



VO Activities @ Space Science Data Center: possible application of VO protocols to SSDC archives

Francesco Verrecchia
(ASI-SSDC, INAF-OAR)

ASI - Italian Space Agency

The Space Science Data Center is a Research Infrastructure of the Italian Space Agency

MAIN GOAL

acquire, manage, process and distribute data from (mainly) space based mission adopting the FAIR (Findable, Accessible, Interoperable, Reusable) principles.

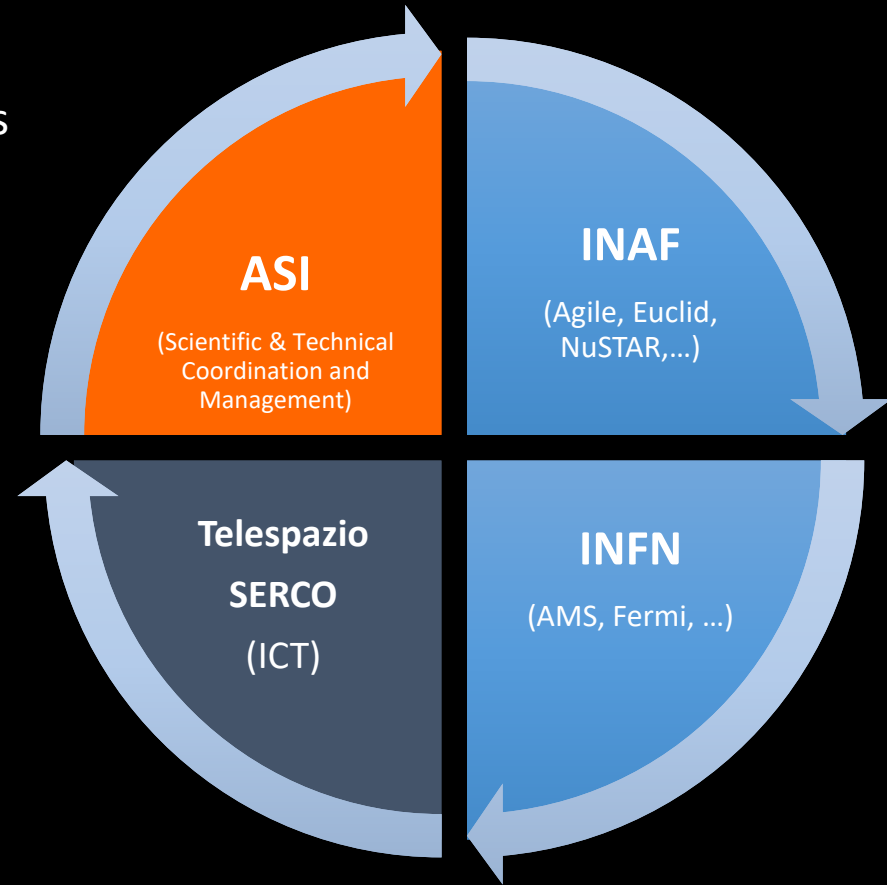
SSDC adopts international standards ensuring both the long term preservation of archives and the interoperability with other data centers.

SSDC – Universe Observation

SSDC – UO management and organization involves several Research Institutes:

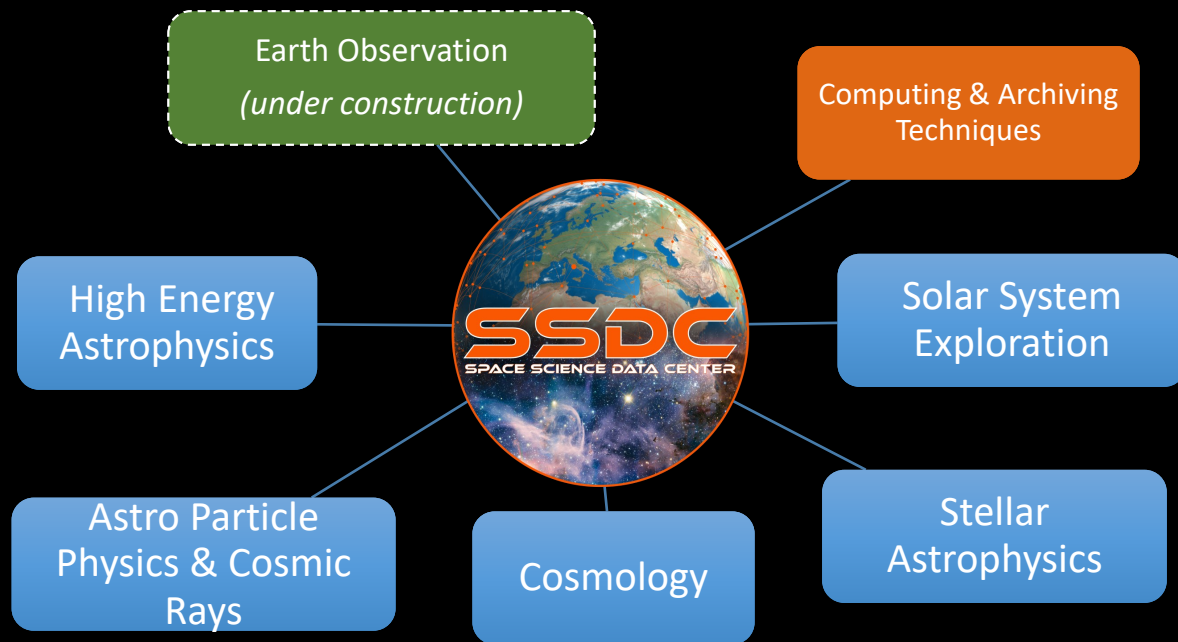
- **ASI** – Italian Space Agency
- **INAF** – National Institute for Astrophysics
- **INFN** – National Institute for Nuclear Physics

Industries are involved for Information and Communication Technology supports.



SSDC Scientific Expertise

At present, SSDC team involves around 40 people: **scientists** from ASI, INAF, INFN and SW **engineers** from Telespazio & SERCO, experts in different fields.



Effective approach: Developers and Users belong to the same communities.

SSDC VO activity (from interop presentation)

SSDC (ex-ASDC) has participated to the european data center census promoted by EuroVO Data Center Alliance (DCA) to identify public european data center following or which will follow the VO standards.

Current activities:

- Review of the VO access to the astronomical catalogs hosted within the SSDC services
- GAIA TAP service integration
- Update SSDC TAP service (new registration)
- Recover Catalog VO interoperability with SAMP protocol
- Activity to allow access to the Multi-Mission scientific data archives hosted at SSDC through the VO
 - Development of new services (SSAP, SIAP)
 - Development of MATISSE 2.0 and integration within VESPA for the planetary mission scientific archives
 - Implementation of IVOA standards in the on-line SSDC services and tools; SED, Data Explorer, Multi Catalog Search e Multi Mission Interactive Archive

Future further developments

- Study of a Space Weather portal in SSDC (ASPIS): assessment of applicable VO protocols
- Earth Observation: assessment of applicable VO protocols

SSDC activity, prospects for VO

My contribution to SSDC (ex-ASDC): in some space missions in the past years on scientific standard data processing and QL monitoring, together with scientific results presentation to the community. Main involvement on High-Energy astrophysics but not only: mainly (chronologically) BeppoSAX, Swift and AGILE; a recent contribution in CHEOPS, then contributions to Multi-Wavelength/Multi-Mission services. In particular, for this presentation: BeppoSAX/WFC , Swift/UVOT archival DA and web services.

Then =>participation to the study and development of scientific on-line data analysis, mainly «Imaging tools».

In the last years a contribution to the Open Universe (OU) activities in SSDC, to some services on the ASI dedicated portal, mainly regarding Swift data.

Among all the possible application of VO protocols to SSDC tools and archives, I will show a few cases:

- Regarding development of new services (SSAP, SIAP)
 - Swift/UVOT (and XRT) imaging tools
 - BeppoSAX/WFC archives
 - OU services for Swift surveys: HiPS

SSDC Swift archive

I may suppose that is not needed to describe the NASA Swift space mission

SSDC hosts one of the three official archives



The screenshot shows the Swift mission website homepage. At the top, there is a navigation bar with links: Home, About SSCD, News and Communication, Quick Look, Missions, Multimission Archive, Catalogs, Tools, Links, Bibliographic services, Helpdesk, and Privacy. Below this is a banner image with the text "Swift: Catching Gamma-Ray Bursts on the Fly" and logos for the U.S., Italian, and U.K. sites. A secondary navigation bar includes: Swift Home, About Swift, ASI HQ Swift Home, Swift Data Archive, Swift pointings, Swift Catalogs, Swift Quicklook Data, and Swift Data Analysis. The main content area features the heading "The Swift Gamma-Ray Burst Mission" and a link to the "ASI Swift Scientific Page (Italian)". A paragraph describes the mission as a MIDEEX Gamma Ray Burst mission led by NASA with participation from Italy and the UK. A bulleted list states that Italy contributes to the mission by providing the XRT X-ray mirror, the Malindi ground station, and XRT data reduction and analysis software. Below this, another bulleted list details the contributions of the ASI Science Data Center (ASDC), including the Swift Data Archive Mirror, on-line XRT & UVOT data analysis, Swift Quick Look Data, XRT Burst Support (XBS) and Burst Advocate (BA) activity, XRT data simulator, XRT Helpdesk, and XRT Data Analysis Software (XRTDAS). A link to the latest software release is also provided. On the right side of the main content area, there is an artist rendering of the Swift satellite catching a Gamma-ray Burst, with labels for BAT, UVOT, and XRT. Below the rendering is a link to "Latest Swift News" and a specific news item from October 28, 2015, about the 1000th Gamma-ray Burst.

Home About SSCD News and Communication Quick Look Missions Multimission Archive Catalogs Tools Links Bibliographic services
Helpdesk Privacy

Swift: Catching Gamma-Ray Bursts on the Fly

U.S. site
Italian site
U.K. site

Swift Home About Swift ASI HQ Swift Home Swift Data Archive Swift pointings Swift Catalogs Swift Quicklook Data Swift Data Analysis
Swift Helpdesk GCN ToO Request Form Malindi ground station Gallery

The Swift Gamma-Ray Burst Mission

[ASI Swift Scientific Page \(Italian\)](#)

Swift is a MIDEEX Gamma Ray Burst mission led by NASA with participation of Italy and the UK. The Swift data are available to the scientific community through data centers in the USA, Italy and the UK.

Italy contributes to the mission providing:

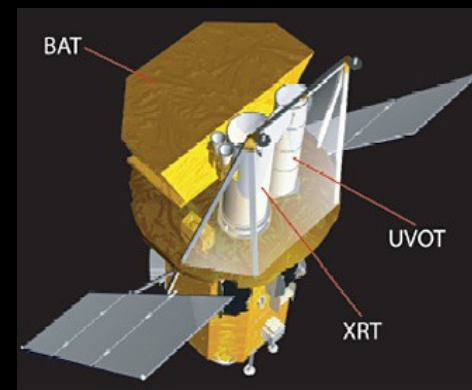
- The XRT X-ray mirror
- The Malindi ground station
- XRT data reduction and analysis software

The ASI Science Data Center (ASDC) contributes to the mission providing:

- [Swift Data Archive Mirror](#)
- [On-line XRT & UVOT data analysis](#)
- [Swift Quick Look Data \(XRT & UVOT Interactive Quick Look\)](#)
- [XRT Burst Support \(XBS\) and Burst Advocate \(BA\) activity](#)
- [XRT data simulator](#)
- [XRT Helpdesk](#)
- [XRT Data Analysis Software \(XRTDAS\)](#)
[Latest software release available here!](#)

Latest Swift News

- **(Oct 28, 2015)** [Swift catches its 1000th Gamma-ray Burst!](#)



An artist rendering of the Swift satellite catching a Gamma-ray Burst

SSDC Science Gateway

<http://www.ssdc.asi.it>

The **Multi-Mission Interactive Archive (MMIA)** is the SSDC door to access all the hosted data archives.

=>TWO versions: 1) classic single archive query...

SSDC Science Gateway

<http://www.ssdc.asi.it>

The **Multi-Mission**
=>TWO versions: 1

a archives.

The screenshot shows the homepage of the Space Science Data Center. At the top left is the SSDC logo with the text 'Space Science Data Center'. To the right is the ASI logo 'Agenzia Spaziale Italiana'. Below the header is a navigation menu with links: Home, About SSDC, News and Communication, Quick Look, Missions, Multimission Archive, Catalogs, Tools, Links, Bibliographic services, Helpdesk, and Privacy. Social media icons for Facebook and Twitter are also present. The main content area features a large image of a satellite in orbit next to a colorful astronomical data visualization. Below this is a grid of mission icons including AGILE, SWIFT, FERMI, XMM-Newton, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, FERMI@LAT, BEPPO, SIMBOL X, CHEOPS, EUCLID, and PLATO. At the bottom, there are sections for 'MEDIA' (SED BUILDER, SKY EXPLORER, MATISSE), 'TOP NEWS' (GAIA PORTAL, COSMIC RAY DATABASE, SSDC MULTIMISSION ARCHIVE FOR SPACE SCIENCE), and 'EVENTS' (SSDC CATALOGS, SSDC BIBLIOGRAPHY TOOL, AGILE-LV3 data analysis). A footer banner for 'NOTTE EUROPEA DEI RICERCATORI' is visible at the bottom right.

