Das News NHSC SCI Pages Google NHSC HELPDESK earthquakes Phil's IPAC

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Help Desks and Services

Help Desks
[NHSC Help Desk \(US Users\)](#) [ESA Help Desk](#)

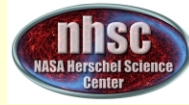
NHSC Contact Information

Computer Resources [\(Over View\)](#)
[Requesting Remote Computer Account](#) [Requesting access to Remote Shared File Area \(WebDav\)](#)





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September 2012



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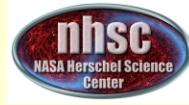
Science Advocacy

AAS Booth and Special Sessions
Conferences
Workshops





NHSC OT2 DP WORKSHOP
September 2012



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UPCOMING CONFERENCES AND WORKSHOPS

**Infrared and Sub-mm Probes of Gas in Galaxies: From the Milky Way
to the Distant Universe**

March 17-20 2013 Sheraton Hotel Pasadena
inc. Sunday Morning tour of SPACE-X!

Map Making with Herschel (NHSC in conjunction with HSC)

28-31 January 2013 Madrid Spain

<https://nhscsci.ipac.caltech.edu/sc/index.php/Workshops/HomePage>

The (F)IR Universe Three Years Later-the contributions by Herschel

15-18 Oct 2013 ESA/ESTEC, Noordwijk, NL





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IRSA Access to Herschel Science Archive





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NASA/IPAC Infrared Science Archive
for NASA's Infrared and Submillimeter Data

Herschel Space Observatory

Mission Characteristics

Description:	The Herschel Space Observatory is a 3.5 meter telescope observing the Far-Infrared and Submillimeter Universe.
Lifetime:	May 2009 - February 2013 (estimated)
Wavelength:	51 μ m - 670 μ m
Area Coverage:	Targeted
Instruments:	<ul style="list-style-type: none"> Photodetector Array Camera and Spectrometer (PACS) Photometer: 60-85, 85-130, and 130-210 μm Spectrometer: 51-220 μm Spectral and Photometric Imaging Receiver (SPIRE) Photometer: 250, 350, 500 μm Spectrometer: 200-670 μm Heterodyne Instrument for the Far Infrared (HIFI) 1.9-0.49THz (157 - 615 μm), with gap at 1.27-1.43GHz
Science Products Generated:	<ul style="list-style-type: none"> Raw, calibrated, and post-calibration data from PACS, SPIRE, and HIFI Herschel Key Project data
Funding Agency:	Herschel is an ESA mission with participation from NASA

Navigation Links:
[E Launch](#) [What's New in HIPE?](#)
[Eometry](#) [SPIRE Spectroscopy](#)





Catalog Search

Basic
General

Image Services

Finder Charts
2MASS Images
2MASS Ext. Srcs.
Mosaics
Cutouts

Inventories

Data Discovery
NVO Sky
Coverage

Tools

Montage
Dust Extinction
IDL Tools
Object Lookup
Data Tags
Image Validation
QA Tools

