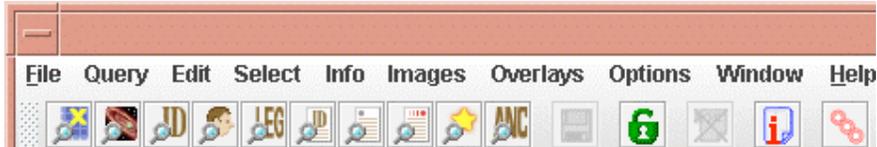# Leopard - The Spitzer Data Archive Tool

Leopard is a client-server multi-platform software tool designed to be the only tool you need to access data from the Spitzer Data Archive. In Leopard you can access public datasets, including the First Look Survey (FLS) and original Legacy Programs. Via Leopard you can login to the Archive and access your proprietary data, when they are available. Archive Query results are listed by Astronomical Observation Requests (AORs). You can use Leopard to list details of an observing program, see the program target list, and visualize the field Spitzer observed. The raw, BCD, and post-BCD data corresponding to an AOR can be downloaded to your local disk.

File   Query   Edit   Select   Info   Images   Overlays   Options   Window   Help

Basic Components of Leopard:

➤ **Help** Full 'online' help packaged with Leopard.

➤   Query   🔍by Position   🔍by Program   🔍by AOR ID
        🔍 by campaign/observer   🔍 for FLS/Legacy Programs
            🔍 by AOR ID list   🔍 by Position list   🔍 by NAIF IDs list
                🔍 for Popular Products   🔍for Ancillary Data.

➤   AOR Management. Delete highlighted AORs in the Archive Query Results.

➤   Detail Information, List of Targets. Obtain details from a highlighted AOR about a specific observing program, including AOR parameters, program description, size of available data, and BCD list. See the observed target list.

➤   Login to the Spitzer Archive (username and password required). Not necessary for non-proprietary data.

➤   Save data to your local disk, or stage data on our ftp site, after selecting which wavelengths and types of data you want.

➤ **Images Overlays** Visualization. Download and display images, and visualize the field observed in an AOR. Overlay catalogs, images, etc, just like in Spot.

➤ **Options** Options. Auto-update Leopard (get new versions automatically when selected -- this is recommended). Disk cache preferences are selectable too.

➤   Partially Queued (see tip)
    Fully Queued (see tip)   Monitor the progress of your data download.
    Partially Downloaded (see tip)
    Fully Downloaded (see tip)

Leopard – The Spitzer Data Archive Tool

Main Toolbar

Shortcut Icons

Archive Query Results

Click on column header to
sort column contents

Observation status

Astronomical Observation Requests (AORs)

Instrument	Label	Target	Key	Position	Retrieve Wave length	Status	Version	Sched...	Relea...	Preview
IRAC Mapping	P00026: FLS-IR...	FLS-CVZ-ver	7676928	17h17m0...	☐ 3... ☐ 4... ☐ 5... ☐ 8...	nominal	S15.0.4	12-5-03	05-11-04	3.6 4.5 5.8 8.0
IRAC Mapping	P00026: FLS-IR...	FLS-CVZ-ver	7677184	17h17m0...	3... 4... 5... 8...	nominal	S15.0.4	12-5-03	05-11-04	3.6 4.5 5.8 8.0

Target Name

Target Position

Unique AOR label

Unique AOR ID or Key

Wavelengths to be retrieved

Retrieved – 0 of 1

File   Edit   Options   Help

File	Size	Time	Progress
P00026- FLS-IRAC-ver1a.zip (1 of 2 parts	11.8M / 200.1M	0:00:18	0:05:02 remaining

Dataset being
downloaded

Scheduled date for AOR

Progress of dataset download by Subscriber tool to local disk

Net Up

Retrieved 0 of 1
11.8M / 200.1M

All Files Available   Working

Public release date
for data products

Legend for data retrieval status indicators

Archive Query Results

Uncompressed Size: 0
Selected Products: 0

🟢 Partially Queued (see tip)
🟢 Fully Queued (see tip)
🔵 Partially Downloaded (see tip)
🔵 Fully Downloaded (see tip)

⬆ *Select AOR Wavelengths*

What to download?
☑ Post BCD data   ☑ BCD - Basic data
☐ Raw data   ☐ Calibration data

Logged in as: General User   Net Up   **Total AORs: 2 / Total Products: 8**

Login name (no login necessary, i.e.,
"General User," for accessing non-proprietary data)

Connection to SSC servers via Internet

Data product types to be downloaded

Leopard – The Spitzer Data Archive Tool
Visualizing The Observations

Image thumbnail with box outline showing zoomed field in frame below. Click on thumbnail to move position of zoomed image.

Click to zoom in image in active frame

Click to zoom in on all frames (not active if only one frame is displayed)

Click to zoom out

Click on crosshairs to center current frame to current target's position (for fixed targets).

Click to show current fixed target.

Click to show coordinate grid.

Click to create a slice from an image.

Click to compute statistics in an area on an image.

Click to crop image.

Click to use distance tool.

Click to add marks to image and create your own catalog.

Pull down to overlay other images.

Menu bar: File Query Edit Select Info Images Overlays Options Window Help

Leopard

Flux: 0.659 MJY/SR   Eq-J2000 RA: 17h19m55.99s   X: 85.000
1 Pixel: 90.000"   Eq-J2000 Dec: +59d51m22.7s   Y: 103.000

"Magnifier" view of image.

Mouse Control
Mouse: Any
Shift-Left Button: **Center the Image at point**

Display of image flux and pixel scales. Coordinates and x,y position of cursor on image. Change coordinate system display under Options on Toolbar.

Delete frame

Images to download & display:
ISSA   NED
2MASS   ISO Archive
MSX   FITS image file
DSS   All Sky (DIRBE,
SkyView   ISSA)
Overlays:
Catalogs (IPAC, HEASARC, VizieR, user)
PCRS Catalog
Crop Tool, Coordinate Grid, Area Statistics
Distance Tool, Slice Tool, Add Marks
Current Fixed Target
Add a Moving Target
Other Images
All Known Moving Objects at a date
Spitzer Focal Plane, Generic Focal Plane
AORs
Spitzer OPZ
Spitzer Bright Objects for an AOR
Depth of Coverage Maps

Iconify frame

Expand frame to full size

ISSA– 12 micron, FLS-CVZ-ver

Click to view Spitzer's pointing positions.

P00026: FLS-IRAC-

Click to change AOR overlay date.

Grid

Overlay layer for coordinate grid.

Base Image

Click on layer box to move a layer up or down between other layers.

Click to view image header.

Click to change image color table.

Archive Query Results   ISSA– 12 micron, FLS-CVZ-ver

Uncompressed Size: 0
Selected Products: 0

Partially Queued (see tip)
Fully Queued (see tip)
Partially Downloaded (see tip)
Fully Downloaded (see tip)

What to download?
☐ Post BCD data   ☐ BCD – Basic data
☐ Raw data   ☐ Calibration data

Click to change image opacity.

Logged in as: General User   Net Up   Total AORs: 27 / Total Products: 96

Window Tabs
(click to bring forward)

Overlay of IRAC Map AOR (6×2 grid). The two IRAC apertures are shown (blue and magenta).

Coordinate grid overlay