

How to use the SOFIA Science Data Archive at IRSA

L. M. Rebull, Caltech-IPAC/IRSA

15 Apr 20

A YouTube screen capture version of this talk is available at
<https://youtu.be/iEnarA02U08>

Outline

- <https://irsa.ipac.caltech.edu/applications/sofia/>
- I just want my data! **Quick start guide**.
- I want to find data on my favorite (inertial or moving) target.
- Highlights from other IRSA tools with a similar look-and-feel, including ways to plan future observations.
- Pointers to where to get more help:
 - Online help.
 - IRSA Helpdesk.
 - IRSA YouTube feed.

Quick Start Guide

I just want my data!

- Log in. (If data proprietary!)
 - Contact SOFIA Science Center helpdesk to request access. (Or, for existing PIs, look for email from IRSA's helpdesk with your account information.)
- Load the tool.
- Search on your PI name.
- Select all data.
- Download.

IRSA Home Page

The image shows a screenshot of the IRSA (Infrared Science Archive) homepage. The browser address bar shows the URL <https://irsa.ipac.caltech.edu/frontpage/>. The page features a dark blue header with the IRSA logo and the text "NASA/IPAC INFRARED SCIENCE ARCHIVE". Below the header is a navigation menu with links for "IRSA", "DATA SETS", "SEARCH", "TOOLS", and "HELP", along with a "Login" link. The main content area is divided into several sections:

- Search for Source:** A search form with a text input field labeled "Name or Coordinates", a "Search" button, a "Radius" dropdown set to "10", and a unit dropdown set to "arcsec". A link for "Guide for Solar System Observers" is also present.
- Search Catalog:** A dropdown menu currently set to "WISE" and a "Search" button.
- NEOWISE 2020 Data Release:** A featured section with a star field image and text: "The NEOWISE Reactivation 2020 Release adds approximately 2.5 million image sets and 18.7 billion source detections to the public archive. These data were acquired during the sixth year of the NEOWISE Reactivation Mission." It includes "Past News" and "Featured Images" links.
- Tools and Services:** A row of icons for "Catalogs", "IRSA Viewer", "Finder Chart", and "VO/API".
- Telescopes:** A row of icons for "Spitzer", "WISE", "SOFIA", "IRTF", "2MASS", "Herschel", and "Planck", followed by a "MORE" button with a downward arrow.

IRSA Home Page

https://irsa.ipac.caltech.edu/frontpage/

Most Visited ADS science directories colloq&mtgs local ipac science teams SSC Luisa's Links Caltech Library Proxy Getting Started

irsa NASA/IPAC INFRARED SCIENCE ARCHIVE

IRSA | DATA SETS | SEARCH | TOOLS | HELP Login

Search for Source

 10
[Guide for Solar System Observers](#)

Search Catalog:

NEOWISE 2020 Data Release

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[Past News](#) [Featured Images](#)

Catalog	IRSA Viewer	Finder Chart	VO/API
Spitzer	WISE	SOFIA	IRTF
2MASS	Herschel	Planck	MORE

6

SOFIA
page
at
IRSA


Browser address bar: <https://irsa.ipac.caltech.edu/Missions/sofia.html>

Navigation: Most Visited, ADS, science, directories, colloq&mtgs, local ipac, science teams, SSC Luisa's Links, Caltech Library Proxy, Getting Started


irsa NASA/IPAC INFRARED SCIENCE ARCHIVE

IRSA | DATA SETS | SEARCH | TOOLS | HELP Login

Stratospheric Observatory for Infrared Astronomy (SOFIA)



[SOFIA Archive](#)



[Documentation](#)

Mission Characteristics



Description:	SOFIA is a Boeing 747SP aircraft modified to accommodate a 2.5 meter reflecting telescope. Its instruments provide researchers with access to a wavelength coverage from the optical to the submillimeter (0.35 - 655 microns).
Wavelength:	0.35 - 655 μm
Area Coverage:	Targeted
Instruments:	2.5-m telescope with <ul style="list-style-type: none">• FORCAST mid-infrared camera and spectrograph (Herter et al. 2018)• GREAT heterodyne spectrometer (Risacher et al. 2018)• FIFI-LS far-infrared spectrometer (Fischer et al. 2018)• EXES echelle spectrograph (Richter et al. 2018)• FPI+ focal plane imager (Pfuller et al. 2018)• HAWC+ far-infrared camera and polarimeter (Harper et al. 2018)• FLTECAM near-infrared camera and spectrograph (McLean et al. 2006)
Time Coverage:	25 May 2010 - present
Science Products Generated:	Observation data and calibration files
Acknowledgement:	Information for Authors

SOFIA
page
at
IRSA

Browser address bar: <https://irsa.ipac.caltech.edu/Missions/sofia.html>

Navigation: IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

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Page number: 8

SOFIA Science Data Archive at IRSA

https://irsa.ipac.caltech.edu/applications/sofia/

IRSA | DATA SETS | SEARCH | TOOLS | HELP

Search Catalogs Help Background Monitor

SOFIA Search

Now includes Cycles 2-7, 7 instruments: [important notes on archive completeness.](#)

Spatial Constraints Search for observations within a specified radius of a specified position. Enter search criteria below.

Object/Position Multiple Positions Solar System Target Preccovery All-Sky

Name or Position: Try NED then Simbad

Examples: 'M17' 'NGC6946' '141.607 -47.347 gal'
'42.76037 3.17750 ed' '12h34m27.0504s +2d11m17.304s Equ J2000'
'20h27m36.3467s +40d01m21.649s Equ B1950'

Radius: arcseconds

Valid range between: 1" and 3600"

Proposal Constraints

Observation Constraints

Instrument Constraints

Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

Search Cancel

SOFIA Search

Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.

Spatial Constraints All-sky search. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

No spatial constraints requested.

Instead, pick "All-sky" ...

...Click on the triangle to reveal "proposal constraints" and put in your PI's last name here

▼ **Proposal Constraints**

Primary Investigator:

Plan ID:

(Partial matching works: "Anders" gets Andersson and Anderson)

▶ **Observation Constraints**

▶ **Instrument Constraints**

Do you want **all** data (Level 0-4) or just high level products (Level 3-4)?

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

List of AORs meeting search criteria

logs Help

Background Monitor



AOR | EXES | FIFI-LS | FLITEC... | FORCAST | FPI+ | GREAT | HAWC+

1 of 1 (1 - 48 of 48)

<input type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal P
<input type="checkbox"/>	04_0119_1	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_2	IRC_10216_PM		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_3	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_4	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_6	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	05_0048_1	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_200	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_201	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_4	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_5	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0052_1	IC59		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_10	IC59		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_2	IC59		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_3	IC59		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_4	IC59		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_5	IC63		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	05_0052_6	IC63		GREAT	05_0052	B-G Andersso
<input type="checkbox"/>	06_0038_1	IK Tau-1		HAWC_PLUS	06_0038	B-G Andersso
<input type="checkbox"/>	06_0038_14	IK Tau_off_N		FORCAST	06_0038	B-G Andersso
<input type="checkbox"/>	06_0038_15	IK Tau_off_S		FORCAST	06_0038	B-G Andersso

Details | Data | Coverage

Name	Value	Type	Units	Descripti
AOR ID	04_0119_1	char		
Target Name	IRC_10216	char		
NAIF ID		char		
Instrument	HAWC_PLUS	char		
Plan ID	04_0119	char		
Proposal PI	B-G Andersson	char		
Abstract Link	abstract	char		

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Prepare Download

1 of 1 (1 - 48 of 48)

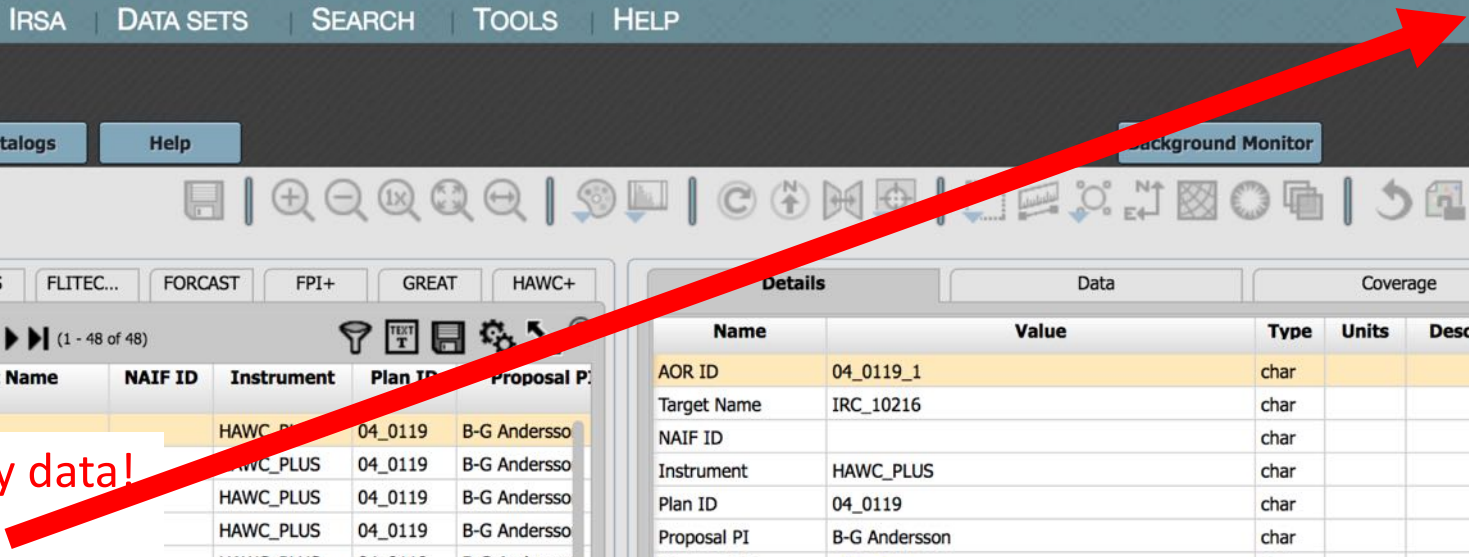
AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal P
04_0119_1	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
05_0048_1	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
05_0048_200	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
05_0048_201	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
05_0048_4	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
05_0048_5	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
05_0052_1	IC59		GREAT	05_0052	B-G Andersso
05_0052_10	IC59		GREAT	05_0052	B-G Andersso
05_0052_2	IC59		GREAT	05_0052	B-G Andersso
05_0052_3	IC59		GREAT	05_0052	B-G Andersso
05_0052_4	IC59		GREAT	05_0052	B-G Andersso
05_0052_5	IC63		GREAT	05_0052	B-G Andersso
05_0052_6	IC63		GREAT	05_0052	B-G Andersso
06_0038_1	IK Tau-1		HAWC_PLUS	06_0038	B-G Andersso
06_0038_14	IK Tau_off_N		FORCAST	06_0038	B-G Andersso
06_0038_15	IK Tau_off_S		FORCAST	06_0038	B-G Andersso

Details

Name	Value	Type	Units	Descripti
AOR ID	04_0119_1	char		
Target Name	IRC_10216	char		
NAIF ID		char		
Instrument	HAWC_PLUS	char		
Plan ID	04_0119	char		
Proposal PI	B-G Andersson	char		
Abstract Link	abstract	char		

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Red rows = proprietary data!
(log in to get access)



Select individual rows or click on the top of the column to "select all."