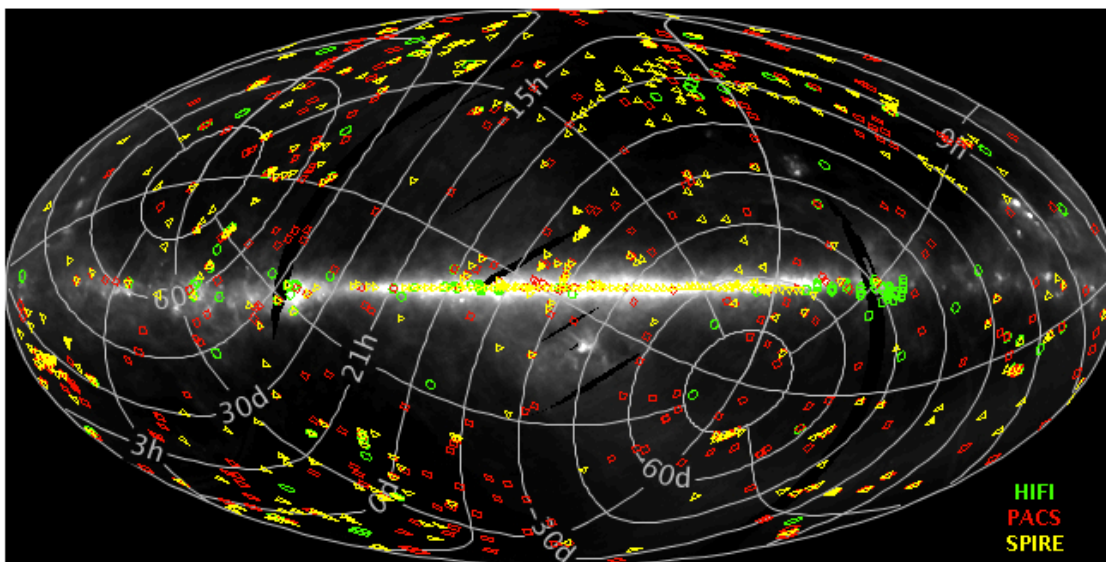
Data Sets

WISE
Herschel
Planck
Spitzer
2MASS

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Herschel Metadata Search



This web interface allows users to find data in the *Herschel Science Archive* maintained by ESA at ESAC. Simple metadata describing the observations is available, together with links to data retrieval through the HSA's Virtual Observatory interface. For more detailed information, please use the main [Herschel Science Archive](#) interface at ESA. For additional information and useful links, see also the [Herschel mission page](#).

Cone Search Box Search

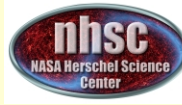
Allows you to perform a cone Search around your Favorite target:

A link allows you to grab the data and pull to your machine from ESA





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GOT COOL SCIENCE? CONTACT THE HELPDESK



HERSCHEL SPACE OBSERVATORY
AN ESA MISSION WITH PARTICIPATION FROM NASA

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News | Images | Videos | About the Mission

All | Recent | Press Releases | Features | Announcements | External | Media Info

NASA HERSCHEL SCIENCE CENTER'S PORTAL TO THE COOL UNIVERSE

Flying Along the Vela Ridge
Press Release - nhsc2012-010 - Monday, July 9th, 2012
A beautiful blue butterfly flutters towards a nest of warm dust and gas, above an intricate network of cool filaments in this image of the Vela C region by ESA's Herschel space observatory. [More ...](#)

Herschel Sees Intergalactic Bridge Aglow with Stars
Press Release - nhsc2012-009 - Thursday, May 17th, 2012
The Herschel Space Observatory has discovered a giant, galaxy-packed filament ablaze with billions of new stars. The filament connects two clusters of galaxies that, along with a third cluster, will smash together and give rise to one of the largest galaxy superclusters in the universe. [More ...](#)

Overfed Black Holes Shut Down Galactic Star-Making
Press Release - nhsc2012-007 - Wednesday, May 9th, 2012
The Herschel Space Observatory has shown galaxies with the most powerful, active black holes at their cores produce fewer stars than galaxies with less active black holes. The results are the first to demonstrate black holes suppressed galactic star formation when the universe was less than half its current age. [More ...](#)

Herschel Spots Comet Massacre Around Nearby Star
Feature - nhsc2012-006 - Thursday, April 12th, 2012
New data from the Herschel Space Observatory suggest comets are constantly smashing together around the star Fomalhaut. [More ...](#)

Dark Heart of a Cosmic Collision
Feature - nhsc2012-005 - Wednesday, April 4th, 2012
The cataclysmic history of a giant galaxy is on display in a new image that combines infrared and X-ray observations. [More ...](#)

Image Use Policy | Privacy Policy

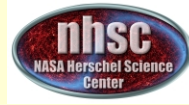
Logos: esa, NASA, JPL, ipac, nhsc

Our friendly EPO team will jump into action to help with image releases or press releases.





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THE HERSCHEL DATA IS
FLOWING

ENJOY YOUR STAY IN
PASADENA!

