

# Space Science Data Center a Research Infrastructure by ASI

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*Italian Space Agency*



ASI - Italian Space Agency

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





## ASI - 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.

ASI - Italian Space Agency

Space Science  
Data Center

Since 2017

Universe  
Observation

Information &  
Computing  
Technologies

Earth  
Observation



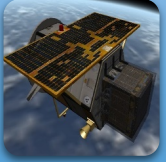
# From ASDC to SSDC

ASI Science Data Center (ASDC) was founded in 2000 after the experience acquired by the previous BeppoSAX Science Data Centre in 1990s. The goal of ASDC was to support scientific mission operations for the Universe observation and exploration. In the past 20 years ASDC has provided operational scientific support to more than **25 space missions**.



## **Beppo SAX** (Bruno Rossi Prize)

- 1996 - 2002
- X-Ray and Gamma-Ray Astrophysics



## **Agile** (Bruno Rossi Prize)

- 2007
- X-Ray and Gamma-Ray Astrophysics



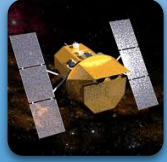
## **Gaia**

- 2013
- Astrometry and Stellar Astrophysics



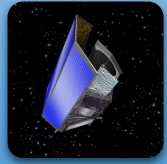
## **Fermi** (Bruno Rossi Prize)

- 2008
- X-Ray and Gamma-Ray Astrophysics



## **Swift** (Bruno Rossi Prize)

- 2004
- X-Ray and Gamma-Ray Astrophysics



## **Euclid**

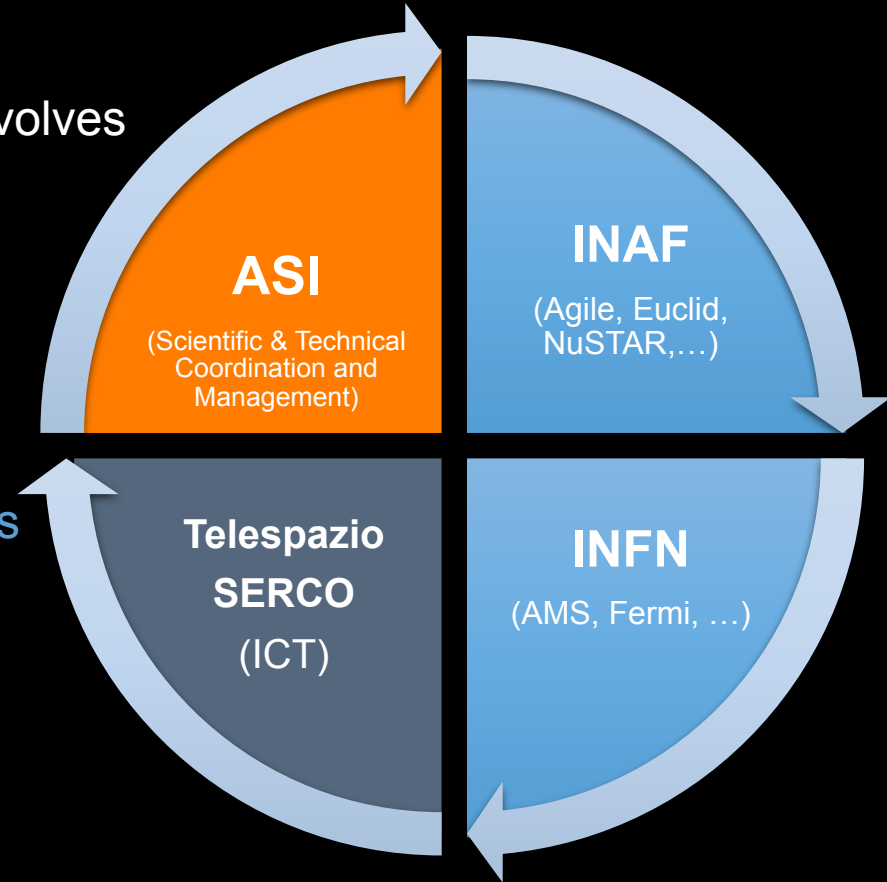
- 2022
- Dark Energy and Dark Matter

# SSDC – Universe Observation

SSDC – UO management and organization involves several Research Institutes:

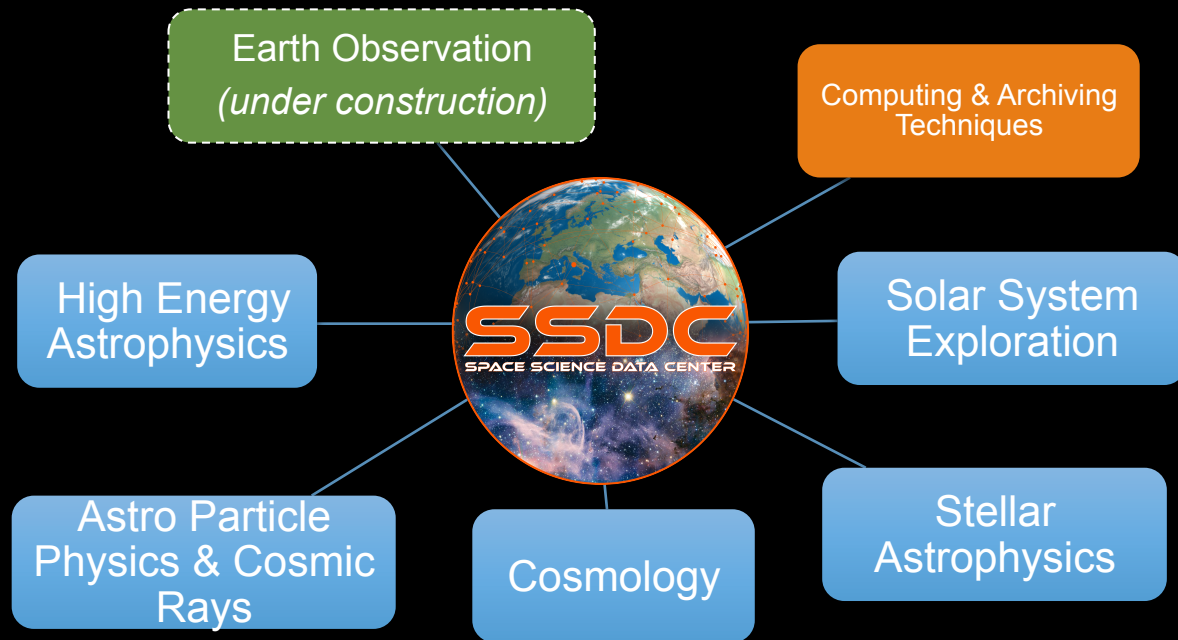
- **ASI** – Italian Space Agency
- **INAF** – National Institute for Astrophysics
- **INFN** – National Institute for Nuclear Physics

Industries are involved for Information and Communication Technology supports.