	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal P
<input checked="" type="checkbox"/>						
<input checked="" type="checkbox"/>	04_0119_1	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_2	IRC_10216_PM		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_3	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_4	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_6	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_1	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_200	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_201	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_4	IRC+10216		HAWC_PLUS	05_0048	B-G Anderssson
<input checked="" type="checkbox"/>	05_0048_5	IRC+10216		HAWC_PLUS	05_0048	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_1	IC59		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_10	IC59		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_2	IC59		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_3	IC59		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_4	IC59		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_5	IC63		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	05_0052_6	IC63		GREAT	05_0052	B-G Anderssson
<input checked="" type="checkbox"/>	06_0038_1	IK Tau-1		HAWC_PLUS	06_0038	B-G Anderssson
<input checked="" type="checkbox"/>	06_0038_14	IK Tau_off_N		FORCAST	06_0038	B-G Anderssson
<input checked="" type="checkbox"/>	06_0038_15	IK Tau_off_S		FORCAST	06_0038	B-G Anderssson

Background Monitor

FORCAST | FPI+ | GREAT | HAWC+

Details | Data | Coverage

Name	Value	Type	Units	Descripti
AOR ID	04_0119_1	char		
Target Name	IRC_10216	char		
NAIF ID		char		
Instrument	HAWC_PLUS	char		
Plan ID	04_0119	char		
Proposal PI	B-G Andersson	char		
Abstract Link	abstract	char		






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 **Prepare Download**

Then click "Prepare Download"

CAST FPI+ GREAT HAWC+

1 of 1 (1 - 48 of 48)

<input checked="" type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal P
<input checked="" type="checkbox"/>	04_0119_1	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_2	IRC_10216_PM		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_3	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_4	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	04_0119_6	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_1	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input checked="" type="checkbox"/>	05_0048_200	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
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<input checked="" type="checkbox"/>	06_0038_1	IK Tau-1		HAWC_PLUS	06_0038	B-G Andersson
<input checked="" type="checkbox"/>	06_0038_14	IK Tau_off_N		FORCAST	06_0038	B-G Andersson
<input checked="" type="checkbox"/>	06_0038_15	IK Tau_off_S		FORCAST	06_0038	B-G Andersson

Details Data Coverage

Name	Value	Type	Units	Description
AOR ID	04_0119_1	char		
Target Name	IRC_10216	char		
NAIF ID		char		
Instrument	HAWC_PLUS	char		
Plan ID	04_0119	char		
Proposal PI	B-G Andersson	char		
Abstract Link	abstract	char		

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irsa | IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

SOPIA | Search | Catalogs | Help

Prepare Download

AOR | EXES | FIFI-LS | FLITEC... | FORCA

1 of 1 (1 - 48 of 48)

<input checked="" type="checkbox"/>	AOR ID	Target Name	NAIF ID
<input checked="" type="checkbox"/>	04_0119_1	IRC_10216	
<input checked="" type="checkbox"/>	04_0119_2	IRC_10216_PM	
<input checked="" type="checkbox"/>	04_0119_3	IRC_10216	
<input checked="" type="checkbox"/>	04_0119_4	IRC_10216	
<input checked="" type="checkbox"/>	04_0119_6	IRC_10216	
<input checked="" type="checkbox"/>	05_0048_1	IRC+10216	
<input checked="" type="checkbox"/>	05_0048_200	irc_+10216	
<input checked="" type="checkbox"/>	05_0048_201	irc_+10216	
<input checked="" type="checkbox"/>	05_0048_4	IRC+10216	
<input checked="" type="checkbox"/>	05_0048_5	IRC+10216	HAWC_PLUS 05_0048 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_1	IC59	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_10	IC59	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_2	IC59	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_3	IC59	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_4	IC59	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_5	IC63	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	05_0052_6	IC63	GREAT 05_0052 B-G Andersson
<input checked="" type="checkbox"/>	06_0038_1	IK Tau-1	HAWC_PLUS 06_0038 B-G Andersson
<input checked="" type="checkbox"/>	06_0038_14	IK Tau_off_N	FORCAST 06_0038 B-G Andersson
<input checked="" type="checkbox"/>	06_0038_15	IK Tau_off_S	FORCAST 06_0038 B-G Andersson

Image Download Options

This table contains proprietary data. Only data to which you have access will be downloaded.

Title: SOPIA-0

Zip File Structure: Structured (with folders)

Save as: aor-table_Files

File Location: Local File Workspace

Enable email notification

Prepare Download Cancel

Click "Prepare Download" to package up data.

I have not logged in, so it denies me access to some data.

value

	char	
	char	
	char	
	char	
	char	
	char	
	char	
	char	

B-G Andersson

abstract

15

Prepare Download

AOR EXES FIFI-LS FLITEC... FORCA

1 of 1 (1 - 48 of 48)

AOR ID	Target Name	NAIF ID			
04_0119_1	IRC_10216				
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05_0048_5	IRC+10216		HAWC_PLUS	05_0048	B-G Andersson
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05_0052_3	IC59		GREAT	05_0052	B-G Andersson
05_0052_4	IC59		GREAT	05_0052	B-G Andersson
05_0052_5	IC63		GREAT	05_0052	B-G Andersson
05_0052_6	IC63		GREAT	05_0052	B-G Andersson
06_0038_1	IK Tau-1		HAWC_PLUS	06_0038	B-G Andersson
06_0038_14	IK Tau_off_N		FORCAST	06_0038	B-G Andersson
06_0038_15	IK Tau_off_S		FORCAST	06_0038	B-G Andersson

Background Monitor

Value	Type	Units	Descripti
	char		
	char		
	char		
	char		
	char		

Image Download Options

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Title: SOFIA-0

Zip File Structure: Structured (with folders)

Save as: aor-table_Files

File Location: Local File Workspace

Enable email notification

Send to background

Prepare Download Cancel

“Send to background” to keep working.

Click to download. Saves file wherever your browser is configured to save files.



ARCH | TOOLS | HELP Login

Background Monitor 1

Prepare Download

AOR | EXES | FIFI-LS | FLITEC... | FORCAST | FPI+

1 of 1 (1 - 48 of 48)

AOR ID	Target Name	NAIF ID	Instrument
<input type="checkbox"/> 04_0119_1	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 04_0119_2	IRC_10216_PM		HAWC_PLUS
<input type="checkbox"/> 04_0119_3	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 04_0119_4	IRC_10216		HAWC_PLUS
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<input type="checkbox"/> 05_0048_1	IRC+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_200	irc_+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_201	irc_+10216		HAWC_PLUS
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<input type="checkbox"/> 05_0052_6	IC63		GREAT
<input type="checkbox"/> 06_0038_1	IK Tau-1		HAWC_PLUS
<input type="checkbox"/> 06_0038_14	IK Tau_off_N		FORCAST
<input type="checkbox"/> 06_0038_15	IK Tau_off_S		FORCAST

SOFIA-0

- [Download Part #1](#) 588 MB
- [Download Part #2](#) 205 MB
- [Download Part #3](#) 811 MB
- [Download Part #4](#) 679 MB
- [Download Part #5](#) 749 MB
- [Download Part #6](#) 209 MB
- [Download Part #7](#) 609 MB
- [Download Part #8](#) 593 MB
- [Download Part #9](#) 648 MB
- [Download Part #10](#) 752 MB
- [Download Part #11](#) 282 MB

Hide Enable email notification

Data		Coverage	
Value	Type	Units	Descripti
1	char		
16	char		
LUS	char		
ersson	char		
	char		

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irsa | IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

SOFIA | Search | Catalogs | Help

Prepare Download

Background Monitor 1

Background Monitor

SOFIA-0

- [Download Part #1](#) 588 MB
- [Download Part #2](#) 205 MB
- [Download Part #3](#) 811 MB
- [Download Part #4](#) 679 MB
- [Download Part #5](#) 749 MB
- [Download Part #6](#) 209 MB
- [Download Part #7](#) 609 MB
- [Download Part #8](#) 593 MB
- [Download Part #9](#) 648 MB
- [Download Part #10](#) 752 MB
- [Download Part #11](#) 282 MB

Hide Enable email notification

Want a script to get all at once? Enter email and get it emailed to you when packaged.

AOR ID	Target Name	NAIF ID	Instrument
<input type="checkbox"/> 04_0119_1	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 04_0119_2	IRC_10216_PM		HAWC_PLUS
<input type="checkbox"/> 04_0119_3	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 04_0119_4	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 04_0119_6	IRC_10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_1	IRC+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_200	irc_+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_201	irc_+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_4	IRC+10216		HAWC_PLUS
<input type="checkbox"/> 05_0048_5	IRC+10216		HAWC_PLUS
<input type="checkbox"/> 05_0052_1	IC59		GREAT
<input type="checkbox"/> 05_0052_10	IC59		GREAT
<input type="checkbox"/> 05_0052_2	IC59		GREAT
<input type="checkbox"/> 05_0052_3	IC59		GREAT
<input type="checkbox"/> 05_0052_4	IC59		GREAT
<input type="checkbox"/> 05_0052_5	IC63		GREAT
<input type="checkbox"/> 05_0052_6	IC63		GREAT
<input type="checkbox"/> 06_0038_1	IK Tau-1		HAWC_PLUS
<input type="checkbox"/> 06_0038_14	IK Tau_off_N		FORCAST
<input type="checkbox"/> 06_0038_15	IK Tau_off_S		FORCAST

Data	Coverage		
Value	Type	Units	Descripti
1	char		
16	char		
LUS	char		
ersson	char		
	char		

18

I want to find data on target X.
(Now slower, with more choices!)

