

ASDC IRIS Plugin

1. Introduction

The ASDC IRIS Plugin is a software interface developed at the ASI Science Data Center (ASDC) as part of an on-going collaboration between the ASDC and the IRIS developers at CfA. It works as an interface to retrieve spectral data from the ASDC SED server and use it within the IRIS tool.

2. Installation instructions

If an icon named "ASDC Data" is already present in the IRIS main window (see fig.1), this means that the plugin is already pre-installed and properly configured on your IRIS version. If this is the case, you may skip the following instructions and go directly to the "Usage" section.

If the icon marked with the red arrow in fig. 1 is not present, the corresponding plugin can be found in the IRIS directory: `<basedir>/iris-1.2-<plat>-<arch>/contrib/AsdclrisPlugin-1.1.3.jar`. To install it, just go to "plugin manager" under the "tools" menu bar, copy the above path to the "Plugin Directory" and "Load" the plugin. A new icon named "ASDC Data" will appear in the IRIS main window.



Fig. 1: The ASDC Plugin in the IRIS main window

3. Usage

To launch the plugin, click on the "ASDC Data" icon in the IRIS main window. A new window, named "ASDC Catalog query" will appear (fig. 2). This is the main interface to query the ASDC catalogs server, load ASDC multi-frequency data on IRIS and display it as spectral energy distributions (SEDs).

ASDC Catalog Query

Target Name: 3c273 SIMBA... Resolve

Ra: 187.2778963 Dec: 2.05240632 Version: 1....

Date Format: yyyy-MM-dd...

TStart Date: 1970-01-01 Time: HH:MM:SS (00:00:00)

TStop Date: 2013-03-01 Time: HH:MM:SS (00:00:00)

Catalogs Available:

- Catalogs
- Radio
- Infrared
- Optical UV
- Soft X Ray
- Hard X Ray
- Gamma Ray

SED Creation Mode: Create New

Catalog Name: []

Search Radius: 3 arc...

Submit

Fig. 2: the ASDC plugin main window.

The name of the cosmic source for which SED data is required can be entered in the "Target Name" box. The system will automatically retrieve the corresponding equatorial coordinates using the NED or the Simbad name server. Alternatively, if the source's coordinates are known, these can be directly inserted in the "Ra" and "Dec" boxes, in decimal degrees.

Data can be queried according to observation time, by selecting the start and end date of observation (Tstart Date/Time and TStop Date/Time boxes). Time intervals can be specified in the common year-month-day-hour-minute-second format (yyyy-MM-dd hh:mm:ss), or as Modified Julian Day (MJD), using the "Date Format" box.

Many different catalogs can be queried. They are grouped in the "Catalogs Available" box according to their wavelength domain. Each domain (Radio, Infrared, Optical UV, Soft X Ray, Hard X Ray and Gamma Ray) includes several catalogs, which can be viewed by clicking on the arrow to the left of each entry. The full catalog list is reported in Appendix A1. To select or deselect a catalog, just check or uncheck the corresponding box.

Each catalog has a default search radius, which depends on the precision of the coordinates listed in the chosen catalog. Be aware that search radii can vary substantially depending on catalog type. For example, optical catalogs typically have radii of a few arc-seconds, while gamma-ray catalogs can have search radii that can be as large as one degree.