# SSDC Scientific Expertise

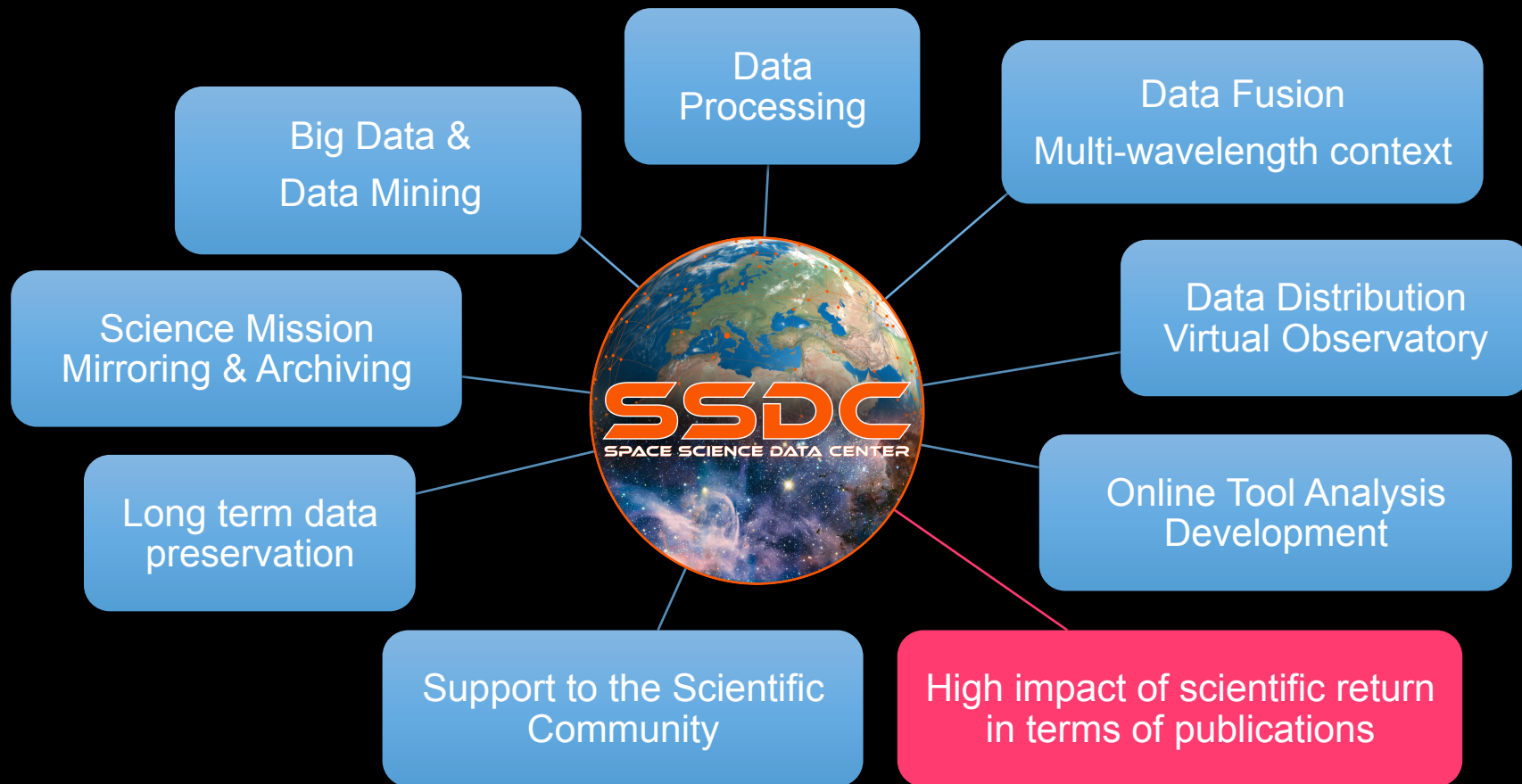
At present, SSDC team involves around 40 people: **scientists** from ASI, INAF, INFN and SW **engineers** from Telespazio & SERCO, expert in different fields.



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



# SSDC Experience



# SSDC Science Gateway

The screenshot shows the SSDC website with a blue header. On the left is the SSDC logo (a globe with 'SSDC' text). In the center is the title 'Space Science Data Center' in large orange letters. On the right is the 'agenzia spaziale italiana' logo. Below the header is a navigation bar with links: Home, About SSDC, Public Outreach, Quick Look, Missions, Multimission Archive, Catalogs, Tools, Links, Bibliographic services, Helpdesk, and Privacy. The main content area features a large image of a satellite (likely Gaia) on the left and a grid of mission icons on the right. The mission icons include AGILE, SWIFT, FERMI, NUSTAR, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAIA, HERSCHEL, BEppo SAX, SIMBOL X, CHEOPS, EUCLID, and PLATO. Below this grid is a row of icons for 'MEDIA' (SED BUILDER, SKY EXPLORER, MATISSE, GAIA PORTAL), 'TOP NEWS' (COSMIC RAY DATABASE, MULTIMISSIOn ARCHIVE FOR SPACE SCIENCE), and 'EVENTS' (SSDC CATALOGS, BIBLIOGRAPHY TOOL, NEWSLETTER). An orange arrow points from the left text box to the 'SED BUILDER' icon. A blue arrow points from the right text box to the mission icons grid.

**SSDC**  
SPACE SCIENCE DATA CENTER

**Space Science Data Center**

agenzia spaziale italiana

Home About SSDC Public Outreach Quick Look Missions Multimission Archive Catalogs Tools Links Bibliographic services Helpdesk Privacy

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

On-line Access to Space Missions Data Archives


**MEDIA**  
SED BUILDER SKY EXPLORER MATISSE GAIA PORTAL

**TOP NEWS**  
COSMIC RAY DATABASE MULTIMISSIOn ARCHIVE FOR SPACE SCIENCE


**EVENTS**  
SSDC CATALOGS BIBLIOGRAPHY TOOL NEWSLETTER

AGILE SWIFT FERMI  
NUSTAR AMS-02 PLANCK  
SOLAR SYSTEM PAMELA GAIA  
HERSCHEL BEppo SAX SIMBOL X  
CHEOPS EUCLID PLATO

# The Multi-Mission Interactive Archive



## Space Science Data Center



agenzia spaziale italiana

[Home](#) [About SSDC](#) [Public Outreach](#) [Quick Look](#) [Missions](#) [Multimission Archive](#) [Catalogs](#) [Tools](#) [Links](#) [Bibliographic services](#) [Helpdesk](#)

[Privacy](#)

### Multi-Mission Interactive Archive for Space Science

#### Astrophysics/Cosmology

#### Astrophysics/Cosmology

☒ 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

☐ Pamela

☐ AMS-02

☐ AMS-01

☐ Fermi-LAT

☐ CREAM

☐ BESS-Polar I

☐ BESS-Polar II

☐ TS93

☐ Chang'E 1 (soon available)

☐ Chang'E 2 (soon available)

#### Atmospheric Physics TGF

☐ all missions

☐ Agile

**Spectral band** (  ): from  to

[1.00e-8 keV -- 1.00e+9 keV]

**Sensitivity (mCrab):**  [1.00e+3 mCrab]

[1.00e+3 mCrab]


**Temporal range (Year):** from  to

[1975 -- 2017]