Finding & getting data

- **Searching:** Many ways to search.
- **Results:** Many ways to explore results of search, including previewing data.
- **Downloading:** Can change how files are packaged.

- Important points given in **red**.
- Hints and tips given in *purple italics*.

SEARCHING....

Online help

... includes Cycles 2-7, 7 instruments: important notes on archive completeness

Help notes with caveats

Spatial Constraints Search for observations within a specified radius of a specified position. Enter coordinates in the following format:

Object/Position Name or Position: Try NED then Simbad ?

Examples: 'M17' 'NGC6946' '141.607 -47.347 gal'
'42.76037 3.17750 ecl' '12h34m27.0504s +2d11m17.304s Equ J2000'
'20h27m36.3467s +40d01m21.649s Equ B1950'

Multiple Positions Radius: arcseconds ?

Solar System Target Valid range between: 1" and 3600"

Preccovery

All-Sky

▶ **Proposal Constraints** ?

▶ **Observation Constraints** ?

▶ **Instrument Constraints** ?


▼ **Data Product Constraints** ?

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: ?

 ?

Help specific to where you are



Default is **single** inertial position search – name or position in RA/Dec, galactic coords, etc.

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints Search for observations within a specified radius of a specified position. Enter search criteria below.

Object/Position Name or Position: Try NED then Simbad

Multiple Positions

Solar System Target

Preccovery

All-Sky

Examples: 'M17' 'NGC6946' '141.607 -47.347 gal'
'42.76037 3.17750 ecl' '12h34m27.0504s +2d11m17.304s Equ J2000'
'20h27m36.3467s +40d01m21.649s Equ B1950'

Radius: arcseconds

Valid range between: 1" and 3600"

▶ **Proposal Constraints**

▶ **Observation Constraints**

▶ **Instrument Constraints**

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

Examples given; changes to reflect how it is interpreting what you put in the box.

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

Search for observations within a specified radius of a specified position. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

Name or Position:

m42 resolved by NED

83.81866, -5.38968 Equ J2000 or 5h35m16.48s, -5d23m22.8s Equ J2000

Radius:

Valid range between: 1" and 3600"

Changed to reflect how it is interpreting what you put in the box.



SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

Search for observations within a specified radius of a specified position. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovey
- All-Sky

Name or Position:

Try NED then Simbad

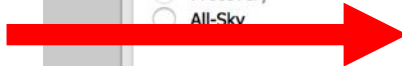
Examples: 'M17' 'NGC6946' '141.607 -47.347 gal'
'42.76037 3.17750 ecl' '12h34m27.0504s +2d11m17.304s Equ J2000'
'20h27m36.3467s +40d01m21.649s Equ B1950'

Radius:

arcseconds

Valid range between: 1" and 3600"

Search radius
(change units
before
changing
number!)



▶ Proposal Constraints

▶ Observation Constraints

▶ Instrument Constraints

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

Multiple positions – file should be IPAC table format (ASCII with a header)

Search radius (change units before changing number!)

Can load from your own disk or from the IRSA Workspace (bit of disk space at our end where you can work)

SOFIA Search

Now includes Cycles 2-7, 7 instruments: [important notes on arc](#)

Spatial Constraints Search for observations within a specified radius of an uploaded table or

Object/Position **Local File** Workspace
Browse... No file chosen

Multiple Positions
 Solar System Target
 Preccovery
 All-Sky

Radius:
Valid range between: 1" and 3600"

► **Proposal Constraints** ?

► **Observation Constraints** ?

► **Instrument Constraints** ?

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

Search

Catalogs

Help

Background Monitor

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

Search for observations tagged as Solar System Objects. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

Object Name or ID:

Examples: NAIF_ID = 899

► Proposal Constraints

► Observation Constraints

► Instrument Constraints

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: ▾

Search

Cancel

**Solar System
(moving) target** →

Search

Catalogs

Help

Background Monitor

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness](#)

Spatial Constraints

Search for observations tagged as Solar System Objects. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

Object Name or ID:

Europa



- Name: **52 Europa**, NAIF ID: **2000052**
- Name: **Europa**, NAIF ID: **502**
- Name: **Europa Clipper (spacecraft)**, NAIF ID: **-159**

TYPE SLOWLY IN THIS BOX. Let it help you by suggesting targets. Then pick from the available choices. If you just hit search, it (probably) won't work!

► Proposal Constraints



► Observation Constraints



► Instrument Constraints



▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: Any



Search

Cancel



SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

Search for observations tagged as Solar System Objects. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

Object Name or ID:

Object Name: **52 Europa**, NAIF ID: **2000052**

*After selection,
look below the
box to be sure
it has
understood you
correctly.*



► **Proposal Constraints**

► **Observation Constraints**

► **Instrument Constraints**

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: ▾

Search

Cancel



Search

Catalogs

Help

Background Monitor

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

All-sky search. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Preccovery
- All-Sky

No spatial constraints requested.

▶ Proposal Constraints

▶ Observation Constraints

▶ Instrument Constraints

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: ▾

Search

Cancel

All-sky search
(used for pulling, e.g., all the data associated with a PI)



Search

Catalogs

Help

Background Monitor

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints

All-sky search. Enter search criteria below.

- Object/Position
- Multiple Positions
- Solar System Target
- Precovery
- All-Sky

No spatial constraints requested.

▶ **Proposal Constraints**

▶ **Observation Constraints**

▶ **Instrument Constraints**

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: ▾

Search

Cancel

Now, let's look at these choices. Click on the triangle to expand choices.



Proposal

(search on PI or Plan ID)

▼ Proposal Constraints

Primary Investigator:

Plan ID:

Observation Constraints

Mission ID:

AOR ID:

Observation Date: From: To:

▼ Instrument Constraints

Configuration:

Spectral Element:

Wavelength (um): From: To:

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

Observation
(search on
Mission ID, AOR
ID, or
observation
date)

▼ Proposal Constraints

Primary Investigator:

Plan ID:

▼ Observation Constraints

Mission ID:

AOR ID:

Observation Date: From: To:

Instrument Constraints

Any Configuration: Any

Spectral Element: Any

Wavelength (um): From: To:

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: Any

Search **Cancel**

Instrument
(search on
instrument,
configuration,
wavelength)

- ✓ Any
- EXES
- FIFI-LS
- FLITECAM
- FORCAST
- FPI+
- GREAT
- HAWC+

▼ Proposal Constraints

Primary Investigator:

Plan ID:

▼ Observation Constraints

Mission ID:

AOR ID:

Observation Date: From: To:

▼ Instrument Constraints

Any Configuration: Any

Spectral Element: Any

Wavelength (um): From: To:

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type: Any



**Menus change based on instrument
you pick**

Data products
(search on data processing level - raw to highly processed - or type of observation - object, sky, dark, flat)

▼ Proposal Constraints

Primary Investigator:

Plan ID:

Observation Constraints

Mission ID:

AOR ID:

Observation Date: From: To:

Instrument Constraints

Configuration:

Spectral Element:

Wavelength (um): From: To:

▼ Data Product Constraints

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:

RESULTS....

Background Monitor

Prepare Download


AOR	EXES	FIFI-LS	FLITEC...	FORCAST	FPI+	GREAT	HAWC+
1 of 1 (1 - 82 of 82)							
<input type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Prop	
<input type="checkbox"/>	03_0044_1	OrionBN		FIFI-LS	03_0044	Leslie Looney	
<input type="checkbox"/>	03_0044_2	Orion		S	03_0044	Leslie Looney	
<input type="checkbox"/>	03_0044_3	Orion		S	03_0044	Leslie Looney	
<input type="checkbox"/>	03_0126_5	Orion			03_0126	Timothy Looney	
<input type="checkbox"/>	03_0138_2	HST1			03_0138	Silvia Vicenti	
<input type="checkbox"/>	04_0058_2	Orion I2		FORCAST	04_0058	Alexander T...	
<input type="checkbox"/>	04_0120_15	BN		EXES	04_0120	Nick Indriolo	
<input type="checkbox"/>	04_0120_16	BN		EXES	04_0120	Nick Indriolo	
<input type="checkbox"/>	04_0120_17	BN		EXES	04_0120	Nick Indriolo	
<input type="checkbox"/>	05_0043_29	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_31	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_32	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_33	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_34	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_36	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_37	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_39	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_41	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_43	Orion IRc2		EXES	05_0043	Naseem Raza	
<input type="checkbox"/>	05_0043_45	Orion IRc2		EXES	05_0043	Naseem Raza	

Search results
"window pane"

Details		Data	Coverage	
Name	Value	Type	Units	Description
AOR ID	03_0044_1	char		
Target Name	OrionBN	char		
NAIF ID		char		
Instrument	FIFI-LS	char		
Plan ID	03_0044	char		
Proposal PI	Leslie Looney	char		
Abstract Link	abstract	char		

Details "window pane"

Click and drag boundary between panes to change relative sizes.