Science Tools allow the on-line access to data within a multifrequency environment

On-line Access to Space Missions Data Archives

s.it. 16 July 2021

SSDC Science Gateway

<http://www.ssdc.asi.it>

The **Multi-Mission**
=>TWO versions: 1

a archives.

SSDC
Space Science Data Center
ASI
Agenzia Spaziale Italiana

Home About SSDC News and Communication Quick Look Missions **Multi-Mission Archive** Catalogs Tools Links Bibliographic services Helpdesk
Privacy

AGILE SWIFT FERMI
INTEGRAL AMS-02 PLANCK
SOLAR SYSTEM PAMELA GAIA
PHEBUS SAX SIMBOL X
CHEOPS EUCLID PLATO

SED BUILDER SKY EXPLORER MATISSE GAIA PORTAL COSMIC RAY DATABASE SSDC MULTIMISSION ARCHIVE FOR SPACE SCIENCE SSDC CATALOGS SSDC BIBLIOGRAPHY TOOL AGILE-LV3 data analysis

MEDIA TOP NEWS EVENTS

scienzainsieme
NOTTE EUROPEA DEI RICERCATORI
28 SETTEMBRE 2016 | VENERDÌ | 16.00-24.00

Science Tools allow the on-line access to data within a multifrequency environment

On-line Access to Space Missions Data Archives

s.it. 16 July 2021

SSDC Science Gateway

<http://www.ssdc.asi.it>

The Multi-Mission

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a archives.

The screenshot shows the Space Science Data Center website. At the top, there is a navigation bar with links: Home, About SSDC, News and Communication, Quick Look, Missions, **Multimission Archive**, Catalog, Tools, Links, Bibliographic services, and Helpdesk. Below the navigation bar is a main header with the SSDC logo on the left, the title "Space Science Data Center" in the center, and the ASI logo on the right. A large image of a satellite is on the left side of the main content area. In the center, a dropdown menu for "Multimission Archive" is open, listing various missions: All Missions (MMIA2.0), AGILE, AGILE-LV3, AGILE-LV3 (restricted area), AMS-02, ASCA, BeppoSAX NFI, BeppoSAX WFC, EINSTEIN, EXOSAT, FERMI, Herschel, Matisse-Rosetta, NuSTAR, PAMELA, ROSAT, and SWIFT. To the right of the menu is a grid of mission icons, including AGILE, SWIFT, FERMI, NuSTAR, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, HERSCHEL, BEPPO SAX, SIMBOL X, CHEOPS, EUCLID, and PLATO. At the bottom of the page, there are sections for "MEDIA" (with icons for SED BUILDER, SKY EXPLORER, MATISSE, and GAIA PORTAL), "TOP NEWS" (with icons for COSMIC RAY DATABASE, SWIFT, and SPACE SCIENCE), and "EVENTS" (with icons for SSDC CATALOGS, BIBLIOGRAPHY TOOL, and AGILE-LV3 data analysis). The footer contains the text "scienzinsieme" and "NOTTE EUROPEA DEI RICERCATORI 28 SETTEMBRE 2016 | VENERDI | 18.00-24.00".

Science Tools allow the on-line access to data within a multifrequency environment

On-line Access to Space Missions Data Archives

s.it. 16 July 2021

SSDC Science Gateway

<http://www.ssdc.asi.it>

The **Multi-Mission**
=>TWO versions: 1

a archives.

The screenshot shows the Space Science Data Center website. At the top, the title "Space Science Data Center" is displayed in orange. The ASI logo is in the top right corner. A navigation bar includes links for Home, About SSDC, News and Communication, Quick Look, Missions, **Multimission Archive**, Catalog, Tools, Links, Bibliographic services, and Helpdesk. Below the navigation bar, there is a "Privacy" link and social media icons for Facebook and Twitter. The main content area features a large image of a satellite on the left and a grid of mission icons on the right. A central menu lists various missions, with "SWIFT" circled in red. At the bottom, there are sections for "MEDIA", "TOP NEWS", and "EVENTS".

Home About SSDC News and Communication Quick Look Missions **Multimission Archive** Catalog Tools Links Bibliographic services Helpdesk

Privacy

All Missions (MMIA2.0)

- AGILE
- AGILE-LV3
- AGILE-LV3 (restricted area)
- AMS-02
- ASCA
- BeppoSAX NFI
- BeppoSAX WFC
- EINSTEIN
- EXOSAT
- FERMI
- Herschel
- Matisse-Rosetta
- NuSTAR
- PAMELA
- ROSAT
- SWIFT**

AGILE SWIFT FERMI

NUSTAR AMS-02 PLANCK

SOLAR SYSTEM PAMELA GAIA

HERSCHEL BEPPO SAX SIMBOL X

CHEOPS EUCLID PLATO

SSDC BIBLIOGRAPHY TOOL

SSDC AGILE-LV3 data analysis

MEDIA

- SED BUILDER
- SKY EXPLORER
- MATISSE
- GAIA PORTAL

TOP NEWS

EVENTS

scienzinsieme

NOTTE EUROPEA DEI RICERCATORI
28 SETTEMBRE 2016 | VENERDI | 16.00-24.00

Science Tools
allow the on-line
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within a
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On-line Access
to Space
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Data Archives

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Space Science Data Center



- Home
- About SSDC
- News and Communication
- Quick Look
- Missions
- Multimission Archive
- Catalogs
- Tools
- Links
- Bibliographic services
- Helpdesk
- Privacy



Multi-Mission Interactive Archive

Mission Selected

Swift Master

Search Type

- Coordinates**
- Time
- Parameter
- Class

Enter source name or coordinates: RA, DEC L, B Lon, Lat
 (e.g. CYGX-1 or 19 58 21.7, +35 12 05.8 or 299.590333, 35.201611 or 71.334960, 3.066917)

Name Resolver: SSDC Name Server SIMBAD NED

Radius: Output sorted by RA DEC

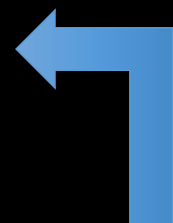
Max lines retrieved Equinox 2000 1950

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On-line Access to Space Missions Data Archives

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Home About SSDC
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Help
Show/hide columns
Advanced filtering
Print current view of table
Print complete table
Reset all filters

Query results for: **3C273(LOCAL)**
Detail: query by COORDINATE with RA = 187.277500 ; DEC = 2.052222 ; EQUINOX = 2000 ; RADIUS = 5 arcmin; sort by RA; max lines retrieved: 300 (on BROWSE catalog swiftmastr)

Export Current view of Table in: [Latex format](#) [HTML format](#) [Raw text format](#) [CSV text format](#)

Previous Page Next Page Page Size (# of lines) 50 Refresh page Reset all filters Show all entries

Entry number	Interactive Analysis	Archive	Target Name	obsid	RA (J2000) hh mm ss.d	Dec (J2000) dd mm ss.d	start_time	xrt_exposure	uvo_exposure	bat_exposure	Dist. from searched position arcmin
1	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017113	12 28 53.6	+02 02 45.0	May 16, 2012 02:09:00	1054.621	8013.64	1061	3.2
2	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017067	12 28 53.8	+02 03 57.5	Apr 24, 2010 07:01:00	1103.374	847.396	1119	3.2
3	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017115	12 28 54.1	+02 03 46.3	Jul 1, 2012 00:22:00	11407.703	11366.337	0	3.1
4	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017068	12 28 54.3	+02 02 02.3	May 7, 2010 07:49:00	979.447	719.367	992	3.2
5	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017100	12 28 55.2	+02 02 28.7	Jul 9, 2011 02:11:00	999.601	993.645	1011	2.9
6	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017092	12 28 55.2	+02 01 52.4	Apr 23, 2011 18:29:00	1219.608	961.483	1232	3.1
7	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017065	12 28 55.2	+02 05 24.2	Apr 2, 2010 17:51:00	969.607	716.121	986	3.6
8	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017070	12 28 55.3	+02 02 46.2	May 21, 2010 04:18:00	1129.234	868.493	1142	2.8
9	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017091	12 28 55.7	+02 01 36.0	Apr 19, 2011 14:46:00	1219.62	962.95	1232	3.1
10	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017072	12 28 55.8	+02 04 31.6	Jun 23, 2010 13:46:00	1139.714	883.974	1099	3
11	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017063	12 28 56.0	+02 03 56.3	Apr 30, 2011 01:37:00	1014.588	720.461	1030	2.7
12	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017098	12 28 56.1	+02 01 55.9	May 26, 2011 00:23:00	999.477	970.522	1012	2.8
13	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis	Data Access	3C273	00035017042	12 28 56.2	+02 04 08.7	May 11, 2009 11:12:00	1249.23	676.81	1278	2.7

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3C279 - Sequence: 00030867048 Version: 004

You have the following download options:
 Automatically request the data using a Java applet
 Download a tar file.

Select files below, then click this button to download the data:

All Files

- auxil
 - en00030867048psr.fits FITS 21 kB (level 1) Corrected attitude file
 - en00030867048psh.par ASCII 3 kB (level 1) Job parameter file
 - en00030867048psb.cat FITS 4 kB (level 1) FITS format tape contents
 - en00030867048psr.par ASCII 2 kB (level 1) Processing parameter file
 - en00030867048ahf FITS 38 kB (level 2) MakeAble files file
 - en00030867048psr.fits FITS 107 kB (level 1) Attitude-orient-related files values
 - en00030867048psr.fits FITS 23 kB (level 1) Spacetrack attitude file
 - en00030867048psr.fits FITS 314 kB (level 1) S/C engineering data
 - en00030867048psr.fits FITS 3 kB (level 1) UTC corrections file
 - SWIFT_TILE_ARCHIVE_enr1718549516387 ASCII 117 kB (level 1) TLE orbit file
- bat
 - hk
 - en00030867048hdch.hk FITS 9 kB (level 1) Housekeeping data
 - en00030867048hdy.hk FITS 28 kB (level 1) BAT DAP housekeeping
 - en00030867048hcn.hk FITS 290 kB (level 1) instrument engineering data
 - en00030867048hgc.hk FITS 146 kB (level 1) Housekeeping data
 - en00030867048hah.hk FITS 7 kB (level 1) Housekeeping data
 - masktag
 - en00030867048sm09010651.k FITS 28 kB (level 1) Mask tagged lightcurves
 - en00030867048sm09010651_rndk FITS 14 kB (level 1) Mask tagged lightcurves
 - rate
 - en00030867048rt1.k FITS 7 kB (level 1) merged rate files
 - en00030867048rtm.k FITS 33 kB (level 1) merged rate files
 - en00030867048rtm.k FITS 101 kB (level 1) merged rate files
 - en00030867048rtm.k FITS 17 kB (level 1) merged rate files
 - survey

Details: query by COORDINATE with

Export Current view of

Previous Page Next Page

Entry number	Selection mode	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017115	12 28 54.1	+02 03 46.3	Jul 1, 2012 00:22:00	11407.703	11386.337	0	3.1
1	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	0003501706E	12 28 54.3	+02 02 02.3	May 7, 2010 07:49:00	979.447	719.367	992	3.2
2	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017100	12 28 55.2	+02 02 28.7	Jul 9, 2011 02:11:00	999.601	993.845	1011	2.9
3	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017092	12 28 55.2	+02 01 52.4	Apr 23, 2011 18:29:00	1219.608	961.483	1232	3.1
4	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017065	12 28 55.2	+02 05 24.2	Apr 2, 2010 17:51:00	969.607	716.121	986	3.6
5	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017070	12 28 55.3	+02 02 46.2	May 21, 2010 04:18:00	1129.234	88E.493	1142	2.8
6	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017091	12 28 55.7	+02 01 36.0	Apr 19, 2011 14:46:00	1219.62	962.95	1232	3.1
7	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017072	12 28 55.8	+02 04 31.6	Jun 23, 2010 13:46:00	1139.714	883.974	1099	3
8	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017063	12 28 56.0	+02 03 56.3	Apr 30, 2011 01:37:00	1014.588	720.461	1030	2.7
9	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	0003501709E	12 28 56.1	+02 01 55.9	May 29, 2011 00:23:00	999.477	970.522	1012	2.8
10	Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017042	12 28 56.2	+02 04 08.7	May 11, 2009 11:12:00	1249.23	976.81	1278	2.7

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3C279 - Sequence: 00030867048 Version: 004

You have the following files:

- All Files
- auxil
 - ex00030867048.par
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 - ex00030867048.par
 - ex00030867048.par
 - ex00030867048.par
 - ex00030867048.par
 - SWIFT_TILE_ARCHIVE_ex17054051607_ASCF_11312009_01_TILE
- bat
 - bk
 - ex00030867048.par
 - ex00030867048.par
 - ex00030867048.par
 - ex00030867048.par
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 - masktag
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 - rate
 - ex00030867048.par
 - ex00030867048.par
 - ex00030867048.par
 - survey