**Source name:**

**Name Resolver:** ☒ SSDC Name Server ☒ SIMBAD ☒ NED

# The Multi-Mission Interactive Archive



## Space Science Data Center



agenzia spaziale italiana

[Home](#) [About SSCD](#) [Public Outreach](#) [Quick Look](#) [Missions](#) [Multimission Archive](#) [Catalogs](#) [Tools](#) [Links](#) [Bibliographic services](#) [Helpdesk](#)

[Privacy](#)

### Multi-Mission Interactive Archive for Space Science

#### Astrophysics/Cosmology

#### Astrophysics/Cosmology

**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** ☐

☐ Pamela  
☐ AMS-02  
☐ AMS-01  
☐ Fermi-LAT  
☐ CREAM  
☐ BESS-Polar I  
☐ BESS-Polar II  
☐ TS93  
☐ Chang'E 1 (soon available)  
☐ Chang'E 2 (soon available)

#### Atmospheric Physics TGF

**all missions** ☐

☐ Agile

**Spectral band** (  ): from  to

[1.00e-8 keV -- 1.00e+9 keV]

**Sensitivity (mCrab):**  [1.00e+3 mCrab]

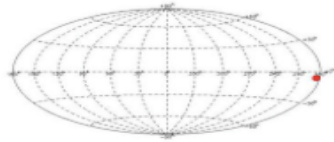
**Temporal range (Year):** from  to  [1975 -- 2017]

**Source name:**  **Name Resolver:** ☒ SSCD Name Server ☒ SIMBAD ☒ NED

# The Multi-Mission Interactive Archive

## Multi-Mission Interactive Archive

Query results for: **CRAB**  
RA = **83.6326** (deg); DEC = **22.014434** (deg); EQUINOX = 2000  
Source name resolved by **ASDS**



[Source Names](#)

Bibliographic search [?](#)

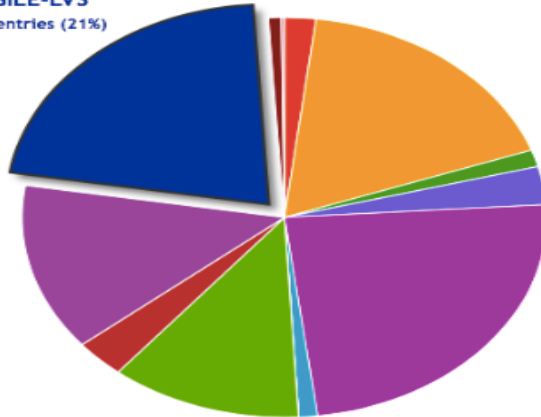
PKS0531+219

in time range between 1900 and 2017

[By name via NEO](#)

[By coordinates via ADS](#)

**AGILE-LV3**  
111 entries (21%)



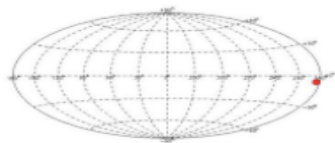
MISSION	ENTRIES
PLANCK	0
HERSCHEL	10
SWIFT	91
ASCA	7
BeppoSax NFI	16
BeppoSax WFC	124
EINSTEIN	6
EXOSAT	0
NUSTAR	61
ROSAT	16
AGILE	70
AGILE-LV3	111
EGRET	4
FERMI	1



# The Multi-Mission Interactive Archive

## Multi-Mission Interactive Archive

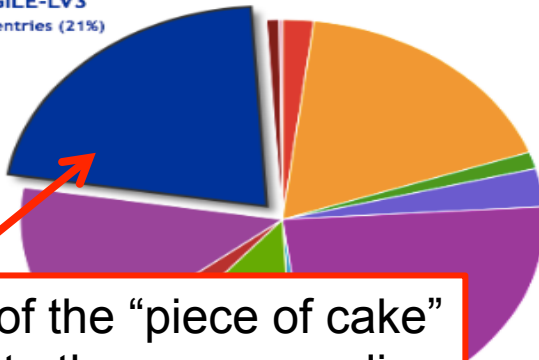
Query results for: CRA  
RA = 83.632977 (deg); DEC = 22.014434  
Source name resolved by



Source Names

Summary of the observations  
on the Crab position considering  
all the data available @ SSDC

AGILE-LV3  
111 entries (21%)



Clicking on each of the “piece of cake”  
you have access to the corresponding  
data and the interactive data analysis

MISSION	ENTRIES
PLANCK	0
HERSCHEL	10
SWIFT	91
ASCA	7
BeppoSax NFI	16
BeppoSax WFC	124
EINSTEIN	6
EXOSAT	0
NUSTAR	61
ROSAT	16
AGILE	70
AGILE-LV3	111
EGRET	4
FERMI	1

# The Multi-Mission Interactive Archive

## AGILE-LV3 Data

### Query results for: 83.632977, 22.014434 (in RA, DEC)

Details: query by **COORDINATE & TIME** with **RA** = 83.632977; **DEC** = 22.014434; **L** = 184.557455; **B** = -5.784478; **Lon** = 84.097402; **Lat** = -1.294493; **EQUINOX** = 2000; **RADIUS** = 30 degrees; **Start date** = 01-12-2007; **End date** = 03-11-2017; **Duration** = 28 day(s); **Min EXP** = 100 cm<sup>2</sup> s sr; sort by **START DATE**; max lines retrieved 5000;

[Modify AGILE-LV3 query parameters](#)

Make Light Curve: LC likelihood

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

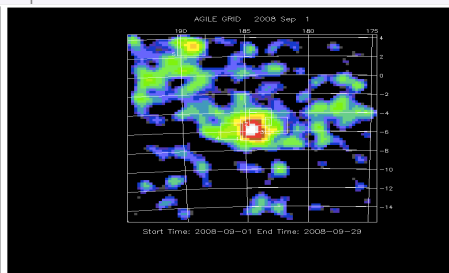
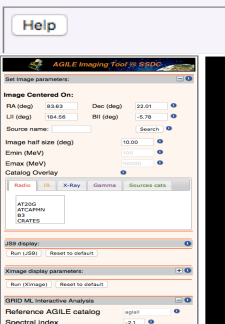
[Previous Page](#) [Next Page](#) Page Size (# of lines)  [Reset all filters](#) [Show all entries](#)

Current view includes 111 entries

Entry number		GRID LV3 data retrieval	GRID Interactive Analysis	START DATE	STOP DATE	RA (J2000)	DEC (J2000)	MEAN EXP (cm <sup>2</sup> s sr)	Dist. from searched position	
						hh mm ss.d	dd mm ss.d			
						degrees				
Selection mode:										
<div>Include</div>			<div>↑</div> <div>↓</div>	<div>↑</div> <div>↓</div>	<div>↑</div> <div>↓</div>	<div>↑</div> <div>↓</div>	<div>↑</div> <div>↓</div>	<div>↑</div> <div>↓</div> Stats	<div>↑</div> <div>↓</div>	
1	<div>✓</div> <div>Select</div>	<div>SSDC Data Explorer</div>	<div>Data Access</div>	<div>Interactive Analysis</div>	2008-01-21 12:00:00	2008-02-18 12:00:00	04 36 06.62	+17 42 29.52	863.166	14.38
2	<div>✓</div> <div>Select</div>	<div>SSDC Data Explorer</div>	<div>Data Access</div>	<div>Interactive Analysis</div>	2008-03-17 12:00:00	2008-04-14 12:00:00	04 36 06.62	+17 42 29.52	1773.82	14.38
3	<div>✓</div> <div>Select</div>	<div>SSDC Data Explorer</div>	<div>Data Access</div>	<div>Interactive Analysis</div>	2008-06-09 12:00:00	2008-07-07 12:00:00	04 36 06.62	+17 42 29.52	163.635	14.38
4	<div>✓</div> <div>Select</div>	<div>SSDC Data Explorer</div>	<div>Data Access</div>	<div>Interactive Analysis</div>	2008-07-07 12:00:00	2008-08-04 12:00:00	04 36 06.62	+17 42 29.52	1343.54	14.38