IRSA | DATA SETS | SEARCH | TOOLS | HELP Login

SOFIA Search Catalogs Help Background Monitor

Prepare Download

AOR | EXES | **FIFI-LS** | FLITEC... | FORCAST | FPI+ | GREAT | HAWC+

1 of 1 (1 - 82 of 82)

<input type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Prop
<input type="checkbox"/>	03_0044_1	OrionBN		FIFI-LS	03_0044	Leslie Looney
<input type="checkbox"/>	03_0044_2	OrionBN		FIFI-LS	03_0044	Leslie Looney
<input type="checkbox"/>	03_0044_3	OrionBN		FIFI-LS	03_0044	Leslie Looney
<input type="checkbox"/>	03_0126_5			ES	03_0126	Timothy Looney
<input type="checkbox"/>	03_0138_2			FORCAST	03_0138	Silvia Vicente
<input type="checkbox"/>	04_0058_2			FORCAST	04_0058	Alexander Tiel
<input type="checkbox"/>	04_0120_15			ES	04_0120	Nick Indriolo
<input type="checkbox"/>	04_0120_16			ES	04_0120	Nick Indriolo
<input type="checkbox"/>	04_0120_17			ES	04_0120	Nick Indriolo
<input type="checkbox"/>	05_0043_29			ES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_31			ES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_32			ES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_33			ES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_34			ES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_36	Orion IRC2		EXES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_37	Orion IRC2		EXES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_39	Orion IRC2		EXES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_41	Orion IRC2		EXES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_43	Orion IRC2		EXES	05_0043	Naseem Raza
<input type="checkbox"/>	05_0043_45	Orion IRC2		EXES	05_0043	Naseem Raza

Details | Data | Coverage

Name	Value	Type	Units	Description
AOR ID	03_0044_1	char		
Target Name	OrionBN	char		
NAIF ID		char		
Instrument	FIFI-LS	char		
Plan ID	03_0044	char		
Proposal PI	Leslie Looney	char		
Abstract Link	abstract	char		

Different tabs here provide different insight into observations matching your search criteria

Different tabs here provide different levels of information about selected row of data matching your search criteria

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Prepare Download



AOR | EXES | FIFI-LS | FLITEC... | FORCAST | FPI+ | GREAT | HAWC+

(1 - 82 of 82)

	AOR ID	Target Name	NAIP ID	Plan ID	Prop
<input type="checkbox"/>	03_0044_1	OrionBN		FIFI-LS 03_0044	Leslie Loc
<input type="checkbox"/>	03_0044_2	OrionBN		FIFI-LS 03_0044	Leslie Loc
<input type="checkbox"/>	03_0044_3	OrionBN		FIFI-LS 03_0044	Leslie Loc
<input type="checkbox"/>	03_0126_5	Orion IRc 2		EXES 03_0126	Timothy L
<input type="checkbox"/>	03_0138_2	HST10_PROP		GREAT 03_0138	Silvia Vic
<input type="checkbox"/>	04_0058_2	Orion I2		FORCAST 04_0058	Alexander T
<input type="checkbox"/>	04_0120_15	BN		EXES 04_0120	Nick Indri
<input type="checkbox"/>	04_0120_16	BN		EXES 04_0120	Nick Indri
<input type="checkbox"/>	04_0120_17	BN		EXES 04_0120	Nick Indri
<input type="checkbox"/>	05_0043_29	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_31	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_32	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_33	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_34	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_36	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_37	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_39	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_41	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_43	Orion IRc2		EXES 05_0043	Naseem Ra
<input type="checkbox"/>	05_0043_45	Orion IRc2		EXES 05_0043	Naseem Ra

Details | Data | Coverage

Name	Value	Type	Units	Descripti
		char		
		char		
		char		
		char		
		char		
		char		

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AOR tab is most compact view of observations.
Scroll left/right within this tab to see more columns.

irsa | IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

SOFIA | Search | Catalogs | Help | Background Monitor







Prepare Download

AOR | EXES | FIFI-LS | FLITEC... | FORCAST | FPI+ | GREAT | HAWC+

1 of 1 (1 - 82 of 82)

<input type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Prop
<input type="checkbox"/>	03_0044_1	OrionBN		FIFI-LS	03_0044	Leslie Loc...
<input type="checkbox"/>	03_0044_2	OrionBN		FIFI-LS	03_0044	Leslie Loc...
<input type="checkbox"/>	03_0044_3	OrionBN		FIFI-LS	03_0044	Leslie Loc...
<input type="checkbox"/>	03_0126_5	Orion IRc 2		EXES	03_0126	Timothy L...
<input type="checkbox"/>	03_0138_2	HST10_PROP		GREAT	03_0138	Silvia Vic...
<input type="checkbox"/>	04_0058_2	Orion I2		FORCAST	04_0058	Alexander T...
<input type="checkbox"/>	04_0120_15	BN		EXES	04_0120	Nick Indriol...
<input type="checkbox"/>	04_0120_16	BN		EXES	04_0120	Nick Indriol...
<input type="checkbox"/>	04_0120_17	BN		EXES	04_0120	Nick Indriol...
<input type="checkbox"/>	05_0043_29	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_31	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_32	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_33	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_34	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_36	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_37	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_39	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_41	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_43	Orion IRc2		EXES	05_0043	Naseem Ra...
<input type="checkbox"/>	05_0043_45	Orion IRc2		EXES	05_0043	Naseem Ra...

Table controls:

- Earlier/later among pages of results (100 obs per page, so here only one page)
- Filter (e.g., limit to only one instrument) 
- Change view to ASCII 
- Save table as IPAC tbl file 
- Change table options (turn off/on columns, impose filters) 
- Make this window pane take up the whole browser window 
- Help 

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Prepare Download














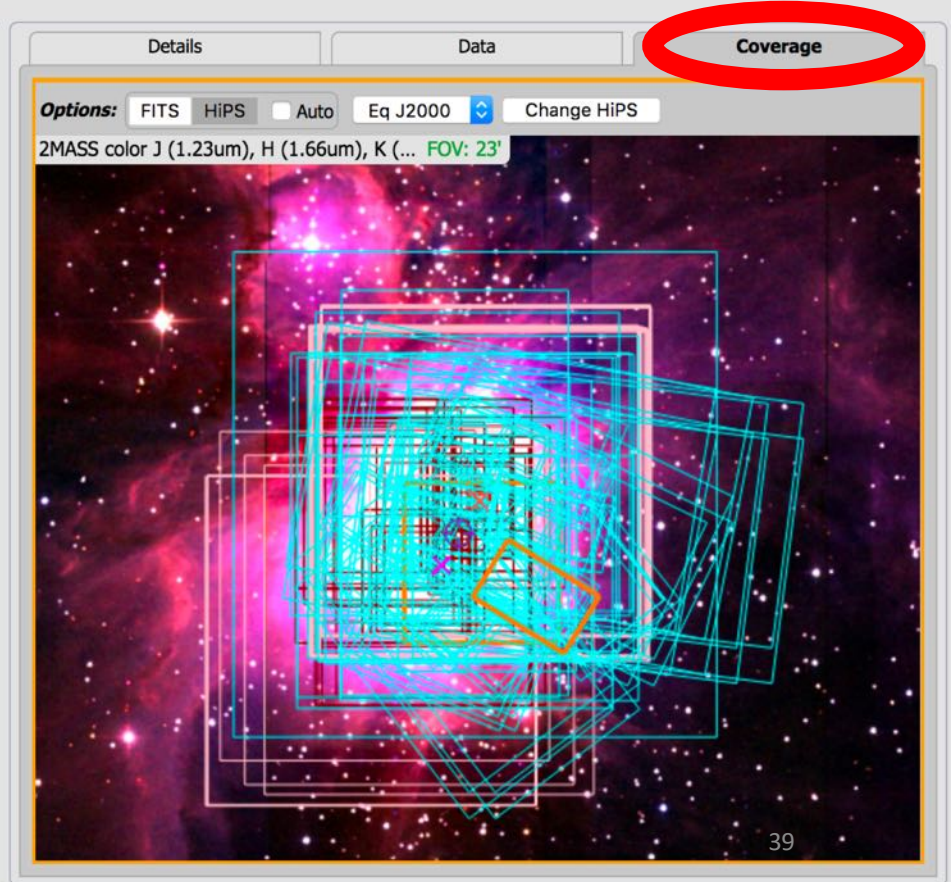


EXES
FIFI-LS
FLITEC...
FORCAST
FPI+
GREAT
HAWC+

1 of 7 (1 - 100 of 657)

<input type="checkbox"/>	AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)	dec (deg)
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374



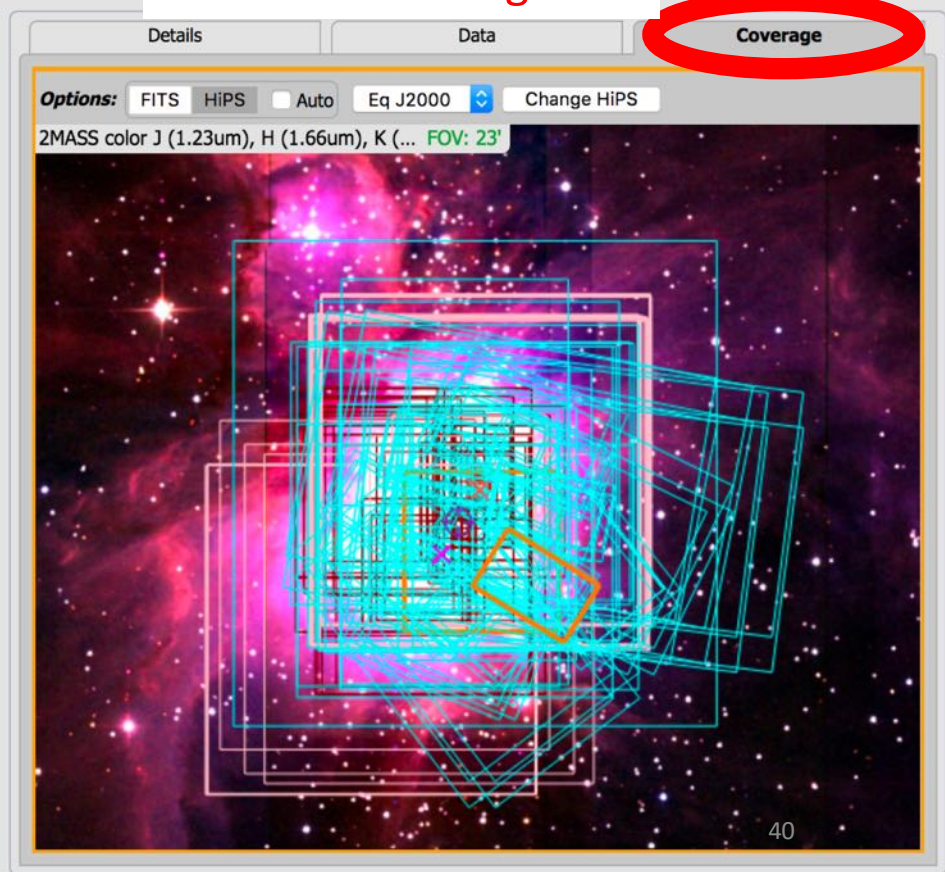
Have selected one instrument tab...