Details: query by COORDINATE with

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Entry number	Selection mode	Interactive Analysis	Archive
		XRT	UVOT
1	Select	ASDC Data Explorer	XRT Online Analysis
2	Select	ASDC Data Explorer	XRT Online Analysis
3	Select	ASDC Data Explorer	XRT Online Analysis
4	Select	ASDC Data Explorer	XRT Online Analysis
5	Select	ASDC Data Explorer	XRT Online Analysis
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7	Select	ASDC Data Explorer	XRT Online Analysis
8	Select	ASDC Data Explorer	XRT Online Analysis
9	Select	ASDC Data Explorer	XRT Online Analysis
10	Select	ASDC Data Explorer	XRT Online Analysis
11	Select	ASDC Data Explorer	XRT Online Analysis
12	Select	ASDC Data Explorer	XRT Online Analysis
13	Select	ASDC Data Explorer	XRT Online Analysis

3C273 00035017115 12 28 54.1

3C273 00035017054 12 28 54.3

3C273 00035017100 12 28 55.2 +02 02 28.7 Jul 9, 2011 02:11:00 999.601 993.845 1011 2.9

3C273 00035017092 12 28 55.2 +02 01 52.4 Apr 23, 2011 18:29:00 1219.608 961.483 1232 3.1

3C273 00035017065 12 28 55.2 +02 05 24.2 Apr 2, 2010 17:51:00 969.607 716.121 986 3.6

3C273 00035017070 12 28 55.3 +02 02 46.2 May 21, 2010 04:18:00 1129.234 886.493 1142 2.8

3C273 00035017091 12 28 55.7 +02 01 36.0 Apr 19, 2011 14:46:00 1219.62 962.95 1232 3.1

3C273 00035017072 12 28 55.8 +02 04 31.5 Jun 23, 2010 13:46:00 1139.714 883.974 1099 3

3C273 00035017093 12 28 56.0 +02 03 56.3 Apr 30, 2011 01:37:00 1014.588 720.461 1030 2.7

3C273 00035017098 12 28 56.1 +02 01 55.9 May 29, 2011 00:23:00 999.477 970.522 1012 2.8

3C273 00035017042 12 28 56.2 +02 04 08.7 May 11, 2009 11:12:00 1249.23 676.81 1278 2.7

Scientific data products resident in archive

XRT On-line Analysis

Select data mode for analysis

PC Mode WT Mode

SSDC data reprocessing

yes no

NOTE: the reprocessing may take a while (from about 30 seconds up to several minutes)

HELP

SUBMIT

access ce ns nives

SSDC BeppoSAX-WFC archive

Also the ASI BeppoSAX mission with participation of the Netherlands space should not need introduction.... SSDC is the official mission data center.

→Wide Field Camera

BeppoSAX ASI ARS Science Data Center - SDC

GR 8971214

Contents

- Latest News
- Documentation
- BeppoSAX reentry
- Mission Outline
- SDC Overview
- SDC location
- Software

Approved Targets

- Obs & Timelines
- Catalogue Browser

NFI Archive

- WFC Archive
- GRBM Archive
- Data Simulator

Selected Results

- BeppoSAX Publications
- BeppoSAX Pictures

Tools

- ASI links and more...

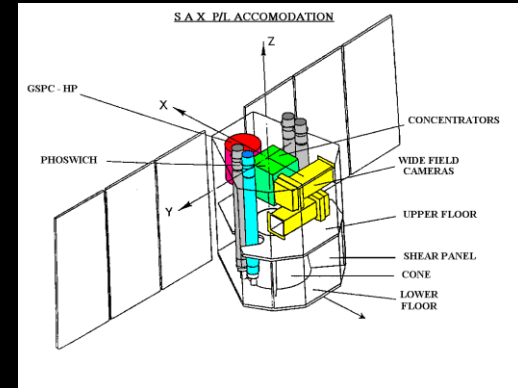
Welcome to the BeppoSAX Mission Home Page

The X-ray astronomy satellite *BeppoSAX* (Satellite per Astronomia X, "Beppo" in honor of Giuseppe Occhialini), is a project of the Italian Space Agency (ASI) with participation of the Netherlands Agency for Aerospace Programs (NIVR). The main scientific characteristic of the *BeppoSAX* mission is the wide spectral coverage, ranging from 0.1 to over 200 keV. *BeppoSAX* has been developed with the support of a consortium of institutes in Italy and in The Netherlands and of the Space Science Department of ESA (SSD). A collaboration with the Max Planck Institute for Extraterrestrial Physics also exists for X-ray mirror testing and the calibration of the concentrator/spectrometer system. Prime contractors for space and ground segments are *Alenia Spazio* and *Telespazio* respectively.

As of March 2002 about 1500 *BeppoSAX* scientific publications have appeared in the literature. A comparison of the *BeppoSAX* publication rate with that of other astronomy satellites is available here.

New -> BeppoSAX LECS and MECS coordinates estimation has improved significantly. See the BeppoSAX latest news for details

Versione Italiana



SSDC BeppoSAX-WFC archive

Also the ASI BeppoSAX mission with participation of the Netherlands space should not need introduction.

→ Wide Field



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- Obs & Timelines
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- ASI links and more...



Multi-Mission Interactive Archive

Mission Selected

BeppoSAX WFC

Search Type

Coordinates

Time

Parameter

Class

Observation Log

WFC Final Processing Archive

WFC Observations archive

WFC Source Catalog

WFC First Processing Archive

WFC Observations archive

WFC Source Catalog

Enter source name or coordinates: RA, DEC L, B Lon, Lat
(e.g. CYGX-1 or 19 58 21.7, +35 12 05.8 or 299.590333, 35.201611 or 71.334960, 3.066917)

Name Resolver: SSDC Name Server SIMBAD NED

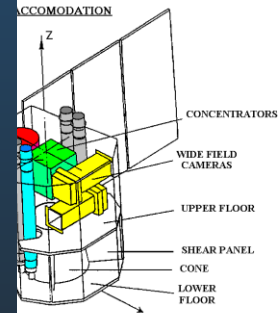
Radius:

Output sorted by RA DEC

Max lines retrieved

Equinox 2000 1950

Submit



SSDC BeppoSAX-WFC archive

Also the ASI BeppoSAX mission with participation of the Netherlands space should not need introduction.

→ Wide Field



Multi-Mission Interactive Archive

Mission Selected

BeppoSAX WFC

Enter source name or coordinates: RA, DEC L, B Lon, Lat
(e.g. CYGX-1 or 19 58 21.7, +35 12 05.8 or 299.590333, 35.201611 or 71.334960, 3.066917)

Name Resolver: SSDC Name Server SIMBAD NED

Radius:

Output sorted by RA DEC

Max lines retrieved

Equinox 2000 1950

Search Type

Observation Log

WFC Final Processing Archive

WFC Observations archive

WFC Source Catalog

WFC First Processing Archive

WFC Observations archive

WFC Source Catalog

Multiple available
queries/archives

Contents

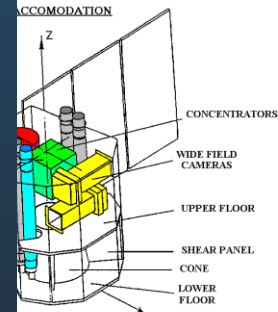
- Latest News
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- BeppoSAX reentry
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- SDC Overview
- SDC location
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SSDC BeppoSAX-WFC archive

Also the A
introduction

→ Wide Field

Help

Show/hide columns

Advanced filtering

Print current view of table

Print complete table

Reset all filters

Query results for: '3C273(SSDC)'

Details: query by **COORDINATE** with **RA** = 187.277875; **DEC** = 2.0523888888889; **EQUINOX** = 2000; **RADIUS** = 5 arcmin; sort by **RA**; max lines retrieved: 5000 (on BROWSE catalog **repwfcall**)

Export Current view of Table in: [Latex format](#) [FITS format](#) [Raw text format](#) [CSV text format](#) [Browse table](#)

◀ Previous Page Next Page ▶ Page Size (# of lines) 200 [Reset all filters](#) [Show all entries](#)

This view includes 3 entries

Entry number		wfcname	RA (J2000) hh mm ss.d	Dec (J2000) dd mm ss.d	flux210	obs_code	dist_iroscat	off_axis_angle	Target Name	Dist. from searched position arcmin
1	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 02.99	+02 01 52.28	1.27e-10	1057200100	1.56	2.64	3C273	1.5
2	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 03.4	+02 03 28.79	2.12e-10	9000044500	0.88	8.69	3C273	0.8
3	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 05.4	+02 02 20.68	7.88e-11	5110900300	0.86	7.88	3C273	0.8

◀ Previous Page Next Page ▶ Page Size (# of lines) 200 [Reset all filters](#) [Show all entries](#)

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- BeppoSAX Pict
- Tools
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Choice of column that can be displayed:

WFC Source Catalog

SSDC BeppoSAX-WFC archive

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Reset all filters

Query results for: '3C273(SSDC)'

Details: query by **COORDINATE** with **RA** = 187.277875; **DEC** = 2.0523888888889; **EQUINOX** = 2000; **RADIUS** = 5 arcmin; sort by **RA**; max lines retrieved: 5000 (on BROWSE catalog **repwfcall**)

Export Current view of Table in: [Latex format](#) [FITS format](#) [Raw text format](#) [CSV text format](#) [Browse table](#)

◀ Previous Page Next Page ▶ Page Size (# of lines) 200 [Reset all filters](#) [Show all entries](#)

This view includes 3 entries

Entry number		wfcname	RA (J2000) hh mm ss.d	Dec (J2000) dd mm ss.d	flux210	obs_code	dist_iroscat	off_axis_angle	Target Name	Dist. from searched position arcmin
1	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 02.99	+02 01 52.28	1.27e-10	1057200100	1.56	2.64	3C273	1.5
2	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 03.4	+02 03 28.79	2.12e-10	9000040500	0.88	8.69	3C273	0.8
3	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	12 29 05.4	+02 02 20.68	7.88e-11	5110900300	0.86	7.88	3C273	0.8

◀ Previous Page Next Page ▶ Page Size (# of lines) 200 [Reset all filters](#) [Show all entries](#)

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Choice of column that can be displayed:

WFC Source Catalog

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The SSDC is a facility managed by the Italian Space Agency, ASI

If your research benefits from the use of SSDC, we would appreciate the following acknowledgement in your paper
"Part of this work is based on archival data, software or online services provided by the Space Science Data Center - ASI."

bs.it 16 July 2021

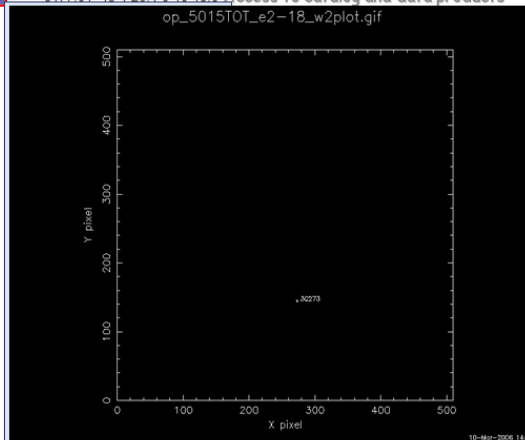
SSDC-BeppoSAX WFC Interactive Archive

A Service of the ASI Space Science Data Center

Observation ID: 9000044500
Start Date: Sun Jul 26 1998
Target: 9000044500
PI: Public data

Available results and data products

Instrument	Duration	Ra Dec (J2000.0)	Results archive access
WFC1	8484.08	14 36.0 0 44 24.0	No Source Detected
WFC0	8477.01	13 4 26.4 0 40 48.0	Access to catalog and data products



Reconstructed Sky 2-8 KeV.
Click to expand

Sort by **RA**; max lines retrieved: 5000 (on BROWSE)

Target Name	Dist. from searched position
3C273	1.5
3C273	0.8
3C273	0.8

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- Latest New
- Documents
- BeppoSAX
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- NFI Arch
- WFC Arch
- GRBM Arch
- Data Simul
- Selected Re
- BeppoSAX Publications
- BeppoSAX
- Tools
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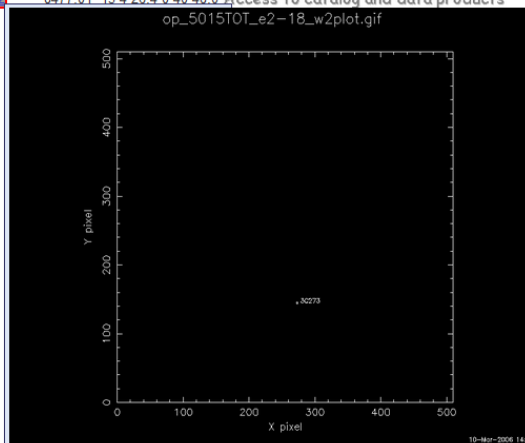
SSDC-BeppoSAX WFC Interactive Archive