# The Multi-Mission Interactive Archive

## AGILE-LV3 Data



Query results for: 83.632977, 22.014434 (in RA, DEC)

with RA = 83.632977; DEC = 22.014434; L = 184.557455; B = -5.784478; Lon = 84.097402; Lat = -1.294493; EQUINOX = 2000; Start date = 12-2007; End date = 03-11-2017; Duration = 28 day(s); Min EXP = 100 cm<sup>2</sup> s sr; sort by **START DATE**; max lines retrieved 5000;

[Modify AGILE-LV3 query parameters](#)

Make Light Curve:

Export Current view of Table in:

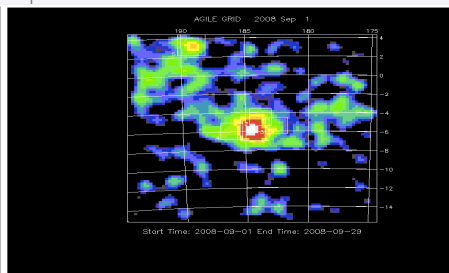
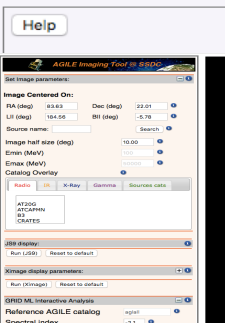
[Previous Page](#) [Next Page](#) Page Size (# of lines)

Current view includes 111 entries

Entry number		GRID LV3 data retrieval	GRID Interactive Analysis	START DATE	STOP DATE	RA (J2000) hh mm ss.d	DEC (J2000) dd mm ss.d	MEAN EXP (cm <sup>2</sup> s sr)	Dist. from searched position degrees
Selection mode: <input type="button" value="Include"/> <input checked="" type="checkbox"/> All									
1	<input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	<input type="button" value="Data Access"/> <input type="button" value="Interactive Analysis"/>	2008-01-21 12:00:00	2008-02-18 12:00:00	04 36 06.62	+17 42 29.52	863.166	14.38
2	<input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	<input type="button" value="Data Access"/> <input type="button" value="Interactive Analysis"/>	2008-03-17 12:00:00	2008-04-14 12:00:00	04 36 06.62	+17 42 29.52	1773.82	14.38
3	<input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	<input type="button" value="Data Access"/> <input type="button" value="Interactive Analysis"/>	2008-06-09 12:00:00	2008-07-07 12:00:00	04 36 06.62	+17 42 29.52	163.635	14.38
4	<input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	<input type="button" value="Data Access"/> <input type="button" value="Interactive Analysis"/>	2008-07-07 12:00:00	2008-08-04 12:00:00	04 36 06.62	+17 42 29.52	1343.54	14.38

# The Multi-Mission Interactive Archive

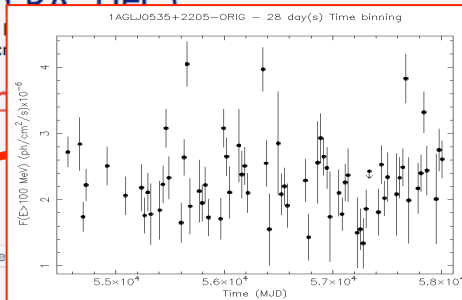
## AGILE-LV3 Data



Query results for: 83.632977, 22.014434 (in RA, DEC)  
with RA = 83.632977; DEC = 22.014434; L = 184.557455; B = -5.784478;  
Start date = 02-2007; End date = 03-11-2017; Duration = 28 day(s); Min EXP = 100 c

Modify AGILE-LV3 query parameter

Make Light Curve: LC likelihood



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

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

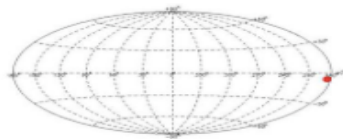
Current view includes 111 entries

Entry number		GRID LV3 data retrieval	GRID Interactive Analysis	START DATE	STOP DATE	RA (J2000) hh mm ss.d	DEC (J2000) dd mm ss.d	MEAN EXP (cm² s sr)	Dist. from searched position degrees
Selection mode:									
<input type="button" value="Include"/>			<input type="button" value="↑"/> <input type="button" value="↓"/>	<input type="button" value="↑"/> <input type="button" value="↓"/>	<input type="button" value="↑"/> <input type="button" value="↓"/>	<input type="button" value="↑"/> <input type="button" value="↓"/>	<input type="button" value="↑"/> <input type="button" value="↓"/>	<input type="button" value="↑"/> <input type="button" value="↓"/> Stats	<input type="button" value="↑"/> <input type="button" value="↓"/>
<input checked="" type="checkbox"/> All									
1	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	Data Access	Interactive Analysis	2008-01-21 12:00:00 2008-02-18 12:00:00	04 36 06.62	+17 42 29.52	863.166	14.38
2	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	Data Access	Interactive Analysis	2008-03-17 12:00:00 2008-04-14 12:00:00	04 36 06.62	+17 42 29.52	1773.82	14.38
3	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	Data Access	Interactive Analysis	2008-06-09 12:00:00 2008-07-07 12:00:00	04 36 06.62	+17 42 29.52	163.635	14.38
4	<input checked="" type="checkbox"/> Select	SSDC Data Explorer	Data Access	Interactive Analysis	2008-07-07 12:00:00 2008-08-04 12:00:00	04 36 06.62	+17 42 29.52	1343.54	14.38

# The Multi-Mission Interactive Archive

## Multi-Mission Interactive Archive

Query results for: **CRAB**  
RA = **83.632977** (deg); DEC = **22.014434** (deg); EQUINOX = **2000**  
Source name resolved by **ASDC**



[Source Names](#)

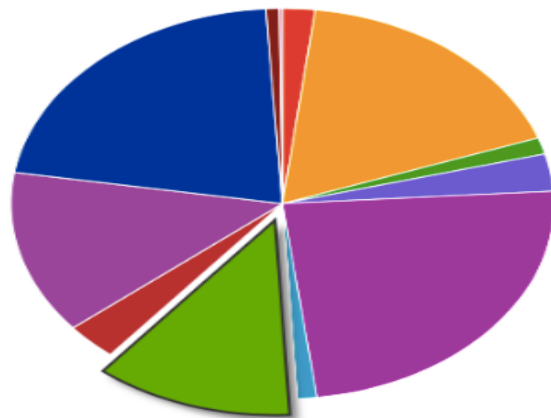
Bibliographic search [?](#)