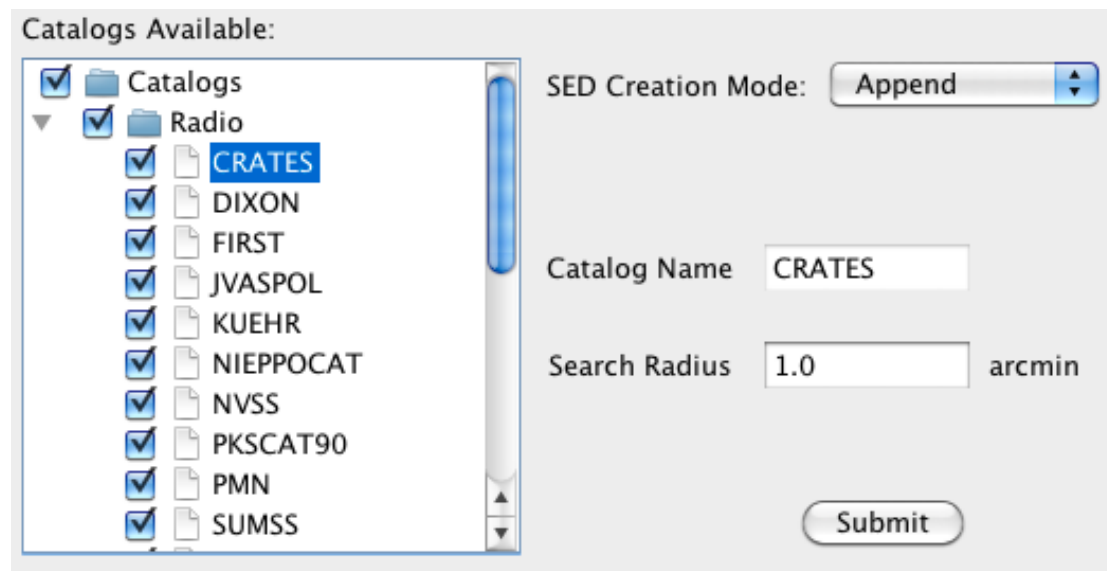


Fig. 3: a zoom-in of the "Catalogs Available" box, where the radio catalog "CRATES" has been selected.

The "Search Radius" box allows users to vary the circular region within which data belonging to each catalog are searched. To do this, just select a catalog from the "Catalogs Available" box. The name of the selected catalog will appear in the "Catalog Name" box, and the default error radius in the "Search Radius" one (see fig. 3 for an example). A new search radius in arc-minutes for the selected catalog can now be defined editing the "Search Radius" box. The search radius is centered on the input coordinates.

The selected data are now ready to be downloaded to the Builder/SED Viewer tools using the Submit button. They can be put into a new SED or appended to an existing one by selecting the corresponding SED Creation Mode.

A1. ASDC catalog list

The complete list of the catalogs accessible via the ASDC IRIS Plugin as of June 2013, is reported in the following table. This list may of course change in time as more catalogs are published in the ASDC webpages. The first column indicates the catalog name, the second one the group to which the catalog belongs, and the last one the frequency domain of the catalog entries. Infrared, Optical and UV fluxes have been corrected for the Galactic A_V , following the extinction recipes in Cardelli et al. (1989, ApJ, 345, 245) and Fitzpatrick (1999, PASP, 111, 63). The Soft X-ray fluxes have been corrected for the Galactic N_H , modeling the corresponding X-ray spectrum with an absorbed power law. More information about the ASDC catalogs can be found on the ASDC webpages at the following URL:

http://tools.asdc.asi.it/SED/docs/SED_catalogs_reference.html

AT20GCAT (flux 20 GHz)	AT	Radio
AT20GCAT (flux 5 GHz)	AT	Radio
AT20GCAT (flux 8 GHz)	AT	Radio
ATCAPMN (flux 3.6 cm)	AT	Radio
ATCAPMN (flux 6 cm)	AT	Radio
ATPMNCAT	AT	Radio
CLASSSCAT	Radio	Radio
CRATES	Radio	Radio
DIXON	Radio	Radio
FIRST	Radio	Radio
GB6	GBT	Radio
GB87CAT	GBT	Radio
NORTH20CM (flux 20 cm)	GBT	Radio
NORTH20CM (flux 6 cm)	GBT	Radio
NORTH20CM (flux 80 cm)	GBT	Radio
JVASPOL	Radio	Radio
KUEHR	Radio	Radio
NIEPPOCAT	Radio	Radio

NVSS	Radio	Radio
PKSCAT90	Radio	Radio
PMN	Radio	Radio
ERCSC030	Planck	Radio
ERCSC044	Planck	Radio
ERCSC070	Planck	Radio
ERCSC100	Planck	Radio
ERCSC143	Planck	Radio
ERCSC217	Planck	Radio
ERCSC353	Planck	Radio
ERCSC545	Planck	Radio
ERCSC857	Planck	Radio
PCCS1F030	Planck	Radio
PCCS1F044	Planck	Radio
PCCS1F070	Planck	Radio
PCCS1F100	Planck	Radio
PCCS1F143	Planck	Radio
PCCS1F217	Planck	Radio
PCCS1F353	Planck	Radio
PCCS1F545	Planck	Radio
PCCS1F857	Planck	Radio
SUMSS	Radio	Radio
VLANEP	Radio	Radio
VLSS	Radio	Radio
WENSS	Radio	Radio
WMAP5 (Freq. 23e9 Hz)	WMAP	Radio
WMAP5 (Freq. 33e9 Hz)	WMAP	Radio
WMAP5 (Freq. 41e9 Hz)	WMAP	Radio
WMAP5 (Freq. 61e9 Hz)	WMAP	Radio
WMAP5 (Freq. 94e9 Hz)	WMAP	Radio
AKARIBSC 065	AKARI/FIS	Infrared
AKARIBSC 090	AKARI/FIS	Infrared
AKARIBSC 140	AKARI/FIS	Infrared
AKARIBSC 160	AKARI/FIS	Infrared
AKARIPSC 09	AKARI/IRC	Infrared
AKARIPSC 18	AKARI/IRC	Infrared
IRASFSC 12	IRAS	Infrared
IRASFSC 25	IRAS	Infrared
IRASFSC 60	IRAS	Infrared
IRASFSC100	IRAS	Infrared
IRASPSC 12	IRAS	Infrared
IRASPSC 25	IRAS	Infrared
IRASPSC 60	IRAS	Infrared
IRASPSC100	IRAS	Infrared
WISE03_ext	WISE	Infrared
WISE03_point	WISE	Infrared
WISE05_ext	WISE	Infrared
WISE05_point	WISE	Infrared
WISE12_ext	WISE	Infrared