A Service of the ASI Space Science Data Center

Observation ID: 9000044500
Start Date: Sun Jul 26 1998
Target: 9000044500
PI: Public data

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Instrument	Duration	Ra Dec (J2000.0)	Results archive access
WFC1	8484.08	14 36.0 0 44 24.0	No source Detected
WFC0	8477.01	13 4 26.4 0 40 48.0	Access to catalog and data products



Reconstructed Sky 2-8 KeV.
Click to expand

Sort by **RA**; max lines retrieved: 5000 (on BROWSE)

Target Name	Dist. from searched position
3C273	1.5
3C273	0.8
3C273	0.8

SSDC-BeppoSAX WFC Interactive Archive

Available parameters

- name ra dec
- e/r 1.6-7.9 keV
- e/n 1.6-7.9 keV
- e/r 7.9-18.7 keV
- e/n 7.9-18.7 keV
- e/r 1.6-3.1 keV
- e/n 1.6-3.1 keV
- e/r 4.5-6.9 keV
- e/n 4.5-6.9 keV
- x_pix y_pix
- source_id classification
- exposure
- offset band ratios
- Gal NH

GO

[Go to 9000044500 main page](#)

Catalog of detected sources produced at SSDC

Target : I-Pointi
 Duration : 8477.01
 Instrument : WFC2
 Pointing (ra,dec) : 13 4 26.4 0 40 48.0
 Start date : Sun Jul 26 1998 18:59:21 (UT)

[Aitoff map](#)

[Export to TXT](#)

Energy band for detection selection

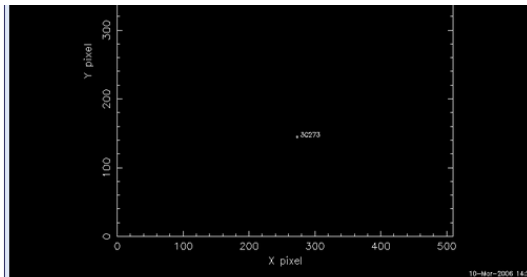
1.63-7.9 keV band

Reset

Power law energy index for flux calculation

1

Entry number			RA (J2000.0)	Dec (J2000.0)	Count rate 1.6-7.9 keV/ Flux 2-10 keV Flux (erg/cm2/s)	Count rate 7.9-18.7 keV	Id from WFC reference catalog	Source class from cross-correlations	Offset from WFC center degrees	Counts ratios/ Spectral slope (from S/H) Soft/Hard ratio
1	Data Explorer	Data products	12 29 03.4	+02 03 28.7	2.025e-10	1.876	3C273	QSO radio loud flat r	8.68	0.471



Reconstructed Sky 2-8 KeV.
Click to expand

rieved: 5000 (on BROWSE)

from searched position
arcmin

Source	Energy Index
3C273	1.5
3C273	0.8
3C273	0.8

SSDC-BeppoSAX WFC Interactive Archive

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→ Wide

Available parameters

- name ra dec
- elr 1.6-7.9 keV
- sln 1.6-7.9 keV
- elr 7.9-18.7 keV
- sln 7.9-18.7 keV
- elr 1.6-3.1 keV
- sln 1.6-3.1 keV
- elr 4.5-6.9 keV
- sln 4.5-6.9 keV
- dx_pix dy_pix
- source_id classification
- exposure
- offset band ratios
- Gal NH

GO

[Go to 9000044500 main page](#)

Source name: 3C273
Obs code: 9000044500

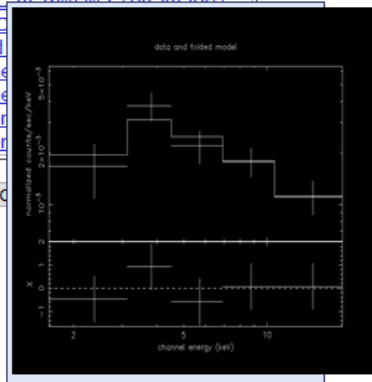
Available Products

Fits File

- [Retrieve Image FITS file \(ch: 2-18.\)](#)
- [Retrieve Image FITS file \(ch: 2-27.\)](#)
- [Retrieve Image FITS file \(ch: 19-27.\)](#)
- [Retrieve PHA file](#)
- [Retrieve Light curve FITS file \(ch: 2-18.\)](#)

GIF and Text files

- [XSPEC fit wabspwlv2](#)
- [SED from XSPEC fit-DIM/W2 \(gif image\)](#)
- [SED from XSPEC](#)
- [SED model used](#)
- [SED from Hardne](#)
- [SED from Hardne](#)
- [Light curve in e](#)
- [Light curve in e](#)



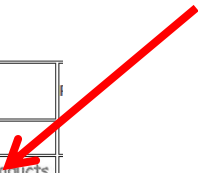
SDC

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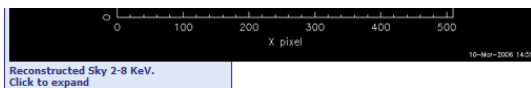
tions	Offset from WFC center	Counts ratios/ Spectral slope (from S/H)
	degrees	Soft/Hard ratio
at r	8.68	0.471

rieved: 5000 (on BROWSE)

Entry number		
Selection mode:		
inclusive		
1	Data Explorer	Data products



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- Docu
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- Missi
- SDC I
- SDC I
- Softw
- Appr
- Obs
- Catal
- NFI Arch
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from searched
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arcmin

ats			Stats
	3C273	1.5	
	3C273	0.8	
	3C273	0.8	

SSDC BeppoSAX-WFC archive

SSDC-BeppoSAX WFC Interactive Archive

Also the
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→ Wide

Available parameters

- name ra dec
- elr 1.6-7.9 keV
- sln 1.6-7.9 keV
- elr 7.9-18.7 keV
- sln 7.9-18.7 keV
- elr 1.6-3.1 keV
- sln 1.6-3.1 keV
- elr 4.5-6.9 keV
- sln 4.5-6.9 keV
- x_pix y_pix
- source_id classification
- exposure
- offset band ratios
- Gal NH

GO

[Go to 9000044500 main page](#)

Source name: 3C273
Obs code: 9000044500

SDC

Available Products

Fits File

- [Retrieve Image FITS file \(ch: 2-18\)](#)
- [Retrieve Image FITS file \(ch: 2-27\)](#)
- [Retrieve Image FITS file \(ch: 19-27\)](#)
- [Retrieve PHA file](#)
- [Retrieve Light curve FITS file \(ch: 2-27\)](#)

GIF and Text files

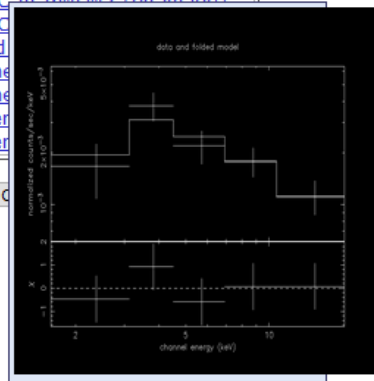
- [XSPEC fit wabspwlv2](#)
- [SED from XSPEC fit DM/LW2 \(gif image\)](#)
- [SED from XSPEC](#)
- [SED model used](#)
- [SED from Hardne](#)
- [SED from Hardne](#)
- [Light curve in e](#)
- [Light curve in e](#)

Scientific data products
resident in archive

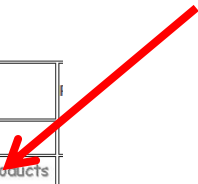
5000 (on BROWSE)

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tions	Offset from WFC center	Counts ratios/ Spectral slope (from S/H)
	degrees	Soft/Hard ratio
at r	8.68	0.471



Entry number		
Selection mode:		
inclusive		
1	Data Explorer	Data products



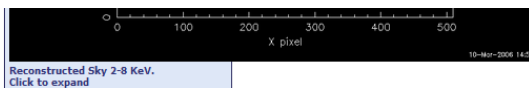
- Lates
- Docu
- Beppi
- Missi
- SDC I
- SDC I
- Softw

- Appr
- Obs
- Catal

- NFI Arch
- WFC Arch
- GRBM Arch
- Data Simul

- Selected Re
- BeppoSAX
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- Tools
- ASI links an



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If your research benefits from the use of SSDC, we would appreciate the following acknowledgement in your paper
"Part of this work is based on archival data, software or online services provided by the Space Science Data Center - ASI."

bs.it 16 July 2021

SSDC Science Gateway

<http://www.ssdc.asi.it>

The **Multi-Mission Interactive Archive** is the SSDC door to access all the hosted data archives:

=>TWO versions: 2) parallel queries!

The Multi-Mission

=>TWO versions: 2

The screenshot shows the homepage of the Space Science Data Center (SSDC). At the top left is the SSDC logo, and at the top right is the ASI logo (Agenzia Spaziale Italiana). The main header features the text "Space Science Data Center" in a large, stylized font. Below the header is a navigation menu with links: Home, About SSDC, News and Communication, Quick Look, Missions, Multimission Archive, Catalogs, Tools, Links, Bibliographic services, and Helpdesk. A "Privacy" link is also present. The main content area is divided into several sections:

- Large Image:** A central image showing a satellite in the foreground and a large, glowing, multi-colored (red, orange, yellow, blue) celestial object in the background, possibly a galaxy or nebula.
- Grid of Satellite Icons:** A grid of 15 satellite icons, each labeled with its name: AGILE, SWIFT, FERMI, ROSAT, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, HERSCHEL, SXP, SIMBOL X, CHEOPS, EUCLID, and PRATO.
- Media Section:** A row of icons for "SED BUILDER", "SKY EXPLORER", "MATISSE", and "GAIA PORTAL".
- Top News Section:** A row of icons for "COSMIC RAY DATABASE", "SSDC MULTIMISSION ARCHIVE FOR SPACE SCIENCE", "SSDC CATALOGS", "SSDC BIBLIOGRAPHY TOOL", and "AGILE-LV3 data analysis".
- Events Section:** A row of icons for "scienzainsieme", "NOTTE EUROPEA DEI RICERCATORI", and "28 SETTEMBRE 2016 | VENERDI | 18.00-24.00".

es:

The Multi-Mission

=>TWO versions: 2

SSDC
Space Science Data Center

Home About SSDC News and Communication Quick Look Missions **Multi-Mission Archive** Catalogs Tools Links Bibliographic services Helpdesk

Privacy

AGILE SWIFT FERMI
XMM-NEWTON AMS-02 PLANCK
SOLAR SYSTEM PAMELA GAIA
HERSCHEL SXP SIMBOL X
CHEOPS EUCLID PRATO

SED BUILDER SKY EXPLORER MATISSE
GAIA PORTAL COSMIC RAY DATABASE
SSDC Multi-Mission Archive for Space Science
SSDC CATALOGS
SSDC BIBLIOGRAPHY TOOL
AGILE-LV3 data analysis

MEDIA TOP NEWS EVENTS

scienzainsieme
NOTTE EUROPEA DEI RICERCATORI
28 SETTEMBRE 2016 | VENERDI | 18.00-24.00

es:

The Multi-Mission

=>TWO versions: 2

The screenshot shows the Space Science Data Center website. At the top, the title "Space Science Data Center" is displayed in orange. The ASI logo is in the top right corner. A navigation bar includes links for Home, About SSDC, News and Communication, Quick Look, Missions, **Multimission Archive**, Catalog, Tools, Links, Bibliographic services, and Helpdesk. Below the navigation bar, a "Privacy" link is visible. The main content area features a large image of a satellite in orbit. A dropdown menu for "Multimission Archive" is open, listing various missions: All Missions (MMIA2.0), AGILE, AGILE-LV3, AGILE-LV3 (restricted area), AMS-02, ASCA, BeppoSAX NFI, BeppoSAX WFC, EINSTEIN, EXOSAT, FERMI, Herschel, Matisse-Rosetta, NuSTAR, PAMELA, ROSAT, and SWIFT. To the right of the menu is a grid of mission icons including AGILE, SWIFT, FERMI, NuSTAR, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, HERSCHEL, BEPPO SAX, and SIMBOL X. Below the main content area, there are sections for "MEDIA" (with icons for SED BUILDER, SKY EXPLORER, MATISSE, and GAIA PORTAL), "TOP NEWS" (with icons for COSMIC RAY DATABASE, SWIFT, and ARCHIVE FOR SPACE SCIENCE), and "EVENTS" (with icons for SSDC CATALOGS, BIBLIOGRAPHY TOOL, and AGILE-LV3 data analysis). At the bottom, a banner for "NOTTE EUROPEA DEI RICERCATORI" is visible, dated 28 SETTEMBRE 2016 | VENERDI | 18.00-24.00.

es:

The Multi-Mission

=>TWO versions: 2

The screenshot displays the Space Science Data Center website. At the top, the title "Space Science Data Center" is prominently displayed in orange. The ASI logo is in the top right corner. A navigation bar includes links for Home, About SSDC, News and Communication, Quick Look, Mission, **Multimission Archive**, Catalog, Tools, Links, Bibliographic services, and Helpdesk. The "Multimission Archive" menu is open, listing various missions such as AGILE, AGILE-LV3, AGILE-LV3 (restricted area), AMS-02, ASCA, BeppoSAX NFI, BeppoSAX WFC, EINSTEIN, EXOSAT, FERMI, Herschel, Matisse-Rosetta, NuSTAR, PAMELA, ROSAT, and SWIFT. A red circle highlights the "Multimission Archive" menu item. Below the menu, a large image shows a satellite in orbit over a colorful astronomical map. To the right, a grid of mission icons includes AGILE, SWIFT, FERMI, NuSTAR, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, HERSCHEL, BEPPO SAX, and SIMBOL X. At the bottom, there are sections for MEDIA (SED BUILDER, SKY EXPLORER, MATISSE, GAIA PORTAL), TOP NEWS (SWIFT, COSMIC RAY DATABASE, ARCHIVE FOR SPACE SCIENCE), and EVENTS (SSDC BIBLIOGRAPHY TOOL, AGILE-LV3 data analysis). A footer banner for "scienzainsieme" and "NOTTE EUROPEA DEI RICERCATORI" is visible at the bottom right.

es:


The Multi-Mission

=>TWO versions: 2

The screenshot displays the Space Science Data Center (SSDC) website interface. The main header includes the SSDC logo, the text "Space Science Data Center", and the ASI logo. Below the header is a navigation menu with links for Home, About SSDC, News and Communication, Quick Look, Missions, Multimission Archive, Catalogs, Tools, and Links. A secondary menu includes Bibliographic services, Helpdesk, and Privacy. The main content area is titled "Multi-Mission Interactive Archive for Space Science Astrophysics/Cosmology". It features several filter sections: "Astrophysics/Cosmology" (selected), "Exploration of the Solar System", "Particle Astrophysics Cosmic rays", and "Atmospheric Physics TGF". Each section has an "all missions" checkbox and a list of mission names with checkboxes. The "Astrophysics/Cosmology" section includes filters for Radio-Micro wave (Planck), IR-Optic-UV (Herschel, Swift-UVOT), X ray (ASCA, BeppoSAX, Einstein, Exosat, NuSTAR, ROSAT, Swift-XRT), and Gamma ray (Agile, Agile-LV3, Egret, Fermi, Swift-BAT). The "Exploration of the Solar System" section lists Rosetta, Dawn, Chang'E 1, Chang'E 2, and Messenger. The "Particle Astrophysics Cosmic rays" section lists AMS-01, AMS-02, BESS-Polar 1, BESS-Polar II, CALET, CREAM, Fermi-LAT, Pamela, and TS93. The "Atmospheric Physics TGF" section lists Agile. Below the filters are three search criteria: "Spectral band (Energy (keV))" with a range from 1e-8 to 1e9 keV, "Sensitivity (mCrab)" with a value of 1e3, and "Temporal range (Year)" from 1975 to 2021. A "Submit" button is located to the right of the temporal range. Below the search criteria is a "Source name" field with the value "3C273" and "Name Resolver" checkboxes for SSDC Name Server, SIMBAD, and NED. A "Coordinate" field contains the values "187.2779, 2.052389" and radio buttons for RA, DEC, L, B, Lon, Lat. At the bottom, there is an "Output sorted by" section with radio buttons for RA and DEC, a "Max lines retrieved" dropdown set to 5000, and "Equinox" radio buttons for 2000 and 1950.

The Multi-Mission

=>TWO versions: 2

Space Science Data Center 

Home About SSDC News and Communication Quick Look Missions Multimission Archive Catalogs Tools Links
Bibliographic services Helpdesk Privacy

Multi-Mission Interactive Archive for Space Science

Astrophysics/Cosmology

Astrophysics/Cosmology | **Exploration of the Solar System** | **Particle Astrophysics Cosmic rays** | **Atmospheric Physics TGF**

all missions

Radio-Micro wave

- Planck

IR-Optic-UV

- Herschel
- Swift-UVOT

X ray

- ASCA
- BeppoSAX
- Einstein
- Exosat
- NuSTAR
- ROSAT
- Swift-XRT

Gamma ray

- Agile
- Agile-LV3
- Egret
- Fermi
- Swift-BAT

Exploration of the Solar System *all missions*

- Rosetta
- Dawn
- Chang'E 1
- Chang'E 2
- Messenger

Particle Astrophysics Cosmic rays *all missions*

- AMS-01
- AMS-02
- BESS-Polar 1
- BESS-Polar II
- CALET
- CREAM
- Fermi-LAT
- Pamela
- TS93

Atmospheric Physics TGF *all missions*

- Agile

Spectral band (Energy (keV)): from $1e-8$ to $1e9$ Chang'E 1 (soon available)

[1.00e-8 keV -- 1.00e+9 keV] Chang'E 2 (soon available)

Sensitivity (mCrab): $1e3$ [1.00e+3 mCrab]

Temporal range (Year): from 1975 to 2021 [1975 -- 2021] **Submit**

Source name: 3C273 **Name Resolver:** SSDC Name Server SIMBAD NED
(e.g. CYGX-1)

Coordinate: 187.2779, 2.052389 RA, DEC l, b Lon, Lat
(e.g. 19 58 21.7, +35 12 05.8 or 299.590333, 35.201611 or 71.334960, 3.066917)

Output sorted by RA DEC **Max lines retrieved** 5000 **Equinox** 2000 1950



Home About SSDC
Privacy



Elen
Sele
l'imi
ssdci 16 July 2021

The Multi-Mission
=>TWO versions

Multi-Mission Interactive Archive

Query results for: **3C273**
 RA = **187.2779** (deg); DEC = **2.052389** (deg); EQUINOX = **2000**
 Source name resolved by SSDC

[Source Names](#)

Bibliographic search [?](#)
 PKSB1226+023
 in time range between and

MISSION	ENTRIES
PLANCK	0
HERSCHEL	8
SWIFT	339
ASCA	0
BeppoSax NFI	9
BeppoSax WFC	8
EINSTEIN	4
EXOSAT	0
NUSTAR	29
ROSAT	60
AGILE	82
AGILE-LV3	147
EGRET	0
FERMI	1

The Multi-Mission
=>TWO versions

Multi-Mission Interactive Archive

Query results for: **3C273**
RA = **187.2779** (deg); DEC = **2.052389** (deg); EQUINOX = **2000**
Source name resolved by SSDC

Source Names

Bibliographic search [?]
PKSB1226+023
in time range between 1900 and 2021
By name via NED
By coordinates via ADS

MISSION	ENTRIES
PLANCK	0
HERSCHEL	8
SWIFT	339
ASCA	0
BeppoSax NFI	9
BeppoSax WFC	9
EINSTEIN	4
EXOSAT	0
NUSTAR	29
ROSAT	60
AGILE	82
AGILE-LV3	147
EGRET	0
FERMI	1

SSDC Science Gateway: UVOT imaging tool

<http://www.ssdsc.asi.it>

Mozilla Firefox <2>

Firefox ▾ http://wwwdev...bdec=2.052222

Help

Show/hide columns

Advanced filtering

Print current view of table

Print complete table

Reset all filters

Query results for: **3C273(LOCAL)**

Details: query by COORDINATE with RA = 187.277500; DEC = 2.052222; EQUINOX = 2000; RADIUS = 5 arcmin; sort by RA; max lines retrieved: 300 (on BROWSE catalog swiftmastr)

Export Current view of Table in: [Latex format](#) [HTML format](#) [Raw text format](#) [CSV text format](#)

Previous Page Next Page Page Size (# of lines) 50 Refresh page Reset all filters Show all entries

Entry number	Selection mode: Include <input checked="" type="checkbox"/> All	Interactive Analysis		Archive	Target Name	obsid	RA (J2000)	Dec (J2000)	start_time	xrt_exposure	uvot_exposure	bat_exposure	Dist. from searched position arcmin	
		XRT	UVOT				hh mm ss.d	dd mm ss.d						
1	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017113	12 28 53.6	+02 02 45.0	May 16, 2012 02:09:00	1054.621	801.384	1061	3.2
2	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017067	12 28 53.8	+02 03 57.6	Apr 24, 2010 07:01:00	1103.374	847.396	1119	3.2
3	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017115	12 28 54.1	+02 03 46.3	Jul 1, 2012 00:00:00				
4	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017068	12 28 54.3	+02 03 57.3	May 7, 2010 07:49:00				
5	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017100	12 28 55.2	+02 02 28.7	Jul 9, 2011 02:11:00				
6	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017092	12 28 55.2	+02 01 52.4	Apr 23, 2011 18:29:00				
7	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017095	12 28 55.2	+02 05 24.2	Apr 2, 2010 17:51:00				
8	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017070	12 28 55.3	+02 02 46.2	May 21, 2010 04:18:00				
9	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017091	12 28 55.7	+02 01 38.0	Apr 19, 2011 14:49:00				
10	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017072	12 28 55.8	+02 04 31.6	Jun 23, 2010 13:46:00				
11	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017093	12 28 55.8	+02 03 56.3	Apr 30, 2011 01:37:00				
12	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017096	12 28 56.1	+02 01 55.3	May 29, 2011 00:23:00				
13	<input checked="" type="checkbox"/> Select	ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C273	00035017042	12 28 56.2	+02 04 08.7	May 11, 2009 11:17:00	1249.23	976.81	1278	2.7

Mozilla Firefox

Firefox ▾ http://wwwdev...swiftvarchint

UVOT On-line Analysis

UVOT filters available for the analysis

V U B W1 M2 W2

V filter has 1 exposure slices
U filter has 1 exposure slices
B filter has 1 exposure slices
W1 filter has 1 exposure slices
M2 filter has 1 exposure slices
W2 filter has 1 exposure slices

[SUBMIT](#)

Mozilla Firefox <2>
 http://wwwdev...bdec=2.052222

Help
 Show/hide columns
 Advanced filtering
 Print current view of table
 Print complete table
 Reset all filters

Query results for: 3C273(LOCAL)
 Details: query by COORDINATE with RA = 187.277500; DEC = 2.052222; EQUINOX = 2000; RADIUS = 5 arcmin; sort by RA; max lines retrieved: 300 (on BROWSE catalog swiftmastr)

Export Current view of Table in: Latex format FITS format Raw text format CSV text format

Previous Page Next Page Page Size (# of lines) 50 Refresh page Reset all filters Show all entries

Entry number	Interactive Analysis	Archive	Target Name	obsid	RA (J2000)		Dec (J2000)		start_time	xrt_exposure	uvot_exposure	bat_exposure	Dist. from searched position
					hh mm ss.d	dd mm ss.d	hh mm ss.d	dd mm ss.d					
1	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017113	12 28 53.6	+02 02 45.0	May 16, 2012 02:09:00	1054.621	801.384	1061	3.2			
2	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017067	12 28 53.8	+02 03 57.6	Apr 24, 2010 07:01:00	1103.374	847.396	1119	3.2			
3	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017115	12 28 54.1	+02 03 46.3	Jul 1, 2012 00:00:00							
4	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017068	12 28 54.3	+02 03 57.3	May 7, 2010 07:49:00							
5	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017100	12 28 55.2	+02 02 28.7	Jul 9, 2011 02:11:00							
6	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017092	12 28 55.2	+02 01 52.4	Apr 23, 2011 18:29:00							
7	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017095	12 28 55.2	+02 05 24.2	Apr 2, 2010 17:51:00							
8	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017070	12 28 55.3	+02 02 46.2	May 21, 2010 04:18:00							
9	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017091	12 28 55.7	+02 01 38.0	Apr 19, 2011 14:49:00							
10	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017072	12 28 55.8	+02 04 31.6	Jun 23, 2010 13:46:00							
11	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017093	12 28 55.8	+02 03 56.3	Apr 30, 2011 01:37:00							
12	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017096	12 28 56.1	+02 01 55.3	May 29, 2011 00:23:00							
13	ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access	3C273	00035017042	12 28 56.2	+02 04 08.7	May 11, 2009 11:17:00	1249.23	976.81	1278	2.7			

Mozilla Firefox
 http://wwwdev....swiftvarchint

UVOT On-line Analysis

UVOT filters available for the analysis

V
 U
 B
 W1
 M2
 W2

V filter has 1 exposure slices
 U filter has 1 exposure slices
 B filter has 1 exposure slices
 W1 filter has 1 exposure slices
 M2 filter has 1 exposure slices
 W2 filter has 1 exposure slices

B
 B
 M
 W

Firefox v ASDC INTERACTIVE ARCHIVE

3C279
SWIFT UVOTA 600 2010 Jun 27 Exposure: 105 s Filter:V

12^h56^m30^s 12^h56^m20^s 12^h56^m10^s 12^h56^m00^s

2500
2000
1500
1000

500 1000 1500 2000

Y Pixels

X Pixels

42.8 arcsec

5°43'00"
5°44'00"
5°45'00"
5°46'00"
5°47'00"
5°48'00"
5°49'00"
5°50'00"
5°51'00"
5°52'00"