PKSB0531+219

in time range between 1900 and 2017

[By name via NED](#)

[By coordinates via ADS](#)

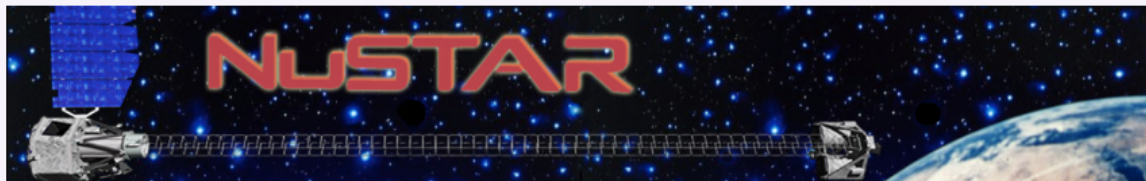


**NUSTAR**  
61 entries (12%)

MISSION	ENTRIES
PLANCK	0
HERSCHEL	10
SWIFT	91
ASCA	7
BeppoSax NFI	16
BeppoSax WFC	124
EINSTEIN	6
EXOSAT	0
NUSTAR	61
ROSAT	16
AGILE	70
AGILE-LV3	111
EGRET	4
FERMI	1



# The Multi-Mission Interactive Archive



Query results for: **83.632977, 22.014434 (in RA, DEC)**

Details: query by **COORDINATE** with **RA** = 83.632977; **DEC** = 22.014434; **EQUINOX** = 2000; **RADIUS** = 10 arcmin; sort by **RA**; max lines retrieved: 5000 (on BROWSE catalog **numaster**)

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)  [Reset all filters](#) [Show all entries](#)

view includes 61 entries

Entry number		Archive	Interactive Analysis	Target Name	obsid	RA (J2000)	Dec (J2000)	time	public_date	exposure_a	exposure_b	status	Dist. from searched position	
						hh mm ss.d	dd mm ss.d						arcmin	
Selection mode:														
<div><input type="button" value="Include"/> <input checked="" type="button" value="All"/></div>														
	<div><input type="button" value="Select"/></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Stats"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Stats"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Stats"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/></div>	<div><input type="button" value="Up"/> <input type="button" value="Down"/> <input type="button" value="Stats"/></div>	
1	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL15	10013035002	05 34 07.39	+22 03 48.24	Feb 15, 2013 05:11:00	Sep 23, 2014 00:00:00	9401.2191	9919.6823	ARCHIVED	6.3
2	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL08	10013028002	05 34 10.36	+22 00 42.12	Sep 28, 2012 00:21:00	Sep 23, 2014 00:00:00	1601.8016	1564.5691	ARCHIVED	4.9
3	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_OA04	10013004002	05 34 10.89	+22 01 14.52	Jul 24, 2012 17:06:00	Sep 23, 2014 00:00:00	308.8379	298.59	ARCHIVED	4.8
4	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL08	10013028004	05 34 11.85	+22 00 51.47	Sep 28, 2012 05:11:00	Sep 23, 2014 00:00:00	1254.35	1225.3015	ARCHIVED	4.6
5	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL07	10013027004	05 34 14.06	+22 01 10.92	Sep 27, 2012 09:51:00	Sep 23, 2014 00:00:00	1105.0882	1090.9042	ARCHIVED	4.1
6	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL07	10013027002	05 34 14.59	+22 01 14.88	Sep 27, 2012 04:56:00	Sep 23, 2014 00:00:00	1182.0179	1166.5398	ARCHIVED	4
7	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_OA10	10013010001	05 34 17.01	+22 02 10.68	Jul 25, 2012 15:26:00	Sep 23, 2014 00:00:00	282.832	280.6575	ARCHIVED	3.6
8	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL13	10013033002	05 34 17.28	+21 59 13.56	Dec 19, 2012 22:46:00	Sep 23, 2014 00:00:00	1383.0562	1410.8179	ARCHIVED	3.7
9	<div><input checked="" type="checkbox"/> <div><input type="button" value="Select"/></div></div>	<div><input type="button" value="SSDC Data Explorer"/></div>	<div><input type="button" value="Data Access"/></div>	<div><input type="button" value="Interactive Analysis"/></div>	CRAB_CAL04	10013024002	05 34 18.72	+22 00 04.32	Sep 20, 2012 11:16:00	Sep 23, 2014 00:00:00	2258.5909	2246.7719	ARCHIVED	3.1

# The Multi-Mission Interactive Archive



Query results for: **83.632977, 22.014434 (in RA, DEC)**

Details: query by COORDINATE with RA = 83.632977; DEC = 22.014434; EQUINOX = 2000; RADIUS = 10 arcmin; sort by RA; max lines retrieved: 5000 (on BROWSE catalog numaster)

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)  [Reset all filters](#) [Show all entries](#)

Direct access to the  
*SSDC Data Explorer* tool

view includes 61 entries

Entry number	Archive	Interactive Analysis	Target Name	obsid	RA (J2000)		Dec (J2000)		time	public_date	exposure_a	exposure_b	status	Dist. from searched position
					hh mm ss.d		dd mm ss.d							
Selection mode: <div><input checked="" type="checkbox"/> Include <input type="checkbox"/> All</div>														
1	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL15	10013035002	05 34 07.39	+22 03 48.24	Feb 15, 2013 05:11:00	Sep 23, 2014 00:00:00	9401.2191	9919.6823	ARCHIVED	6.3
2	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL08	10013028002	05 34 10.36	+22 00 42.12	Sep 28, 2012 00:21:00	Sep 23, 2014 00:00:00	1601.8016	1564.5691	ARCHIVED	4.9
3	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_OA04	10013004002	05 34 10.89	+22 01 14.52	Jul 24, 2012 17:06:00	Sep 23, 2014 00:00:00	308.8379	298.59	ARCHIVED	4.8
4	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL08	10013028004	05 34 11.85	+22 00 51.47	Sep 28, 2012 05:11:00	Sep 23, 2014 00:00:00	1254.35	1225.3015	ARCHIVED	4.6
5	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL07	10013027004	05 34 14.06	+22 01 10.92	Sep 27, 2012 09:51:00	Sep 23, 2014 00:00:00	1105.0882	1090.9042	ARCHIVED	4.1
6	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL07	10013027002	05 34 14.59	+22 01 14.88	Sep 27, 2012 04:56:00	Sep 23, 2014 00:00:00	1182.0179	1166.5398	ARCHIVED	4
7	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_OA10	10013010001	05 34 17.01	+22 02 10.68	Jul 25, 2012 15:26:00	Sep 23, 2014 00:00:00	282.832	280.6575	ARCHIVED	3.6
8	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL13	10013033002	05 34 17.28	+21 59 13.56	Dec 19, 2012 22:46:00	Sep 23, 2014 00:00:00	1383.0562	1410.8179	ARCHIVED	3.7
9	<div>Select</div>	SSDC Data Explorer	Data Access	<div>Interactive Analysis</div>	CRAB_CAL04	10013024002	05 34 18.72	+22 00 04.32	Sep 20, 2012 11:16:00	Sep 23, 2014 00:00:00	2258.5909	2246.7719	ARCHIVED	3.1