...and the coverage tab

AOR **EXES** FIFI-LS FLITEC... FORCAST FPI+ GREAT HAWC+

1 of 7 (1 - 100 of 657)

<input type="checkbox"/>	AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)	dec (deg)
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374



Pixel Size:

EQ-J2000:
Gal:

Lock by click

Background Monitor

Prepare Download



Image controls:

- This is image data (in this case HiPS, 2MASS), not JPG or PNG.
- Row of tools at the top does basic image manipulation. (e.g., save, zoom, center, measure, add marker, add compass rose/coordinates, overlay ds9 regions, etc.)
- *This is the layers icon and when viewing a popular region like M42, you really need it.*



<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN	83.8087917	-5.37
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2	83.8100000	-5.37
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2	83.8100000	-5.37

Details
Data
Coverage

Options: Auto

2MASS color J (1.23um), H (1.66um), K (... FOV: 23')

41

IRSA DATA SETS

SOFIA Search Catalogs Help

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Image controls:

- This is image data (in this case 2MASS), not JPG or PNG
- Row of tools at the top of the image manipulation. (e.g. pan, zoom, center, measure, add markers, compass rose/coordinate overlays, etc.)
- *This is the layers icon and is really needed when viewing a popular region.*

<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2

Layers- 2MASS color J (1.23um), H (1.66um), K (2.16um)

Grid Match Image Depth
 Grid Level Lock

Coverage: FIFI-LS ■ [Color](#) [Delete](#)

Search: m42 (NED) ■ [Color](#) [Symbol](#)

Click on point to highlight

Coverage: EXES ■ [Color](#) [Symbol](#) [Delete](#)

Search: m42 (NED) ■ [Color](#) [Symbol](#)

Click on point to highlight

Coverage: FORCAST ■ [Color](#) [Delete](#)

Search: m42 (NED) ■ [Color](#) [Symbol](#)

Click on point to highlight

Coverage: HAWC+ ■ [Color](#) [Delete](#)

Search: m42 (NED) ■ [Color](#) [Symbol](#)

Click on point to highlight

Coverage: GREAT ■ [Color](#) [Symbol](#) [Delete](#)

Search: m42 (NED) ■ [Color](#) [Symbol](#)

Click on point to highlight

Show All Hide All

Login

Image

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AOR EXES FIFI-LS

1 of 7 (1 - 100 of 657)

THE TABLE AND THE IMAGE ARE LINKED.
 Click on an observation on the left; its footprint is highlighted on the right. (The reverse is also true.)

<input type="checkbox"/>	AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)	dec (deg)
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_39	2018-10-27_EX_F520	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	86_0005_48	2015-02-25_EX_F195	BN		83.8087917	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374
<input type="checkbox"/>	05_0043_52	2017-03-22_EX_F390	Orion IRc2		83.8100000	-5.374

Options: FITS HiPS Auto E_q J2000 Change HiPS

2MASS color J (1.23um), H (1.66um), K (... FOV: 23')

43

Taking advantage of this

- The whole point is to give you ability to investigate observations that you may want.
 - Did it really cover the region you care about?
 - Are there other observations nearby?
- In a region where there are this many observations, it's overwhelming. May want to use layers pop-up to turn off footprints for all instruments other than the one you have selected on the left (in this case, EXES).
- Next slide has search results from a target with fewer observations: Betelgeuse.

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Pixel Size: Value: NaN EQ-J2000: Image Pixel:

SOFIA Search Catalogs Help Lock by click Background Monitor

Prepare Download

AOR EXES FIFI-LS FLITEC... FORCAST FPI+ GREAT HAWC+

1 of 1 (1 - 6 of 6)

AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal PI
<input type="checkbox"/> 02_0004_1	alpha Ori		EXES	02_0004	Graham Harper
<input type="checkbox"/> 02_0004_2	alpha Ori		EXES	02_0004	Graham Harper
<input type="checkbox"/> 05_0073_1	alpha Ori		EXES	05_0073	Graham Harper
<input type="checkbox"/> 05_0073_2	alpha Ori		EXES	05_0073	Graham Harper
<input type="checkbox"/> 75_0051_1	alpha Ori		EXES	75_0051	
<input type="checkbox"/> 75_0051_2	alpha Ori		EXES	75_0051	

Options: FITS HiPS Auto

2MASS K_s FOV: 1.9'

45

Fewer observations of Betelgeuse than M42. Spectroscopy locations indicated.

Have selected FORCAST tab...

...and the data tab

Prepare Do

AOR EXES FIFI-LS FLITEC. **FORCA...** FPI+ GREAT HAWC+

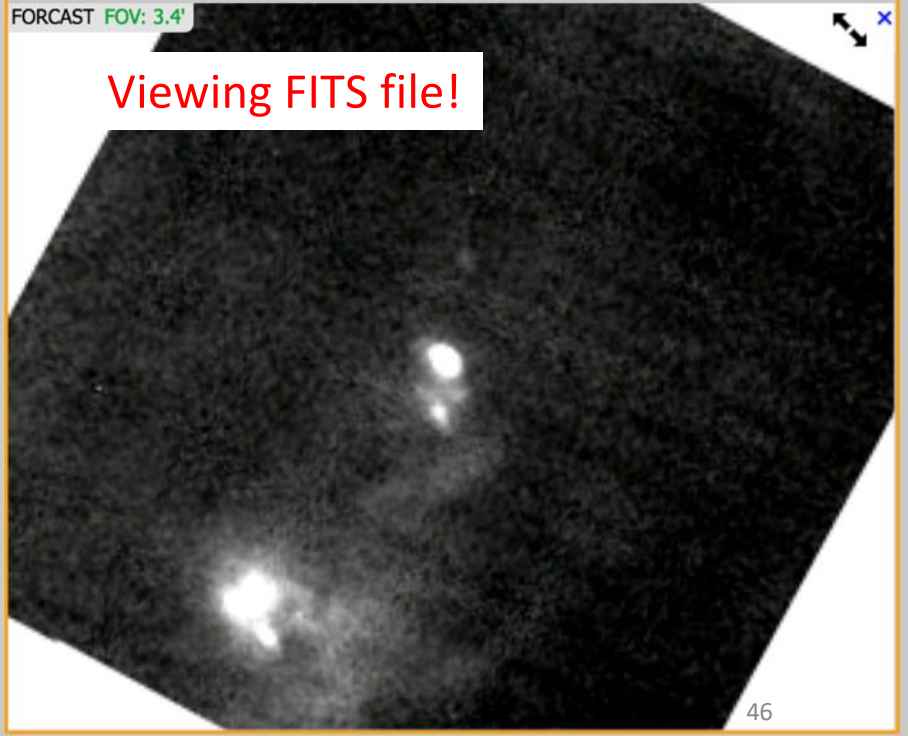
1 of 1 (1 - 41 of 41)

AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)
<input type="checkbox"/> 76_0002_62	2018-09-08_FO_F502	M42 Grism 2		83.808 5
<input type="checkbox"/> 76_0002_62	2018-09-08_FO_F502	M42 Grism 2		83.808 5
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 4
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 4
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 5
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 4
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 4
<input type="checkbox"/> 70_0301_111	2015-11-19_FO_F260	ORION-BN		83.812 5
<input type="checkbox"/> 70_0301_11	2015-11-19_FO_F260	ORION-BN		83.807 1
<input type="checkbox"/> 70_0301_11	2015-11-19_FO_F260	ORION-BN		83.807 1
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81114
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81114
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81155
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81113
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.80853
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81113
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.80853
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.80853
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81113
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.80853
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81113
<input type="checkbox"/> 70_0401_28	2016-09-17_FO_F329	IRc4		83.81155

Details **Data** Coverage

Plane: <> 1 / 3
FORCAST FOV: 3.4'

Viewing FITS file!



46

irsa | IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

Pixel Size: EQ-J2000: Image Pixel: Lock by click Background Monitor

SOFIA Search Catalogs Help

Prepare Download

Zoom the image Zoom the image out

AOR EXES FIFI-LS FLITEC... FORCA... FPI+ GREAT HAWC+ Details Data Coverage

1 of 1 (1 - 41 of 41)

AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)
<input type="checkbox"/>	76_0002_62	2018-09-08_FO_F502	M42 Grism 2	
<input type="checkbox"/>	76_0002_62	2018-09-08_FO_F502	M42 Grism 2	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN	
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81114
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81114
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81155
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81113
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.80853
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81113
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.80853
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.80853
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81113
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4	83.81155

Plane: <> 1 / 3

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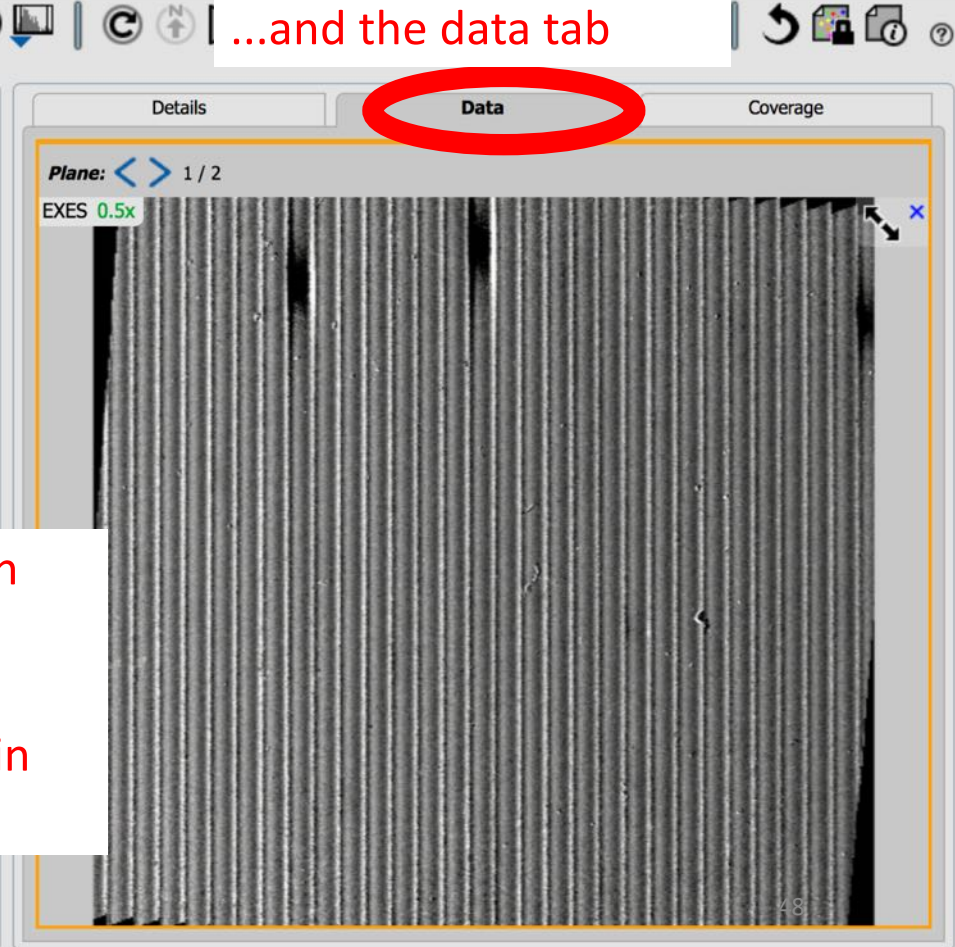
- Viewing FITS file!
- Can manipulate using toolbox along top
- Note 3 planes to these data here.