Details for source/cursor position (J2000.0)
Source: Ra=12 56 11.2 Dec=-05 47 21.4 Vmag=18.49+/-0.15 Umag=18.16+/-0.1 Bmag=18.87+/-0.11 W1mag=17.86+/-0.09 W2mag=18.08+/-0.07

Derived quantities: V: $f(5402\text{\AA})=0.15878+/-0.021814$ mJy; $\nu F(5.5463e+14\text{ Hz})=8.8105e-13+/-1.2166e-13$ erg/cm²/s; U: $f(3501\text{\AA})=0.088813+/-0.0080493$ mJy; $\nu F(8.5704e+14\text{ Hz})=7.6033e-13+/-6.8353e-14$ erg/cm²/s; B: $f(4329\text{\AA})=0.12751+/-0.012365$ mJy; $\nu F(6.9183e+14\text{ Hz})=8.8308e-13+/-8.5312e-14$ erg/cm²/s; W1: $f(2634\text{\AA})=0.078353+/-0.0064097$ mJy; $\nu F(1.1376e+15\text{ Hz})=8.9125e-13+/-7.3888e-14$ erg/cm²/s; W2: $f(2030\text{\AA})=0.054097+/-0.0035098$ mJy; $\nu F(1.4757e+15\text{ Hz})=7.9799e-13+/-5.1469e-14$ erg/cm²/s;

Overlay catalogue entries

A2LED
A2PIC
ABELL
AGLGRD1CAT

Submit

Entry number

Selection mode:

Include

All

1 Select

2 Select

3 Select

4 Select

5 Select

6 Select

7 Select

8 Select

9 Select

10 Select

11 Select

12 Select

13 Select

ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access 3C279 00035017093 12 26 56.2 +02 03 56.3 791.30, 2011 01:37:00

ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access 3C279 00035017096 12 26 56.1 +02 01 55.3 May 29, 2011 00:23:00

ASDC Data Explorer XRT Online Analysis UVOT Online Analysis Data Access 3C279 00035017042 12 26 56.2 +02 04 08.7 May 11, 2009 11:17:00

Download image file

About this tool

filters available

V
U
B
W1
M2
W2

OBS Code: 00035019037

Selected Filter: V

javascript:void(0)

Submit

Firefox v

Show sources list sorted by:

Size (arcmin): 1.0

Color table: Default

Image scaling: Default

Error radius (arcsec): 0

Overlay catalogue entries:

- A2LED
- A2PIC
- ABELL
- AGLGRD1CAT

Submit

Entry number

Selection mode: Include

All

1 Select

2 Select

3 Select

4 Select

5 Select

6 Select

7 Select

8 Select

9 Select

10 Select

11 Select

12 Select

13 Select

ASDC INTERACTIVE ARCHIVE

3C279

SWIFT UVOTA 600 2010 Jun 27 Exposure: 105 s Filter: V

Y Pixels: 2500, 2000, 1500, 1000

X Pixels: 500, 1000, 500

OBS Code: 00035019037

Selected Filter: V

Filters available:

- V
- U
- B
- W1
- M2
- W2

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The SSDC Multi-frequency Data Explorer: Web and VO data access and tools - Mozilla Firefox (Private Browsing)

https://www.ssdc.asi.it/showEntry.php#

Entry 10

R.A. (J2000) = 12 29 06.7 (187.2779 deg) l=289.95

Dec (J2000) = +02 03 08.6 (2.0524 deg) b=64.35

Galactic nH = 1.67E+20 (cm⁻²)

[Source Names](#)

UVOT detection ingestion in SED Builder | UVOT aperture photometry execution | Error circle EXPLORER | Source Details | Feedback

Spectral Energy Distribution (SED):

Sample	Frequency (Hz)	Freq. error (Hz)	nuFnu (erg/cm2/s)	nuFnu error (erg/cm2/s)	Start TIME (MJD)	End TIME (MJD)
V	5.54625713E+14	0.0	1.67880402E-10	1.93118964E-12	58245.33432	58245.33588
U	8.57037845E+14	0.0	2.64850014E-10	1.82946258E-12	58245.32476	58245.32632
B	6.91890971E+14	0.0	1.51705037E-10	1.39623236E-12	58245.32638	58245.32794
W1	1.15611224E+15	0.0	6.30957344E-10	4.35388405E-12	58245.32159	58245.32471
M2	1.34586035E+15	0.0	3.51560441E-10	0.00000000E+0	58245.33593	58245.34034
W2	1.47570653E+15	0.0	7.85235635E-10	3.62064084E-12	58245.32800	58245.33426

SSDC SED Builder:
(click below to include SED data points)

[Add data to SED](#)

Details for source/cursor position (J2000.0)

Source: Ra=12 56 11.2 Dec=-05 47 21.4 Vmag=18.49+/-0.15 Umag=18.16+/-0.1 Bmag=18.87+/-0.11

Derived quantities: V: f(5402Å)=0.15878+/-0.021814 mJy; nuF(5.5463e+14 Hz)=8.8105e-13+/-1.13e-13 erg/cm2/s; U: f(6163Å)=0.1275+/-0.0080493 mJy; nuF(8.5704e+14 Hz)=7.6033e-13+/-6.8353e-14 erg/cm2/s; B: f(4329Å)=0.1275+/-0.0080493 mJy; nuF(6.9189e+14 Hz)=7.6033e-13+/-6.8353e-14 erg/cm2/s; W1: f(2634Å)=0.078353+/-0.0064097 mJy; nuF(1.1376e+15 Hz)=8.92e-13+/-0.0035098 mJy; nuF(1.4757e+15 Hz)=7.9799e-13+/-5.1469e-14 erg/cm2/s;

javascript:void(0)

ASDC Data Explorer	XRT Online Analysis	UVOT Online Analysis	Data Access	3C279	00035017093	12 29 06.7	+02 03 08.6	May 11, 2009 11:17:00	1249.23	976.81	1278	2.7
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3C279	00035017096	12 29 56.1	+02 01 55.1	May 11, 2009 11:17:00	1249.23	976.81	1278	2.7
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	3C279	00035017042	12 28 56.2	+02 04 08.7	May 11, 2009 11:17:00	1249.23	976.81	1278	2.7

Firefox ▾ ASDC INTERACTIVE ARCHIVE

SWIFT UVOT 600 3C279 2010 Jun 27 Exposure: 105 s Filter:V

Show sources list sorted by:

The ASDC Multi-frequency Data Explorer: Web and VO data access and tools - Mozilla Firefox

www.asdc.asi.it/showEntry.php#

ASDC ASI Science Data Center Version 2.0

Entry 21
 R.A. (J2000) = 12 56 11.2 (194.0467 deg) l=305.10
 Dec (J2000) = -05 47 21.5 (-5.7893 deg) b=57.06
 Galactic nH = 2.05E+20 (cm⁻²) [Source Names](#)

UVOT detection ingestion in SED Builder | **UVOT aperture photometry execution** | Error circle EXPLORER | Source Details | Feedback

UVOT Products extraction HEADAS_4Jan_014_V6.15.1

Source Extraction Region : Background Extraction Region :
 inner radius (arcsec) [] inner radius (arcsec) [27.5]
 outer radius (arcsec) [5] outer radius (arcsec) [35]

Submit

[Preview](#)

SWIFT UVOT 400 3C279 2009 Apr 18 Exposure: 732 s Filter:UVW2

Spectral Energy Distribution (SED):

frequency (Hz)	Freq. error (Hz)	nuFnu (erg/cm2/s)	nuFnu error (erg/cm2/s)	Start TIME (MJD)	End TIME (MJD)
25713E+14	0.0	1.67880402E-10	1.93118964E-12	58245.33432	58245.33588
37845E+14	0.0	2.64850014E-10	1.82946258E-12	58245.32476	58245.32632
10971E+14	0.0	1.517050037E-10	1.39623236E-12	58245.32638	58245.32794
11224E+15	0.0	6.30957344E-10	4.35388405E-12	58245.32159	58245.32471
86035E+15	0.0	3.51560441E-10	0.00000000E+0	58245.33593	58245.34034
70653E+15	0.0	7.85235635E-10	3.62064084E-12	58245.32800	58245.33426

SSDC SED Builder:
 (click below to include SED data points)

[Add data to SED](#)

Entry 10
 R.A. (J2000) = 12 29 06.7 (187.2779 deg) l=289.95
 Dec (J2000) = +02 03 08.6 (2.0524 deg) b=64.35
 Galactic nH = 1.95E+20 (cm⁻²) [Source Names](#)

SED Builder | UVOT aperture photometry execution | Error circle EXPLORER | Source Details | Feedback

13

Firefox v ASDC INTERACTIVE ARCHIVE

SWIFT UVOTA 600 3C279 2010 Jun 27 Exposure: 105 s Filter:V

Show sources list sorted by:

The ASDC Multi-frequency Data Explorer: Web and VO data access and tools - Mozilla Firefox

www.asdc.asi.it/showEntry.php#

ASDC ASI Science Data Center Version 2.0

Entry 21
 R.A. (J2000) = 12 56 11.2 (194.0467 deg) l=305.10
 Dec (J2000) = -05 47 21.5 (-5.7893 deg) b=57.06
 Galactic nH = 2.05E+20 (cm⁻²) [Source Names](#)

UVOT detection ingestion in SED Builder | **UVOT aperture photometry execution** | Error circle EXPLORER | Source Details | Feedback

UVOT Products extraction HEADAS_4Jan_014_V6.15.1

Source Extraction Region : inner radius (arcsec) [] outer radius (arcsec) [5]
 Background Extraction Region : inner radius (arcsec) [27.5] outer radius (arcsec) [35]

Submit [Preview](#)

SWIFT UVOTA 400 3C279 2009 Apr 18 Exposure: 732 s Filter:UVW2

12^h56^m14^s 12^h56^m12^s 12^h56^m10^s 12^h56^m08^s

Y Pixels 1700 1600 1500 1400

X Pixels 1000 1100 1200 1300

SWIFT UVOTA 400 3C279 2009 Apr 18 Exposure: 732 s Filter:UVW2

12^h56^m14^s 12^h56^m12^s 12^h56^m10^s 12^h56^m08^s

5°46'30" 5°47'00" 5°47'30" 5°48'00" 5°48'30"

SED Builder | **UVOT aperture photometry execution** | Error circle EXPLORER | Source Details | Feedback

Spectral Energy Distribution (SED):

frequency (Hz)	Freq. error (Hz)	nuFnu (erg/cm2/s)	nuFnu error (erg/cm2/s)	Start TIME (MJD)	End TIME (MJD)
25713E+14	0.0	1.67880402E-10	1.93118964E-12	58245.33432	58245.33588
37845E+14	0.0	2.64850014E-10	1.82946258E-12	58245.32476	58245.32632
10971E+14	0.0	1.517050037E-10	1.39623236E-12	58245.32638	58245.32794
11224E+15	0.0	6.30957344E-10	4.35388405E-12	58245.32159	58245.32471
86035E+15	0.0	3.51560441E-10	0.00000000E+0	58245.33593	58245.34034
70653E+15	0.0	7.85235635E-10	3.62064084E-12	58245.32800	58245.33426

SSDC SED Builder:
 (click below to include SED data points)

[Add data to SED](#)

1249.23 976.81 1278 2.7

www.asdc.asi.it

Interactive Analysis

Standard Products

- Show Image
- Show Exposure Map

Download Data

- Sky Image File
- Exposure Map File
- Output FITS File

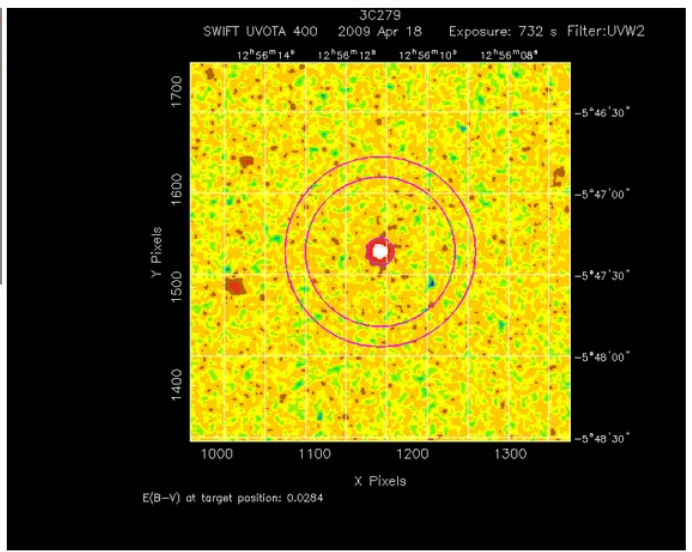


Image center (R.A.,Dec.): 194.0465 , -5.7893

Aperture photometry results

Estimated Galactic E(B-V) at object position: 0.02845

Filter	Observed Magnitude	Mag. error	Dereddened FluxDensity (mJy)	FluxDensity error (mJy)
V	16.890	0.07	6.9837e-01	4.5425e-02

Spectral Energy Distribution (SED):

Frequency (Hz)	Freq. error (Hz)	nuFnu (erg/cm2/s)	nuFnu error (erg/cm2/s)	Start TIME (MJD)	End TIME (MJD)	U. L. Flag
5.5497E+14	0.0	3.8757E-12	2.521E-13	54939.8591698	54939.9932169	

ASDC SED Builder: (click below to include SED data points)

Add data to SED

Filter: V
 OBS Code: 00035019037
 Selected Filter: V

Filters available
 V
 U
 B
 W1
 M2
 W2

[Download image file](#)

Entry 10

Spectral Energy Distribution (SED):

Frequency (Hz)	Freq. error (Hz)	nuFnu (erg/cm2/s)	nuFnu error (erg/cm2/s)	Start TIME (MJD)	End TIME (MJD)
25713E+14	0.0	1.67880402E-10	1.93118964E-12	58245.33432	58245.33588
37845E+14	0.0	2.64850014E-10	1.82946258E-12	58245.32476	58245.32632
10971E+14	0.0	1.51705037E-10	1.39623236E-12	58245.32638	58245.32794
11224E+15	0.0	6.30957344E-10	4.35388405E-12	58245.32159	58245.32471
86035E+15	0.0	3.51560441E-10	0.00000000E+0	58245.33593	58245.34034
70653E+15	0.0	7.85235635E-10	3.62064084E-12	58245.32800	58245.33426

SSDC SED Builder:
 (click below to include SED data points)

Add data to SED

1249.23 976.81 1278 2.7

Interactive Analysis

Skipped!