# The Multi-Mission Interactive Archive

Direct access to the  
*SSDC Data Explorer* tool

view includes 61 entries


Entry number	Archive	Interactive Analysis	Target Name	obsid
Selection mode: <input type="checkbox"/> All <input checked="" type="checkbox"/> Include				
1 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL15 10013035002
2 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL08 10013028002
3 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_OA04 10013004002
4 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL08 10013028004
5 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL07 10013027004
6 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL07 10013027002
7 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_OA10 10013010001
8 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL13 10013033002
9 <input checked="" type="checkbox"/>	<a href="#">SSDC Data Explorer</a>	<a href="#">Data Access</a>	<a href="#">Interactive Analysis</a>	CRAB_CAL04 10013024002

SSDC-resident astronomical catalogs		Search Other Services	Bibliography search
Group of Catalogs	Selected Catalogs	VIZIER(X-R-G) VIZIER(O-IR) NED SIMBAD HEASARC(X-R-G) GSC2 STSCL MAST 2MASS SDSS USNO-B1.0 NVO	NGC1952 in time range between 1900 and 2017 By name via NED By coordinates via ADS
Radio IR Optical X-ray Gamma	QORG AGN BZCAT ZCAT NGC ZWICKY	Search radius 0.2 arcmin	Search radius 0.2 arcmin
Access to Public Data Archives			

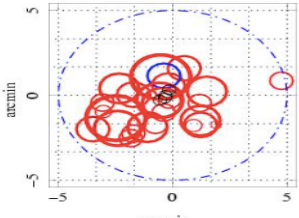
  

05 34 12.60	+22 01 10.52	Sep 27, 2012 05:34:00	Sep 23, 2014 00:00:00	1182.0179	1166.5398	ARCHIVED	4
05 34 17.01	+22 02 10.68	Jul 25, 2012 15:26:00	Sep 23, 2014 00:00:00	282.832	280.6575	ARCHIVED	3.6
05 34 17.28	+21 59 13.56	Dec 19, 2012 22:46:00	Sep 23, 2014 00:00:00	1383.0562	1410.8179	ARCHIVED	3.7
05 34 18.72	+22 00 04.32	Sep 20, 2012 11:16:00	Sep 23, 2014 00:00:00	2258.5909	2246.7719	ARCHIVED	3.1



Entry CRAB  
R.A. (J2000) = 05 34 29.54 (83.6231 deg) l=184.54  
Dec (J2000) = +22 01 09.48 (22.0193 deg) b=-5.79  
Galactic nH = 3.26E+21 (cm^-2) [Source Names](#)

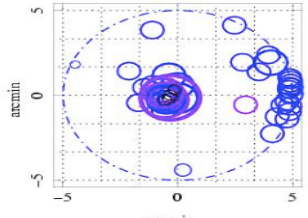
Error circle EXPLORER Source Details



arcmin  
show sources list  
download image in ps format

TUTORIAL HELP

Default catalogs (always selected)  
Selectable catalogs:  
Default selection []  
Radio [select]  
Infrared [select]  
Optical [select]  
X-Ray [select]  
Gamma [select]  
Source Catalogs [select]  
[Selected catalog List >>]  
size (arcmin) 5  
Create new image.



arcmin  
show sources list  
download image in ps format

Position selected for the analysis: R.A.=05 34 29.54 (83.6231 deg) l=184.54  
Dec=+22 01 09.48 (22.0193 deg) b=-5.79 [SED Builder](#) [Source Names](#)  
[Reset Position](#) Galactic nH= 3.26E+21 (cm^-2)

Additional Services -

SSDC-resident astronomical catalogs	Search Other Services	Bibliography search
Group of Catalogs Radio IR Optical X-ray Gamma	Selected Catalogs QORG AGN BZCAT ZCAT NGC ZWICKY	VIZIER(X-R-G) VIZIER(O-IR) NED SIMBAD HEASARC(X-R-G) GSC2 STSCL MAST 2MASS SDSS USNO-B1.0 NVO
Search radius 0.2 arcmin	Search radius 0.2 arcmin	NGC1952 in time range between 1900 and 2017 By name via NED By coordinates via ADS

Access to Public Data Archives -

# The Multi-Mission Interactive Archive

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

Query results

Details: query by **COORDINATE** with RA = 83.632977; DEC = 184.54

Export Current view of Table

Previous Page Next Page

view includes 61 entries

Entry number	Archive	Interactive Analysis	Target Name	obsid
Selection mode: Include All				
1 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL15 10013035002
2 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL08 10013028002
3 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_OA04 10013004002
4 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL08 10013028004
5 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL07 10013027004
6 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL07 10013027002
7 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_OA10 10013010001
8 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL13 10013033002
9 <input checked="" type="checkbox"/> <a href="#">Select</a>	SSDC Data Explorer	Data Access	<a href="#">Interactive Analysis</a>	CRAB_CAL04 10013024002

SSDC SPACE SCIENCE DATA CENTER

Entry CRAB  
R.A. (J2000) = 05 34 29.54 (83.6231 deg) l=184.54  
Dec (J2000) = +22 01 09.48 (22.0193 deg) b=-5.79  
Galactic nH = 3.26E+21 (cm<sup>-2</sup>) [Source Names](#)

Error circle EXPLORER Source Details

TUTORIAL HELP

Default catalogs

Access to the *SEDBuilder* tool

Position selected for the analysis: R.A.=05 34 29.54 (83.6231 deg) l=184.54  
Dec=+22 01 09.48 (22.0193 deg) b=-5.79  
Galactic nH= 3.26E+21 (cm<sup>-2</sup>) [SED Builder](#) [Source Names](#)

Additional Services -

SSDC-resident astronomical catalogs  
Group of Catalogs Selected Catalogs  
Radio IR Optical GORG AGN BZCAT  
X-ray Gamma ZCAT NGC ZWICKY

Search radius 0.2 arcmin

Search Other Services  
VIZIER(X-R-G) VIZIER(O-IR) NED  
SIMBAD HEASARC(X-R-G)  
GSC2 STSCL MAST 2MASS  
SDSS USNO-B1.0 NVO

Search radius 0.2 arcmin

Bibliography search  
NGC1952  
in time range between  
1900 and 2017  
By name via NED  
By coordinates via ADS

Access to Public Data Archives -

05 34 29.54	+22 01 09.48	Sep 27, 2012 04:56:00	Sep 23, 2014 00:00:00	1182.0179	1166.5398	ARCHIVED	4
05 34 17.01	+22 02 10.68	Jul 25, 2012 15:26:00	Sep 23, 2014 00:00:00	282.832	280.6575	ARCHIVED	3.6
05 34 17.28	+21 59 13.56	Dec 19, 2012 22:46:00	Sep 23, 2014 00:00:00	1383.0562	1410.8179	ARCHIVED	3.7
05 34 18.72	+22 00 04.32	Sep 20, 2012 11:16:00	Sep 23, 2014 00:00:00	2258.5909	2246.7719	ARCHIVED	3.1