Prepare Do

Have selected EXES tab...

EXES

ilit	Observation Type	Processing Level	Product Type	Exposure Time (s)	M
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	mask	72.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	coadded	72.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	spec	96.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	mrgordspec	264.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	coadded	96.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	mask	96.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	coadded	96.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	image	72.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	image	96.000000
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S14	OBJECT	LEVEL_3		
<input type="checkbox"/>	S14	OBJECT	LEVEL_3		
<input type="checkbox"/>	S14	OBJECT	LEVEL_3		
<input type="checkbox"/>	S14	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3		
<input type="checkbox"/>	S32	OBJECT	LEVEL_3	mrgordspec	308.000000



- This spectrum is an image.
- Tool will display extracted spectra in the future.

Prepare Download

AOR EXES FIFI-LS FLITEC... **FORCA...** FPI+ GREAT HAWC+

1 of 1 (1 - 41 of 41)

<input type="checkbox"/>	AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)
<input type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN		83.81215
<input type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN		83.80751
<input checked="" type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN		83.80751
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.81114
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.8114
<input type="checkbox"/>		FO_F329	IRc4		83.8115
<input type="checkbox"/>		FO_F329	IRc4		83.8113
<input type="checkbox"/>		FO_F329	IRc4		83.8083
<input type="checkbox"/>		FO_F329	IRc4		83.8113
<input type="checkbox"/>		FO_F329	IRc4		83.8083
<input type="checkbox"/>		FO_F329	IRc4		83.8083
<input type="checkbox"/>		FO_F329	IRc4		83.8113
<input type="checkbox"/>		FO_F329	IRc4		83.8115
<input type="checkbox"/>		FO_F329	IRc4		83.8083
<input type="checkbox"/>		FO_F329	IRc4		83.80991
<input type="checkbox"/>		FO_F329	IRc4		83.80853
<input type="checkbox"/>		FO_F329	IRc9		83.80678
<input type="checkbox"/>		FO_F329	IRc9		83.80678
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80678
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80729
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80678

Plane: <> 1 / 3
FORCAST FOV: 9.5'

49



Found data you want to download? Select tickbox on left. Click on tickbox on top of column to select all (not just all shown).



Click on 'Prepare Download'



Prepare Download

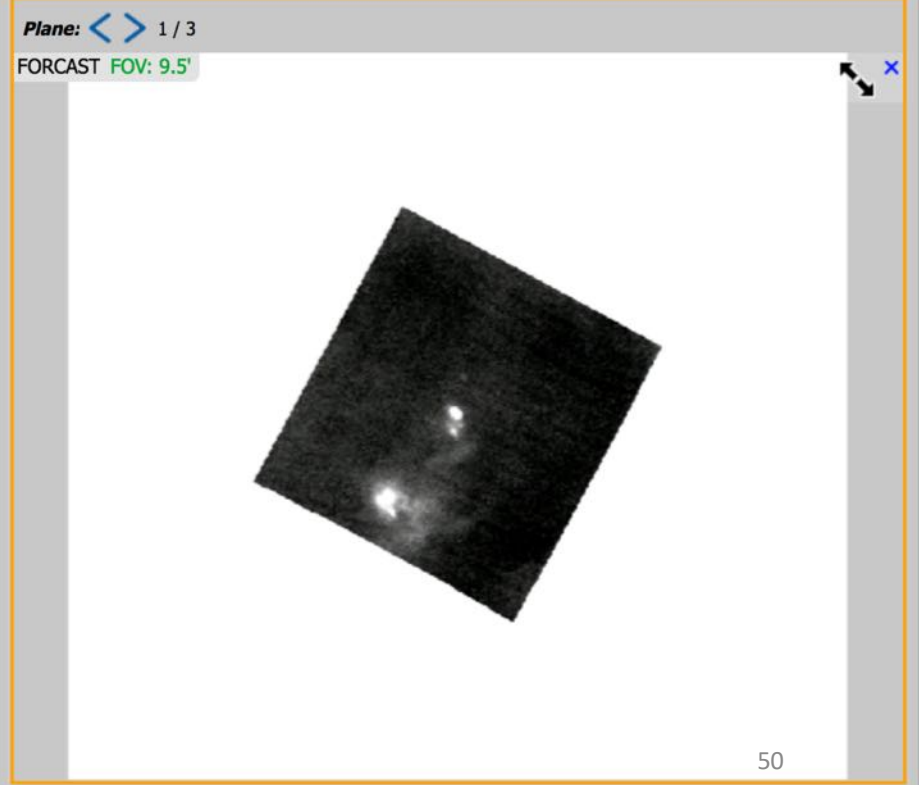


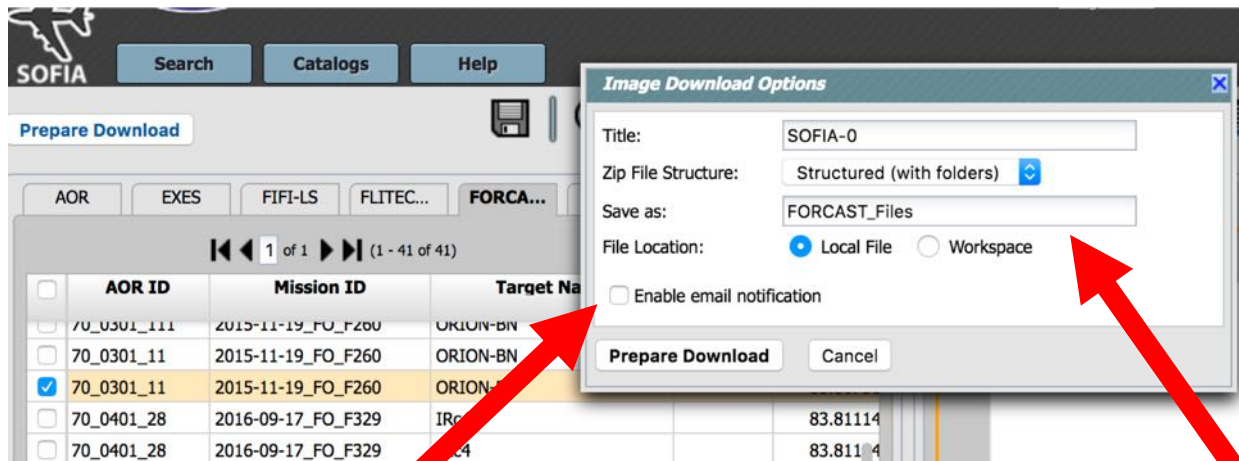
AOR EXES FIFI-LS FLITEC... FORCA... FPI+ GREAT HAWC+

1 of 1 (1 - 41 of 41)

<input type="checkbox"/>	AOR ID	Mission ID	Target Name	NAIF ID	ra (deg)
<input type="checkbox"/>	70_0301_111	2015-11-19_FO_F260	ORION-BN		83.81215
<input type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN		83.80751
<input checked="" type="checkbox"/>	70_0301_11	2015-11-19_FO_F260	ORION-BN		83.80751
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.81114
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 4
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 5
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.808 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.808 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.808 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.811 5
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.808 3
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.80991
<input type="checkbox"/>	70_0401_28	2016-09-17_FO_F329	IRc4		83.80853
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80678
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80678
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80678
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80729
<input type="checkbox"/>	70_0401_57	2016-09-17_FO_F329	IRc9		83.80607

Details Data Coverage





If you turn on email notification, it will:

- Let you know when it is done.
- Send you an email that also has a script to use to download all the pieces.

This matters more when you have huge downloads.

Your computer should know what to do with zip files; if working from the command line, it needs to have the wild card escaped: `unzip *.zip`

- “Title” just refers to how it is tracked through the background monitor. Doesn’t matter so much for small downloads.
- Zip file structure means bundled into subdirectories (folders) by observation or a flat file structure.
- “Save as” is the filename it uses.
- Save to your disk or the IRSA Workspace (you need to be logged in).

It saves the files wherever your browser is configured to save files!

<input type="checkbox"/>	AOR ID	Target Name	NAIF ID	Instrument	Plan ID	Proposal P.
<input type="checkbox"/>	04_0119_1	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_2	IRC_10216_PM		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_3	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_4	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	04_0119_6	IRC_10216		HAWC_PLUS	04_0119	B-G Andersso
<input type="checkbox"/>	05_0048_1	IRC+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_200	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_201	irc_+10216		HAWC_PLUS	05_0048	B-G Andersso
<input type="checkbox"/>	05_0048_4	IRC+10216		HAWC_PLUS	05_0048	B-G Andersson
<input type="checkbox"/>	05_0048_5	IRC+10216		HAWC_PLUS	05_0048	B-G Andersson
<input type="checkbox"/>	05_0052_1	IC59		GREAT	05_0052	B-G Andersson
<input type="checkbox"/>	05_0052_10	IC59		GREAT	05_0052	B-G Andersson
<input type="checkbox"/>	05_0052_2	IC59		GREAT	05_0052	B-G Andersson
<input type="checkbox"/>	05_0052_3	IC59		GREAT	05_0052	B-G Andersson



Red rows means proprietary data! You can't even preview those data unless you are logged in and have legitimate access to those observations.

More advanced tips and tricks

- Many important caveats in the online help. Highlights:
 - Some columns aren't populated:
 - Things that aren't moving targets don't have a NAIF(*) id.
 - Calibration observations or products of many combined observations often don't have a PI.
 - Some files won't appear or visualize:
 - All data levels not found in all instruments.
 - Extracted spectra can be rendered as images.
 - GREAT Level 3 or 4 are tar files and cannot be visualized.
- Doing lots of subsequent searches? Everything on the search page is 'AND'ed together. Be sure you don't accidentally leave a parameter set.