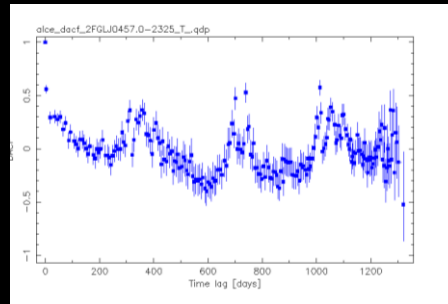
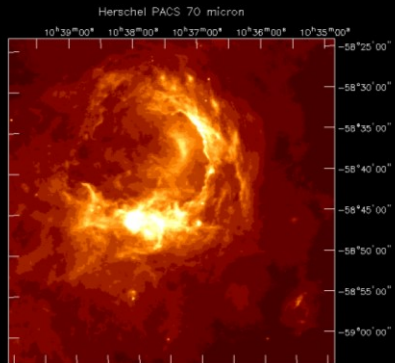
SSDC Science Gateway: many other tools...

<http://www.ssdc.asi.it>

Skipping many other tools, in particular other imaging ones...

- On data from various older (BeppoSAX/NFI, Einstein..) or newer (NuSTAR) X-ray telescopes;
- On Herschel data;
- On AGILE & Fermi gamma-ray data: various tools, also on time domain;

....



Summary on SSSC MMIA

The **Multi-Mission Interactive Archive** is the SSSC door to access all the hosted data archives.

=>TWO versions: single or multiple parallel archive queries...

- Multimission Archive
- Catalogs
- All Missions (MMIA2.0)**
- AGILE
- AGILE-LV3
- AGILE-LV3 (restricted area)
- AMS-02
- ASCA
- BeppoSAX NFI
- BeppoSAX WFC
- EINSTEIN
- EXOSAT
- FERMI
- Herschel
- Matisse-Rosetta
- NuSTAR
- PAMELA
- ROSAT
- SWIFT

This screenshot shows the search interface of the Multi-Mission Interactive Archive for Space Science. It features a navigation bar with 'Home', 'About SSSC', 'News and Communication', 'Quick Links', 'Missions', 'Multimission Archive', 'Catalogs', 'Tools', and 'Links'. Below the navigation bar is a search form with several sections: 'All missions' with a list of mission names and checkboxes; 'Spectral band' with input fields for energy range and sensitivity; 'Temporal range' with input fields for start and end years; and 'Source name' and 'Name Resolver' options. A 'Submit' button is located at the bottom right of the search form.

This screenshot shows the search interface for the 'Swift Master' mission. It features a navigation bar with 'Home', 'About SSSC', 'News and Communication', 'Quick Links', 'Missions', 'Multimission Archive', 'Catalogs', 'Tools', and 'Links'. Below the navigation bar is a search form with several sections: 'Mission Selected' (Swift Master); 'Search Type' with buttons for 'Coordinates', 'Time', 'Parameter', and 'Class'; 'Enter source name or coordinates' with an input field containing '3C273'; 'Name Resolver' options; 'Radius' and 'Output sorted by' options; and a 'Submit' button.

This screenshot shows the search interface for the 'NuSTAR Master' mission. It features a navigation bar with 'Home', 'About SSSC', 'News and Communication', 'Quick Links', 'Missions', 'Multimission Archive', 'Catalogs', 'Tools', and 'Links'. Below the navigation bar is a search form with several sections: 'Mission Selected' (NuSTAR Master); 'Search Type' with buttons for 'Coordinates', 'Time', 'Parameter', 'Class', and 'Status'; 'Enter source name or coordinates' with an input field containing '3C273'; 'Name Resolver' options; 'Radius' and 'Output sorted by' options; and a 'Submit' button.

SSDC MMIA data publication in VO

MMIA update to allow data access through the VO:

- easily access main resident products through the VO?
- and what about real-time DA tools producing further data products?
- different approach: integrate VO tools in our web DA tools??

Further possible developments

- Upgrade of other SSDC main tools, for instance the SED-Builder tool (a link within Imaging tools has been shown: an independent application using data in a unique SEDs DB server)

An example of advanced application: the SED-Builder

SED (t)

Login is needed to see VO-tools

The screenshot shows the SED-Builder web application interface. At the top left is the SSDC logo (Space Science Data Center) and the title "SED(t) Builder" in large red letters. Below the title is the subtitle "A tool to build and handle spectral energy distributions and multifrequency light curves". In the top right corner, there are links for "Version 4.0", "Tutorial", "Feedback", "Login", "User Data", "User SEDs", and "Sky Explorer".

The main interface has two tabs: "Single Source" (selected) and "List of Sources". Below the tabs are two search sections:

- Search by Name:** A search box with a dropdown menu for "Enter object name" and checkboxes for "SSDC", "SIMBAD", and "NED".
- Search by Coordinates:** A section with a "Coordinate system:" dropdown set to "Equatorial (J2000)" and a "Coordinates:" input field with the placeholder text "RA, Dec (degrees or hh mm ss.s, dd mm ss.s)".

At the bottom of the search sections are two blue buttons: "Explore Data" and "Build SED".

On the right side of the interface, there is a large visualization area containing several plots:

- A main plot showing "Log $\nu f(\nu)$ (erg cm⁻² s⁻¹)" on the y-axis versus "Time (Year)" on the x-axis. The plot displays multiple data series in various colors (red, green, blue, orange, purple) and includes vertical shaded regions.
- A 3D plot below the main plot showing data points in a 3D space.
- Several smaller line plots stacked vertically on the right side, each showing a different data series over time.

An example of advanced application: the SED-Builder

SED (t)

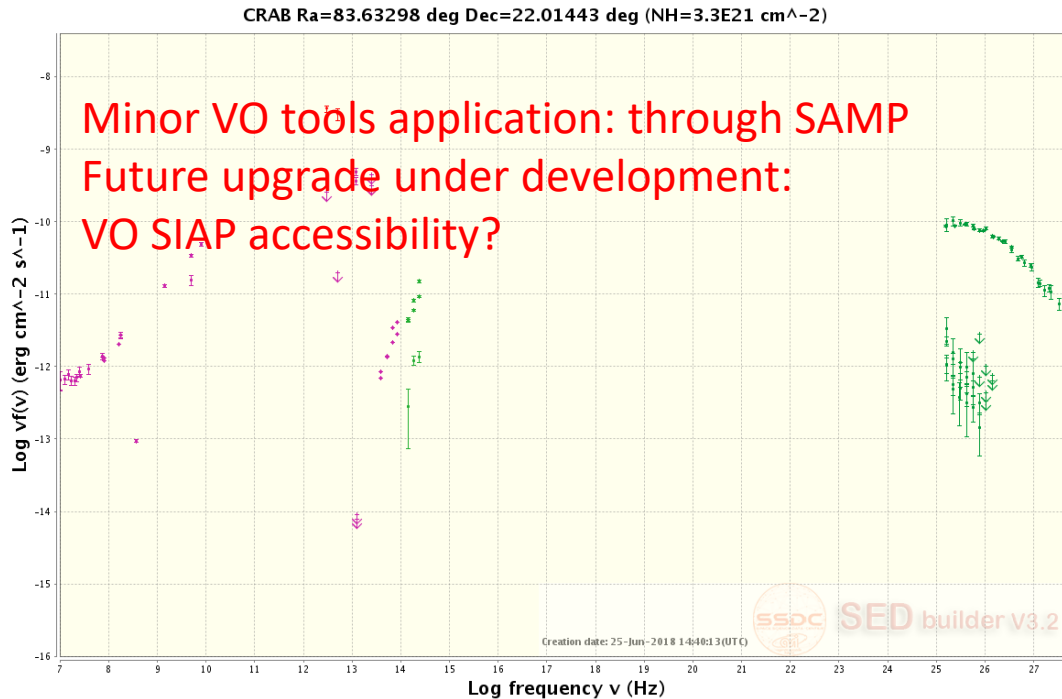
Login is needed to see VO-tools



An example of advanced application: the SED-Builder

SED (t)

Login is needed to see VO-tools



Load Data Show Data
Save Duplicate Sed

Bibliographic search

Redshift: 0.0 Frame: Observed
X Axis: Frequency (Hz) Y Axis: nuFnu (erg/cm2/s)
Plot Type: Default Update Plot

Input Data Time Filtering Energy Filtering Models Fit Functions Templates
Instr Sensitivity Plot options Existing SEDs Export VO Tools

VO Tools like TOPCAT can be used to handle SED data in the time domain.

Warning: Data points for which an observation date is not available are artificially associated to $t_{\text{year}}=2000.0$ equivalent to $t_{\text{MJD}}=51544.0$

TOPCAT Launch

Broadcast Type: Multi Frequency Light Curves

Band:	Log _v min	Log _v max	Label
5 GHz	9.6	9.7	
1 Kev	17.13	17.39	
1 Gev	23.38	23.39	
VMAG	14.7	14.8	

Register

The Open Universe ASI portal

The mission of the [Open Universe initiative](#) is to make astronomy and space science data much more openly available, easily discoverable, free of bureaucratic, administrative or technical barriers, and therefore usable by the widest possible community, from professional researchers to all people interested in space science, in all parts of the world.

In doing so, Open Universe aims to support an increase in productivity of space research, facilitate the emerging field of data-driven science, and stimulate a significant acceleration towards the democratisation of space science and the benefits therefrom.

Initially proposed in 2016 to the United Nations Committee on the Peaceful Uses of Outer Space (COPUOS), Open Universe is now actively developed by a number of countries (Italy, Brazil, Armenia, and Argentina) and international scientific institutions, in coordination with the United Nations Office for Outer Space Affairs (UNOOSA).

In this phase **Open Universe** gives access to a number of **services**, is engaged in the generation of several **user-ready space science data sets**, and in **scientific activities**, including:

The Open Universe web portal @ ASI

The Open Universe for Blazars program

The Open Universe for GRBs program

The screenshot shows the Open Universe web portal. At the top, there is a navigation bar with the 'Open UNiverse' logo and links to various sections like 'Open Universe', 'Open Universe for Blazars', and 'Open Universe for GRBs'. Below the navigation bar, there is a search bar with the text 'Enter object name or coordinates:' and an example input 'e.g. 3C279 or 1943+422, -5.78187 or 12 56 11. -00 47 21.0'. A red arrow points to the search input field, labeled 'User input'. Below the search bar, there is a section titled 'Supported space science sectors' with four icons: Astronomy, Planetary Science, Cosmic Rays, and Atmospheric Physics. To the right of the search bar, there is a section titled 'Open Universe Space science data for everyone' with a sub-section 'Open Universe documents' listing several documents and a sub-section 'Open Universe Technical presentations' listing several presentations. A red dashed box highlights the 'Info and output area' which includes the 'Open Universe documents' and 'Open Universe Technical presentations' sections.

This is the front page of the Open Universe web portal developed at the Italian Space Agency, ASI. Click on the picture to visit the site.

The Open Universe ASI portal

- Contribution to SSDC activities for OU: name server, catalog web pages, and support to Swift surveys

=>Swift/XRT survey HiPS

In this phase Open Universe gives access to a number of services, is engaged in the generation of several user-ready space science data sets, and in scientific activities, including:

The Open Universe web portal @ ASI

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Open Universe

Links to web sites

UNITED NATIONS Office for Outer Space Affairs ASI

Open Universe

Supported space science sectors

Version 2.0

Enter object name or coordinates:

e.g. 3C279 or 1943+023, -5.78197 or 12 56 11. -00 47 21.0

User input

Info and output area

Open Universe documents

- Open Universe - Report Meeting, 11-12 April 2010, ASI-HQ, Rome, Italy
- Report on the Open Universe - Report Meeting
- Open Universe Workshop, Vienna 20-22 November 2017
- Report on the Open Universe workshop

Open Universe Technical presentations

- June 2016 - COPUS-2016, 5th session
- July 2017 - COPUS-2017, 5th session
- February 2018 - COPUS-2018, 5th session
- November 2018 - United Nations/ASI High Level Forum
- February 2019 - COPUS-2019, 5th session

This is the front page of the Open Universe web portal developed at the Italian Space Agency, ASI. Click on the picture to visit the site.