WISE12_point	WISE	Infrared
WISE22_ext	WISE	Infrared
WISE22_point	WISE	Infrared
GALEXAISFUV	GALEX	Optical UV
GALEXAISNUV	GALEX	Optical UV
GALEXMISFUV	GALEX	Optical UV
GALEXMISNUV	GALEX	Optical UV
UVOTPLKSED	Swift	Optical UV
ARIEL3A	Ariel V	Soft X Ray
ASCASIS (0.5-12 keV)	ASCA	Soft X Ray
WFCCAT	BeppoSAX	Soft X Ray
WFCCAT FULL	BeppoSAX	Soft X Ray
CHANDRASRC (0.2-0.5 keV)	CHANDRA	Soft X Ray
CHANDRASRC (0.5-1.2 keV)	CHANDRA	Soft X Ray
CHANDRASRC (1.2-2.0 keV)	CHANDRA	Soft X Ray
CHANDRASRC (2.0-7.0 keV)	CHANDRA	Soft X Ray
IPC	Einstein	Soft X Ray
IPCSLEW	Einstein	Soft X Ray
CMA	EXOSAT	Soft X Ray
BMW	ROSAT	Soft X Ray
RASS	ROSAT	Soft X Ray
SKYROSAT	ROSAT	Soft X Ray
WGACAT2	ROSAT	Soft X Ray
1SWXRT (0.1-10 keV)	Swift	Soft X Ray
1SWXRT (0.1-2.4 keV)	Swift	Soft X Ray
1SWXRT (2-10 keV)	Swift	Soft X Ray
XRTGRBDEEP	Swift	Soft X Ray
UHURU4	UHURU	Soft X Ray
TWOXMMIDR3	XMM	Soft X Ray
XMMSL1D5	XMM	Soft X Ray
XMMSL1D5 (0.2-12 keV)	XMM	Soft X Ray
A4 (13-25 keV)	HEAO-1	Hard X Ray
A4 (25-40 keV)	HEAO-1	Hard X Ray
A4 (40-80 keV)	HEAO-1	Hard X Ray
A4 (80-180 keV)	HEAO-1	Hard X Ray
IBISSG4CAT (20-40 keV)	INTEGRAL	Hard X Ray
IBISSG4CAT (40-100 keV)	INTEGRAL	Hard X Ray
MAXIGSC	Hard X Ray	Hard X Ray
BAT39MCAT (10-150keV)	Swift	Hard X Ray
BAT39MCAT (15-30keV)	Swift	Hard X Ray
BAT54MCAT (15-150keV)	Swift	Hard X Ray
BAT54MCAT (15-50keV)	Swift	Hard X Ray
BAT60AGN (15 - 55 keV)	Swift	Hard X Ray
SWBAT70M (14-195 keV)	Swift	Hard X Ray
AGILE Grid	Gamma Ray	Gamma Ray
EGRET3	Gamma Ray	Gamma Ray
Fermi1FGL (200 Mev)	Fermi	Gamma Ray
Fermi1FGL (2Gev)	Fermi	Gamma Ray
Fermi1FGL (600 Mev)	Fermi	Gamma Ray

Fermi1FGL (60Gev)	Fermi	Gamma Ray
Fermi1FGL (6Gev)	Fermi	Gamma Ray
Fermi2FGL (200 Mev)	Fermi	Gamma Ray
Fermi2FGL (2Gev)	Fermi	Gamma Ray
Fermi2FGL (600 Mev)	Fermi	Gamma Ray
Fermi2FGL (60Gev)	Fermi	Gamma Ray
Fermi2FGL (6Gev)	Fermi	Gamma Ray
Fermi2FgILC	Fermi	Gamma Ray