(*) NAIF = NASA's Navigation and Ancillary Information Facility

More advanced tips and tricks

- Filtering columns
 - Powerful for weeding down long lists.
 - Can filter on free-form text or from set of options.

Starting from another search on M42...

SOFIA Search

[Now includes Cycles 2-7, 7 instruments: important notes on archive completeness.](#)

Spatial Constraints Search for observations within a specified radius of a specified position. Enter search criteria below.

Object/Position Name or Position:

Multiple Positions

Solar System Target

Precovery

All-Sky

m42 resolved by NED
83.81866, -5.38968 Equ J2000 or 5h35m16.48s, -5d23m22.8s Equ J2000

Radius:

Valid range between: 1" and 3600"

▶ **Proposal Constraints**

▶ **Observation Constraints**

▶ **Instrument Constraints**

▼ **Data Product Constraints**

Processing Level: Level 0 Level 1 Level 2 Level 3 Level 4

Observation Type:





...this time asking for **all** data.

On the FORCAST tab, click on this to add filters

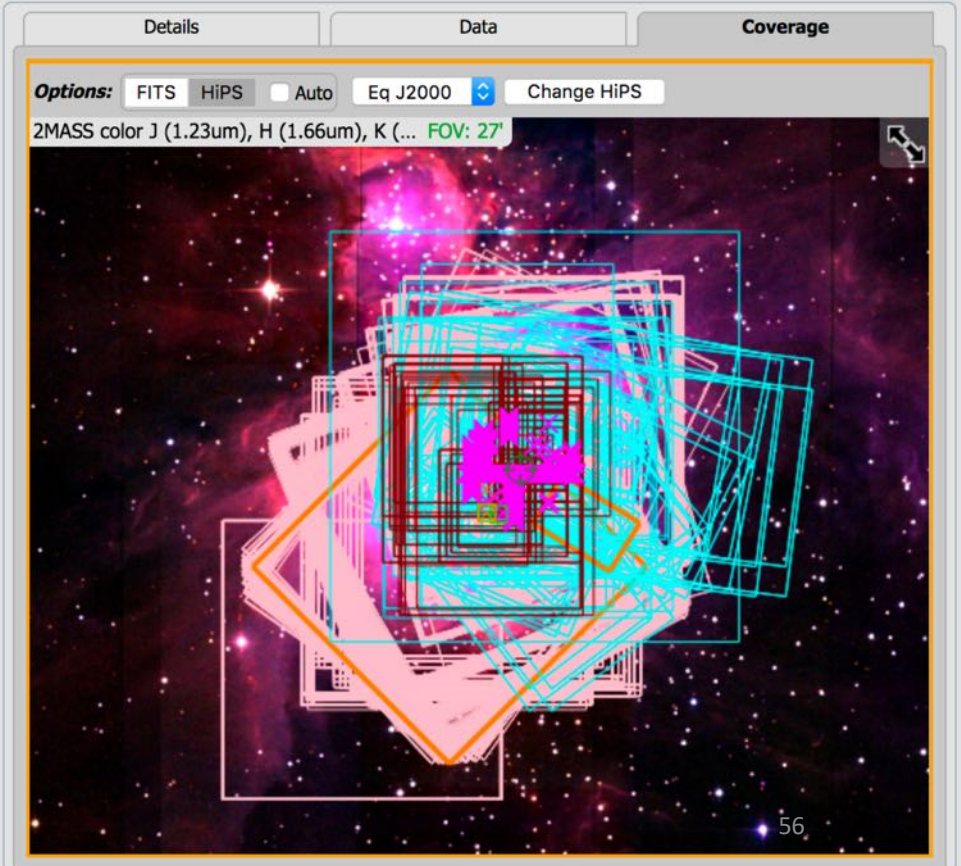
Prepare Download




15 of 16 (1,401 - 1,500 of 1,533)

AOR ID	Mission ID	Target Name	RA (deg)
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8564285
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8564268
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562260
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8563838
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562934
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562277
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562794
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8563329
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562599
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562897
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562807
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562788
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562807
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562784
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8542420
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8542456
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8563786
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8562334
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8563237
<input type="checkbox"/> 04_0058_2	2016-02-09_FO_F275	Orion I2	83.8563729



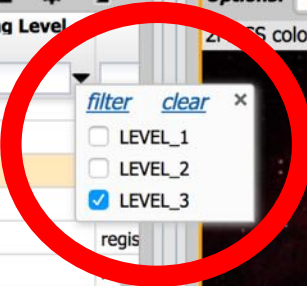

IRSA | DATA SETS | SEARCH | TOOLS | HELP
Login

Scroll over until you find a column on which you want to filter. Click on the triangle. Select all options you want, and click “filter”.

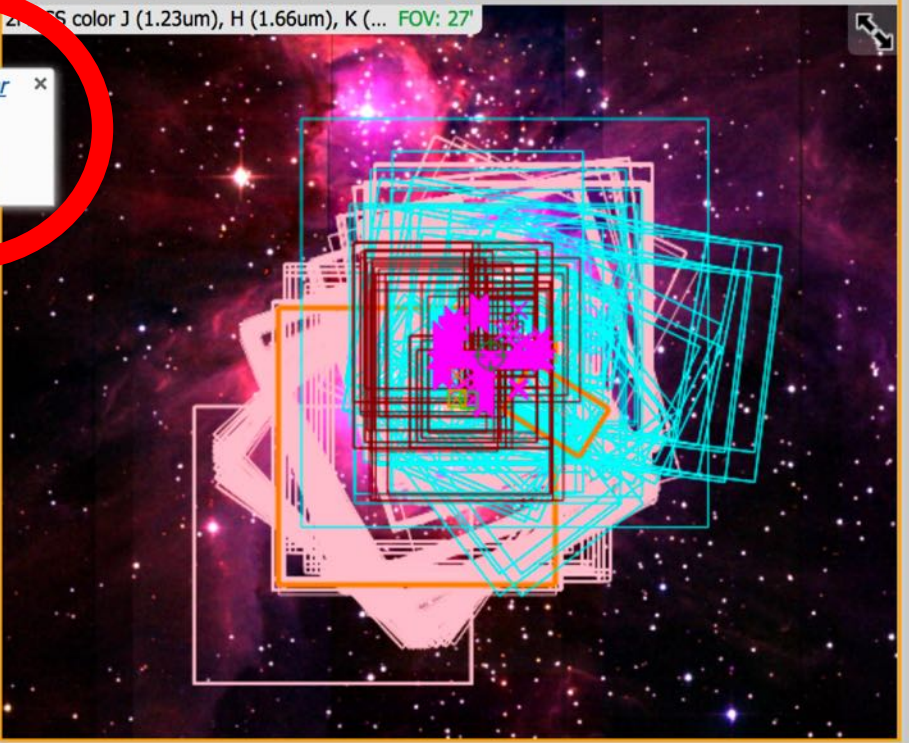
Prepare Download

AOR
EXES

	Camera	Bandpass	Slit	Observation Type	Processing Level
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_2



Options: FITS HiPS Auto
EQ J2000
Change HiPS



Prepare Download

AOR EXES FIFI-LS FLITEC... **FORCA...** FPI+ GREAT HAWC+

1 of 1 (1 - 41 of 41)

Filter shown

Position	Camera	Bandpass	Slit	Observation Type	Processing Level	
<input type="checkbox"/>	SW	FOR_F197	NONE	OBJECT	LEVEL_3	ca b
<input type="checkbox"/>	SW	FOR_F197	NONE	OBJECT	LEVEL_3	ca b
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	me g
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	re s
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	me g
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	re s
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	me g
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	re s
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	regis
<input type="checkbox"/>	SW	FOR_F111	NONE	OBJECT	LEVEL_3	merc
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib
<input type="checkbox"/>	LW	FOR_F315	NONE	OBJECT	LEVEL_3	calib

EXES/Observation Type filter

The screenshot shows a software interface with a table of observation data. The table has columns for Spectral Element 1, Spectral Element 2, Slit, Observation Type, and a partially visible 'Pro' column. A filter dropdown menu is open over the 'Observation Type' column, showing options: DARK, FLAT, OBJECT (checked), and SKY. The table contains 16 rows of data, with the first row highlighted in yellow.

	Spectral Element 1	Spectral Element 2	Slit	Observation Type	Pro
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	FLAT	
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	FLAT	
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	FLAT	
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	FLAT	
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	FLAT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL
<input type="checkbox"/>	EXE_ELON	EXE_ECHL	EXE_S32	OBJECT	LEVEL

FORCAST/imaging filter...

	Instrument	Configuration	Camera	Bandpass	Slit	Observati
94	FORCAST	IMAGING		11	NONE	OBJECT
39	FORCAST	IMAGING		11	NONE	
43	FORCAST	IMAGING		11	NONE	
71	FORCAST	IMAGING	LW	FOR_F371	NONE	
81	FORCAST	IMAGING	LW	FOR_F371	NONE	
24	FORCAST	IMAGING	LW	FOR_F371	NONE	
13	FORCAST	IMAGING	LW	FOR_F371	NONE	
83	FORCAST	IMAGING	LW	FOR_F371	NONE	
73	FORCAST	IMAGING	LW	FOR_F371	NONE	
57	FORCAST	IMAGING	LW	FOR_F371	NONE	
20	FORCAST	IMAGING	LW	FOR_F371	NONE	
56	FORCAST	IMAGING	LW	FOR_F371	NONE	
73	FORCAST	IMAGING	LW	FOR_F371	NONE	
80	FORCAST	IMAGING	LW	FOR_F371	NONE	
52	FORCAST	IMAGING	LW	FOR_F371	NONE	
80	FORCAST	GRISM	SW	FOR_G111	FOR	
80	FORCAST	GRISM	SW	FOR_G111	FOR_LS24	OBJECT
54	FORCAST	GRISM	SW	FOR_G111	FOR_LS24	OBJECT
41	FORCAST	GRISM	SW	FOR_G111	FOR_LS24	OBJECT

filter clear x

GRISM

IMAGING

... plus resolution >20...

me	Min Wavelength (um)	Max Wavelength (um)	Spectral Resolution	
<input type="checkbox"/>			> 20	
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	7100	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	2700	11.20	11.40	47.1 https://irsa.ipac.caltech
<input type="checkbox"/>	7100	11.20	11.40	47.1 https://irsa.ipac.caltech

... yields just narrow-band images.