The Open Universe ASI portal

The screenshot displays the Open Universe ASI portal interface. At the top left, the logo reads "Open UNiverse for astronomy". To the right are the logos for the UNITED NATIONS Office for Outer Space Affairs and ASI (Agenzia Spaziale Italiana). A navigation bar contains links for "OU for blazars", "OU for GRBs", and various astronomical categories like "Space Astronomy", "Ground Astronomy", "Planetary Science", "Solar data", "ISS", "VO and General services", "Bibliography", "Cosmic Rays", "Astronomical tools", "Image galleries", and "Open software". Below this is a secondary navigation bar with "Help & video tutorials", social media icons for Facebook and Twitter, a "Feedback" button, a "VO inside" logo, a "Login" button, and a "Reset all" button.

The main content area features a "OU Parameters" section with a search input field. The "Object name or coordinates" field contains "3C279 (M87)". A dropdown menu is open, showing "3C279" and "3C279 194.046309 -5.789235 SSDC 1". Below the search area is a grid of service icons including ESAsky, SKY-MAP.ORG, Google Sky, DSGS SkyServer, Aladin Lite, Swift XRT, ESO Products, Legacy Surveys, SSDC R-X-O, VizieR X-R-G, VizieR IR-Opt, HEASARC Browse, VAO Data Scope, ALMA Archive, ISDC HEAVENS, SSDC Archive, Radio Telescope OC, INAF IAZ, Multi-req Explorer, VOU-Blazars, VOU SED, SED Builder, SED Movie, and ADS Bibliography. A text label "Astronomical surveys and imaging data: Aladin Swift XRT" is positioned over the VAO Data Scope icon.

At the bottom left, there is a photograph of the Milky Way galaxy rising above a dark forest of evergreen trees under a clear night sky.

The Open Universe ASI portal

Open UNiverse for astronomy

UNITED NATIONS Office for Outer Space Affairs ASI




OU for blazars OU for GRBs Space Astronomy Ground Astronomy Planetary Science Solar data ISS VO and General services Bibliography Cosmic Rays Astronomical tools Image galleries Open software Other Initiatives Educational contents

Help & video tutorials f t Feedback VO inside Login Reset all

OU Parameters

Version 2.0
Object name or coordinates: 3C279 (MJD)
3C279
3C279 194.046309 -5.789235 SSDC 1

ESASky SKY-MAP.ORG Google Sky DSGS SkyServer Aladin Lite **OU Swift XRT** ESO Products Legacy Surveys
SSDC R-X-O VizieR X-R-G VizieR IR-Opt HEASARC Browse VAO Data Scope Astronomical surveys and imaging data: Aladin Swift XRT
ALMA Archive ISDC HEAVENS SSDC Archive Radio Telescope OC INAF IAZ Multi-Res. Explorer VOU-Blazars VOU SED SED Builder SED Movie ADS Bibliography
IUED Bibliography IUCDS Bibliography




































Help & video tutorials   Feedback  Login Reset all




OU Parameters

Altoff coordinates type: **Galactic - Equatorial**

Version 2.0
Object name or coordinates: 3C279 (SSDC)
3C279

Source Name(s) : 3C279
R.A.(J2000) = 12 56 11.11 (194.046309 deg)
Dec.(J2000) = -05 47 21.24 (-5.789235 deg)
GLON = 305.1 GLAT = 57.06

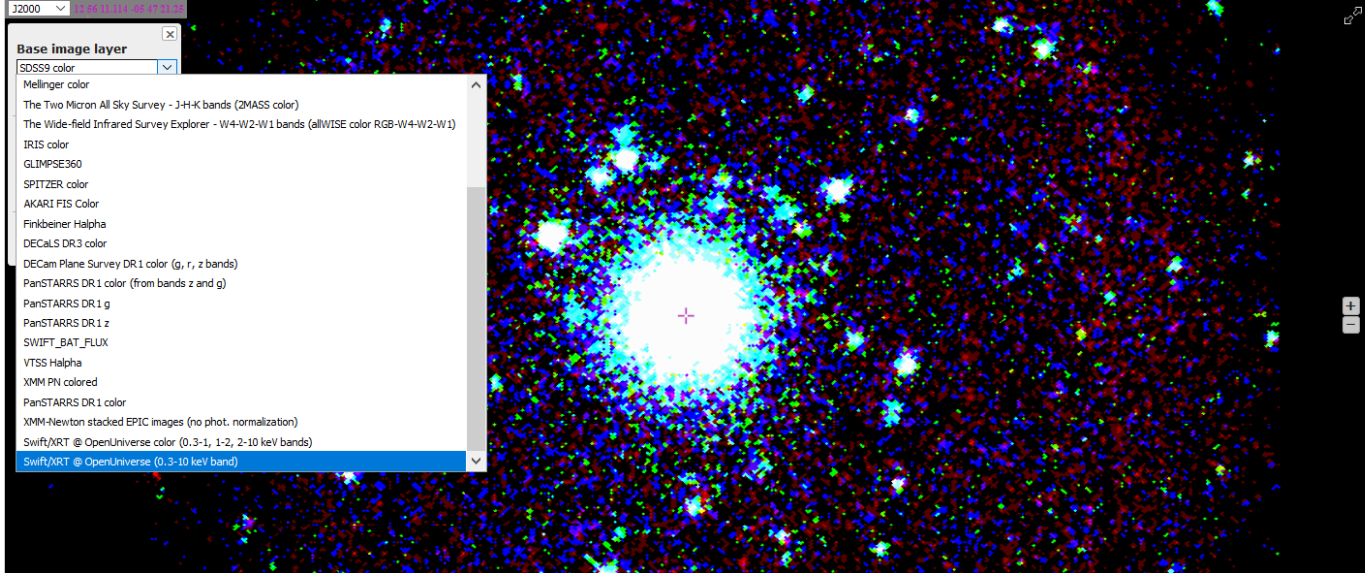
 ESASKY  SKY-MAP-ORG  Google Sky  SDSS SkyServer  Aladin Lite  Swift XRT  ESO Products  Legacy Surveys  Super Cosmos  Radio Surveys  SSDC Catalogs  SSDC R-X-O  VizieR X-R-G
 VizieR IR-Opt  HEASARC Browse  VAO Data Scope  SkyMapper  MAST Archive  CADC Archive  ESO Archive  NOAO Survey Data  NRAO Archive  ALMA Archive  ISDC HEAVENS  SSDC Archive  Radio Telescope
 INAF IAZ  Multi-File Explorer  VOU-Blazars  VOU SED  SED Builder  SED Movie  ADS Bibliography  NED Bibliography  CDSD Bibliography

Swift XRT HiPS data   جامعة نيويورك أبوظبي  NYU ABU DHABI

J2000

Base image layer

- SDSS9 color
- Mellinger color
- The Two Micron All Sky Survey - J-H-K bands (2MASS color)
- The Wide-field Infrared Survey Explorer - W4-W2-W1 bands (allWISE color RGB-W4-W2-W1)
- IRIS color
- GLIMPSE360
- SPITZER color
- AKARI FIS Color
- Finkbeiner Halpha
- DECaLS DR3 color
- DECam Plane Survey DR1 color (g, r, z bands)
- PanSTARRS DR1 color (from bands z and g)
- PanSTARRS DR1 g
- PanSTARRS DR1 z
- SWIFT_BAT_FLUX
- VTSS Halpha
- XMM PN colored
- PanSTARRS DR1 color
- XMM-Newton stacked EPIC images (no phot. normalization)
- Swift/XRT @ OpenUniverse color (0.3-1, 1-2, 2-10 keV bands)
- Swift/XRT @ OpenUniverse (0.3-10 keV band)**



This is a first version of an Open Universe web portal providing a) links to the major on-line space science open data services, and b) an evolving prototype to be used for discussions on the definition of a new generation of on-line integrated space science data archive services.

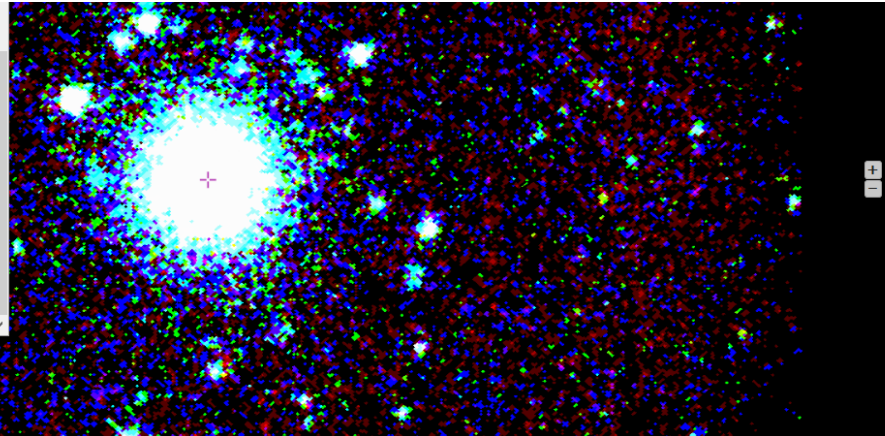
- Contribution to SSDC activities for OU:

=>Swift/XRT survey HiPS

Developed also in preparation of future application of HiPS to other SSDC archives

Question: is it possible to link single specific data products to HiPS?
And/or they should be available independently

IRIS color
GLIMPSE360
SPITZER color
AKARI FIS Color
Finkbeiner Halpha
DECaLS DR3 color
DECam Plane Survey DR1 color (g, r, z bands)
PanSTARRS DR1 color (from bands z and g)
PanSTARRS DR1 g
PanSTARRS DR1 z
SWIFT_BAT_FLUX
VTSS Halpha
XMM PN colored
PanSTARRS DR1 color
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Swift/XRT @ OpenUniverse color (0.3-1, 1-2, 2-10 keV bands)
Swift/XRT @ OpenUniverse (0.3-10 keV band)



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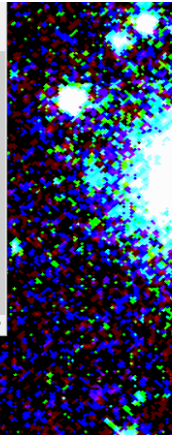
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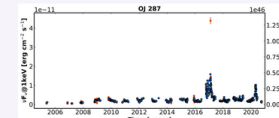


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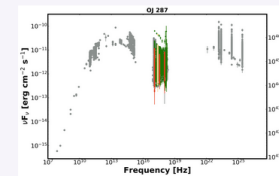
Open Universe for Blazars X-ray spectra and light-curves of blazars frequently observed by Swift

Last update: 22-March-2021

Show



Catalog Description



Export Current view of Table in: [Table format](#) | [HTML format](#) | [Raw text format](#) | [CSV text format](#) | [Browse table](#)

[Previous Page](#) | [Next Page](#) | Page Size (# of lines) | [Reset all filters](#) | [Show all entries](#)

This view includes 1556 entries

Entry number	Source name	RA (J2000.0)	Dec (J2000.0)	Physical ID (erg/cm ² /s)	Photo index	Reduced Ch2 R1	Alpha LP	Beta LP	Reduced Ch2 LogP	Photo-2.2 gl (erg/cm ² /s)	Photo-1.0 gl (erg/cm ² /s)	Observation time	
1	SSDC Data Explorer	03287	08 54 48.79	+30 06 31	5.59e-12+3.20e-13	2.57+0.11	1.26+1	2.31+0.11	0.67+0.39	1.216	7.28e-12+7.10e-13	3.97e-12+1.02e-12	58963.52484
2	SSDC Data Explorer	03287	08 54 48.79	+30 06 31	5.50e-12+2.19e-13	2.53+0.07	1.282	2.53+0.07	-0.02+0.23	1.288	7.15e-12+4.06e-13	4.12e-12+6.19e-13	58964.52325
3	SSDC Data Explorer	03287	08 54 48.79	+30 06 31	5.26e-12+2.69e-13	2.61+0.09	1.1911	2.63+0.05	-0.15+0.26	1.187	6.88e-12+3.49e-13	3.51e-12+6.90e-13	58965.58637

Summary and next steps

- Current access to SSDC data archives: MMIA & MMIA 2.0
- Allow access to various data types using SIAP/SSAP?
- For some specific SSDC tool generated products
- VOSSIA possible application
- Access to specific spectral products from within an application
- First application of HiPS for OU
- Access to archival data through HiPS or viceversa
- Future development on other archives
-



Thank you!