# The Multi-Mission Interactive Archive

Help

Show/hide columns

Advanced filtering

Print current view of table

Print complete table

Reset all filters

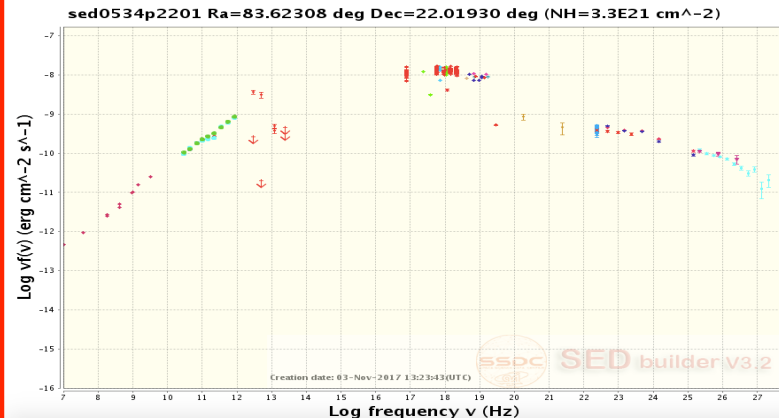
Query results

Details: query by **COORDINATE** with RA = 83.632977; DEC = 22.01930

Export Current view of Table

## SED<sup>(t)</sup> builder V 3.2

A tool to build and handle Spectral Energy Distributions, time-resolved SEDs and multi-frequency light-curves



SSDC SPACE SCIENCE DATA CENTER

Entry CRAB

R.A. (J2000) = 05 34 29.54 (83.6231 deg) l=184.54  
Dec (J2000) = +22 01 09.48 (22.0193 deg) b=-5.79  
Galactic NH = 3.26E+21 (cm<sup>-2</sup>) [Source Names](#)

Error circle EXPLORER Source Details

TUTORIAL HELP

Default catalogs

Access to the SEDBuilder tool

Source Catalogs [select] ☐  
(selected catalog List >>)

arcmin (5) [show sources list](#)  
[download image in ps format](#)  
new image

(83.6231 deg) l=184.54  
(22.0193 deg) b=-5.79  
E+21 (cm<sup>-2</sup>) [SED Builder](#) [Source Names](#)

Data citation policy - please read

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

SSDC-resident Catalogs Expand all Collapse all

Energy Band / Catalog Name	Options	View
Radio	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Infrared	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AKARI/FIS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
AKARI/IRC	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
DENIS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HATLASDR1	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
HERSCHEL	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
IRAS	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
WISE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Optical UV	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
Soft X Ray	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
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Gamma Ray	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>
VHE	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

Search Other Services

IR (X-R-G) VIZIER (O-IR) NED  
SDSS (U-G-R-I-Z) HEASARC (X-R-G)  
2MASS STSCL MAST 2MASS  
SS USNO-B1.0 NVO

Search radius 0.2 arcmin

Bibliography search

NGC1952  
In time range between  
1900 and 2017  
By name via NED  
By coordinates via ADS

RA (J2000)	Dec (J2000)	l	b	Source	Value
05 34 29.54	+22 01 09.48	184.54	-5.79	ARCHIVED	4
05 34 29.54	+22 01 09.48	184.54	-5.79	ARCHIVED	3.6
05 34 29.54	+22 01 09.48	184.54	-5.79	ARCHIVED	3.7
05 34 29.54	+22 01 09.48	184.54	-5.79	ARCHIVED	3.1



ASI - Italian Space Agency

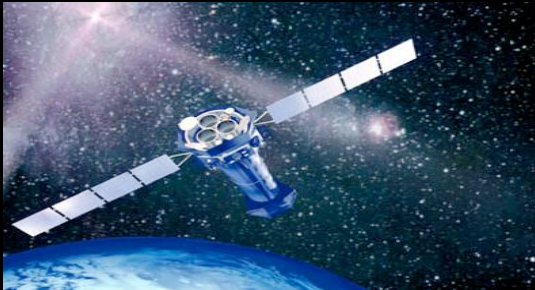
Space Science  
Data Center

Universe  
Observation

Information &  
Computing  
Technologies

Earth  
Observation

Since 2017



# SSDC – Earth Observation

SSDC is part of the Scientific Ground Segment of the Chinese mission CSES (China Seismo-Electromagnetic Satellite) with the Italian participation (ASI + INFN) LIMADOU. The mission (launch in 2018) is dedicated to explore terrestrial electric and magnetic fields.

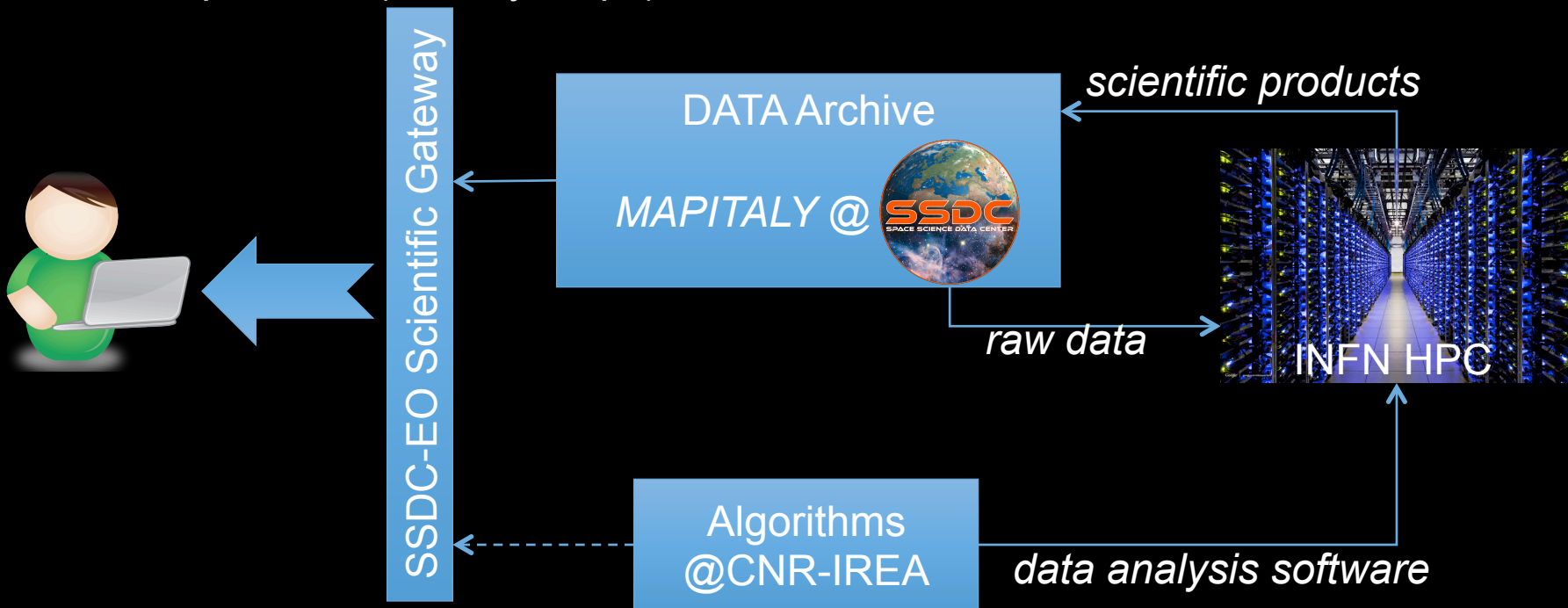
SSDC will process data from Lev0 to Lev2 of LIMADOU payload and will allow access to the italian scientific community to Lev2 data of all other instruments of CSES.