SOFIA in context at IRSA

- One of the main advantages to having the SOFIA archive at IRSA is that it allows you to use IRSA tools and SOFIA data together in context.
- Access other images, catalogs at IRSA.
- Access other images, catalogs worldwide in tools with this look-and-feel.

ipac

IRSA NASA/IPAC INFRARED SCIENCE ARCHIVE

IRSA | DATA SETS | SEARCH | TOOLS | HELP Login

Search for Source

 10
[Guide for Solar System Observers](#)

Search Catalog:

NEOWISE 2020 Data Release

The NEOWISE Reactivation 2020 Release adds approximately 2.5 million image sets and 18.7 billion source detections to the public archive. These data were acquired during the sixth year of the NEOWISE Reactivation Mission.

[Past News](#) [Featured Images](#)

Catalogs **IRSA Viewer** **Finder Chart** **VO/API**

MORE

Data Discovery:
Tell me everything you can find at IRSA overlapping this position

IRSA Viewer:
Tool for comparing data from multiple observatories.

Pick an image type, origin of data, & target.

This list is long. Use filters on left to weed down sheer number of programs on right.

IRSA | IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

Images | Catalogs | Charts | Help | Background Monitor

Image Search

1. Choose Image Type View FITS Images Create 3-Color Composite View HiPS Images

2. Select Image Source Search Use my image URL Workspace

3. Select Target Name or Position: Try NED then Simbad
Examples: 'm81' 'ngc 18' '12.34 34.89' '46.53 -0.251 gal'
'19h17m32s 11d58m02s equ j2000' '12.3 8.5 b1950'
Cutout size (leave blank for full size): arcseconds
Valid range between: 1" and 3600"

4. Select Data Set [Clear Filters](#) [Clear Selections](#) [Expand All](#) [Collapse All](#)

Filter By:

▼ MISSION:

- Spitzer (37)
- WISE (2)
- Herschel (20)
- 2MASS (7)
- IRAS (2)
- ZTF (1)

Selection:

- SEIP: Spitzer Enhanced Imaging Products ⓘ
- Abell1763 Data ⓘ
- C2D: From Molecular Cores to Planet-Forming Disks ⓘ
- CLASH: Cluster Lensing And Supernova survey with Hubble ⓘ
- Cygnus-X: A Spitzer Legacy Survey of the Cygnus-X Complex ⓘ

Search Cancel ?

Contact | Privacy Policy | Acknowledge IRSA | ipac | Caltech | JPL | NASA | v4.0.2019.3.2 Built On: 2019-12-09 | 63

Load FITS images of M16, 500 arcsec across, from Spitzer/IRAC (GLIMPSE) and WISE (not shown)

The screenshot shows the IRSA Image Search interface. At the top, there is a navigation bar with the IRSA logo and links for IRSA, DATA SETS, SEARCH, TOOLS, HELP, and a Login button. Below this is a secondary navigation bar with buttons for Images, Catalogs, Charts, Help, and Background Monitor. The main content area is titled "Image Search" and is divided into four steps:

- 1. Choose Image Type:** Radio buttons for "View FITS Images" (selected), "Create 3-Color Composite", and "View HiPS Images".
- 2. Select Image Source:** Radio buttons for "Search" (selected), "Use my image", "URL", and "Workspace".
- 3. Select Target:** A text input field contains "M16". A dropdown menu shows "Try NED then Simbad". Below, it displays "M16 resolved by NED" with coordinates "274.70073, -13.80723 Equ J2000 or 18h18m48.18s, -13d48m26.0s Equ J2000". A "Cutout size (leave blank for full size):" input field contains "500" and a unit dropdown shows "arcseconds". A note below states "Valid range between: 1\" and 3600\"".
- 4. Select Data Set:** A "Filter By:" section on the left shows "Spitzer,galactic" and a "MISSION:" list with "Spitzer (37)" selected. The "Selection:" section on the right lists several datasets, with "GLIMPSE: Galactic Legacy Infrared Midplane Survey Extraordinaire" selected. Underneath, "Spitzer:" is followed by four checked IRAC channels: "IRAC1 (3.6 microns)", "IRAC2 (4.5 microns)", "IRAC3 (5.8 microns)", and "IRAC4 (8 microns)".

At the bottom of the search area are "Search" and "Cancel" buttons. The footer contains links for "Contact", "Privacy Policy", and "Acknowledge IRSA", along with logos for ipac, Caltech, JPL, and NASA. The version information "v4.0.2019.3.2 Built On: 2019-12-09" and the page number "64" are also present.

Initial results
from search.
Same size
patch of sky..
But not
oriented the
same way.

The screenshot displays the IRSA (Infrared Science Archive) web interface. At the top, the IRSA logo is on the left, and navigation links for IRSA, DATA SETS, SEARCH, TOOLS, and HELP are on the right. A 'Login' link is also present. Below the navigation, a search bar shows the coordinates EQ-J2000: 18h18m43.40s, -13d52m20.5s and the flux value 7.85104 MJy/sr. The image pixel size is 408.6, 167.8. A 'Background Monitor' button is visible on the right. The main interface features a toolbar with various icons for zooming, panning, and image manipulation. Below the toolbar, the 'Tiled View' section displays eight panels arranged in a 2x4 grid. The top row shows GLIMPSE IRAC1, IRAC2, IRAC3, and IRAC4, all with a Field of View (FOV) of 8.5'. The bottom row shows AllWISE W1, W2, W3, and W4, also with a FOV of 8.5'. Each panel contains a different astronomical image of the same region, with a yellow crosshair indicating the search location. The GLIMPSE IRAC4 panel is highlighted with an orange border. A small '65' is visible in the bottom right corner of the AllWISE W4 panel.

Lock images together by WCS, north up.

IRSA | DATA SETS | SEARCH | TOOLS | HELP | Login

Pixel Size: EQ-J2000: Image Pixel:

Lock by click

Background Monitor

Images | Catalogs | Charts | Help

Tiled View

GLIMPSE IRAC1 FOV: 8.5', 298°

GLIMPSE IRAC2 FOV: 8.5', 298°

GLIMPSE IRAC3 FOV: 8.5', 298°

GLIMPSE IRAC4 FOV: 8.5', 298°

ALLWISE W1 FOV: 8.5', North

ALLWISE W2 FOV: 8.5', North

ALLWISE W3 FOV: 8.5', North

ALLWISE W4 FOV: 8.5', North

66


 IRSA | DATA SETS | SEARCH | TOOLS | HELP Login

Pixel Size: 1.20 arcsec EQ-J2000: 18h18m37.08s, -13d50m48.2s GLIMPSE IRAC2
 Flux: 4.84406 MJy/sr Image Pixel: 377.2, 271.8 Lock by click

Images Catalogs Charts Help Background Monitor



Tiled View

GLIMPSE IRAC1 FOV: 8.5', 298° Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	GLIMPSE IRAC2 FOV: 8.5', 298° Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	GLIMPSE IRAC3 FOV: 8.5', 298° Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	GLIMPSE IRAC4 FOV: 8.5', 298° Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC
ALLWISE W1 FOV: 8.5', North Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	ALLWISE W2 FOV: 8.5', North Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	ALLWISE W3 FOV: 8.5', North Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC	ALLWISE W4 FOV: 8.5', North Footprint: SOFIA FIFI-LS Blue Footprint: SOFIA HAWC BAND A TC

67

Reverse grey
 scale (change
 all at once);
 overlay SOFIA
 FIFI-LS and
 HAWC
 footprints.

Show only one image at a time, overlay 2MASS catalog (filtered to only have SNR>10 at all three bands), overlaid on image, make color-color plot. All are interactive; click on source in image or plot to find in table, etc.

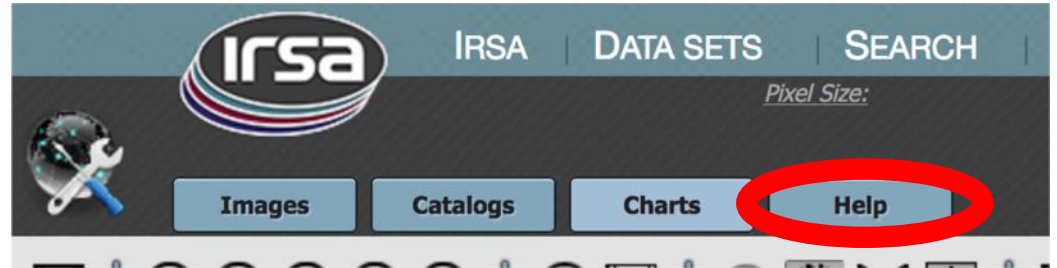
The screenshot displays the IRSA web interface. At the top, there is a navigation bar with 'IRSA', 'DATA SETS', 'SEARCH', 'TOOLS', and 'HELP'. Below this is a toolbar with various icons for image manipulation and data viewing. The main content area is divided into several panels:


- Images Panel:** Shows a color-color plot of $h_m - k_m$ versus $j_m - h_m$. The plot contains numerous blue data points, with one point highlighted in yellow. A red circle highlights the 'Images' tab in the top navigation bar.
- Catalogs Panel:** Shows a 2MASS catalog overlay on an image. The catalog entries are represented by red squares. A red circle highlights the 'Catalogs' tab in the top navigation bar.
- Table Panel:** Displays a table of catalog data for '2MASS-fp_psc (Polygon)'. The table has columns for 'cmsig', 'h_msigcom', 'h_snr', 'k_m', 'k_cmsig', 'k_msigcom', 'k_snr', and 'pt'. The 'h_snr' and 'k_snr' columns are filtered to show values greater than 10. A red circle highlights the table's search and filter controls.
- Color-Color Plot Panel:** Shows a scatter plot of $h_m - k_m$ versus $j_m - h_m$. The plot contains numerous blue data points, with one point highlighted in yellow. A red circle highlights the plot's search and filter controls.

Additional interface elements include a 'Background Monitor' button, a 'Lock by click' checkbox, and a 'Login' link in the top right corner. The page number '68' is visible in the bottom right corner.

Getting more help

- Help button at top gets online help. (Also available as pdf, which is searchable!)



- Context-sensitive help  should drop you in relevant portion of online help.
- IRSA helpdesk (linked on IRSA main page).
- IRSA YouTube channel
https://www.youtube.com/channel/UCIysJbамhNnlu0Bgdrwxn_w
- Playlist collects all the SOFIA videos in one place
https://www.youtube.com/playlist?list=PL3UuvF_s8KWJQWu7bjlXMWZ7QRwL4DPRI though also see other tutorials for, e.g., overview of image toolbar, etc.