Measurement of the electrical and magnetic fields and their perturbations in ionosphere	Search-Coil Magnetometer
	Fluxgate Magnetometer
	Electric Field Detector (EFD)
Measurement of the disturbance of plasma in ionosphere	Plasma analyzer
	Langmuir probe
Measurement of the flux and energy spectrum of the particles in the radiation belts	High Energetic Particle Detector (HEPD)
Measurement of the profile of electronic content	GPS Occultation Receiver
	Tri-frequency transmitter

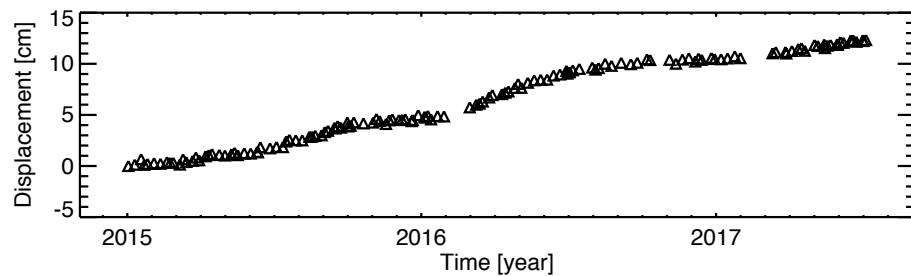
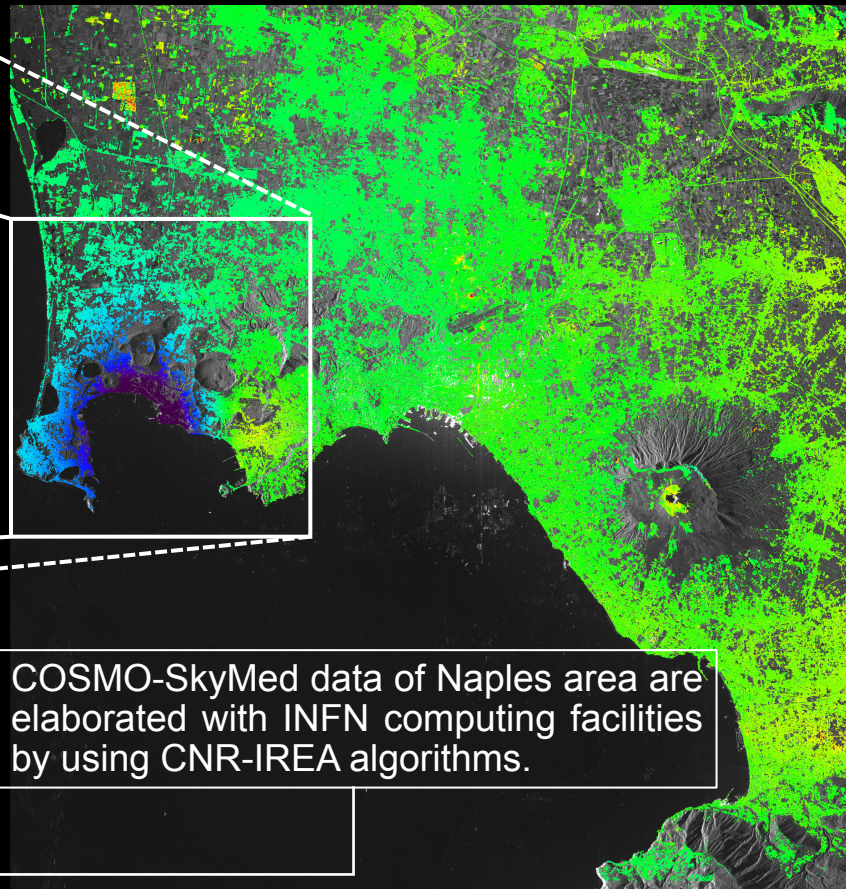
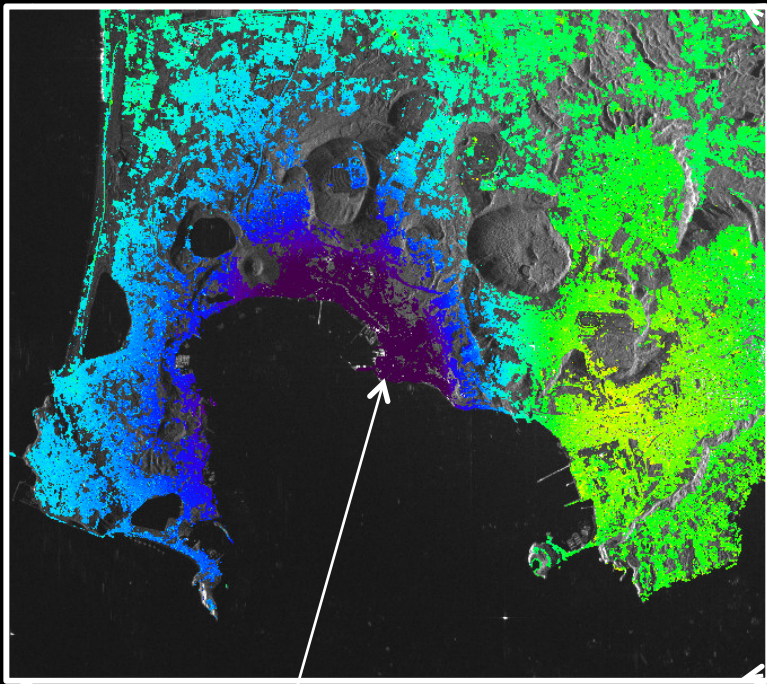


# SSDC – Earth Observation

A pilot project in SSDC to support Earth Observation scientific research. The project is aimed to allow access to a subset of COSMO-SkyMed data (MapItaly) as well as scientific products (velocity maps) obtained in collaboration with CNR and INFN.







COSMO-SkyMed data of Naples area are elaborated with INFN computing facilities by using CNR-IREA algorithms.

# SSDC – Information & Computing Technology

The SSDC – ICT office is devoted to support both data archiving and data analysis techniques in SSDC. Research & Development activities in ICT play an important role for this office in view of the Big Data management.

The *Artificial Intelligence for Astronomy* (AlfA) project is carried on together with the GeoInformation Dept. at University of Tor Vergata, INAF, E4 within the H2020 ASTERICS Project.

AlfA aims to develop new algorithms for image analysis for astronomy, astroparticle and Earth observation using Deep Neural Networks.





