

Space Science Data Center a Research Infrastructure by ASI

M. Giardino

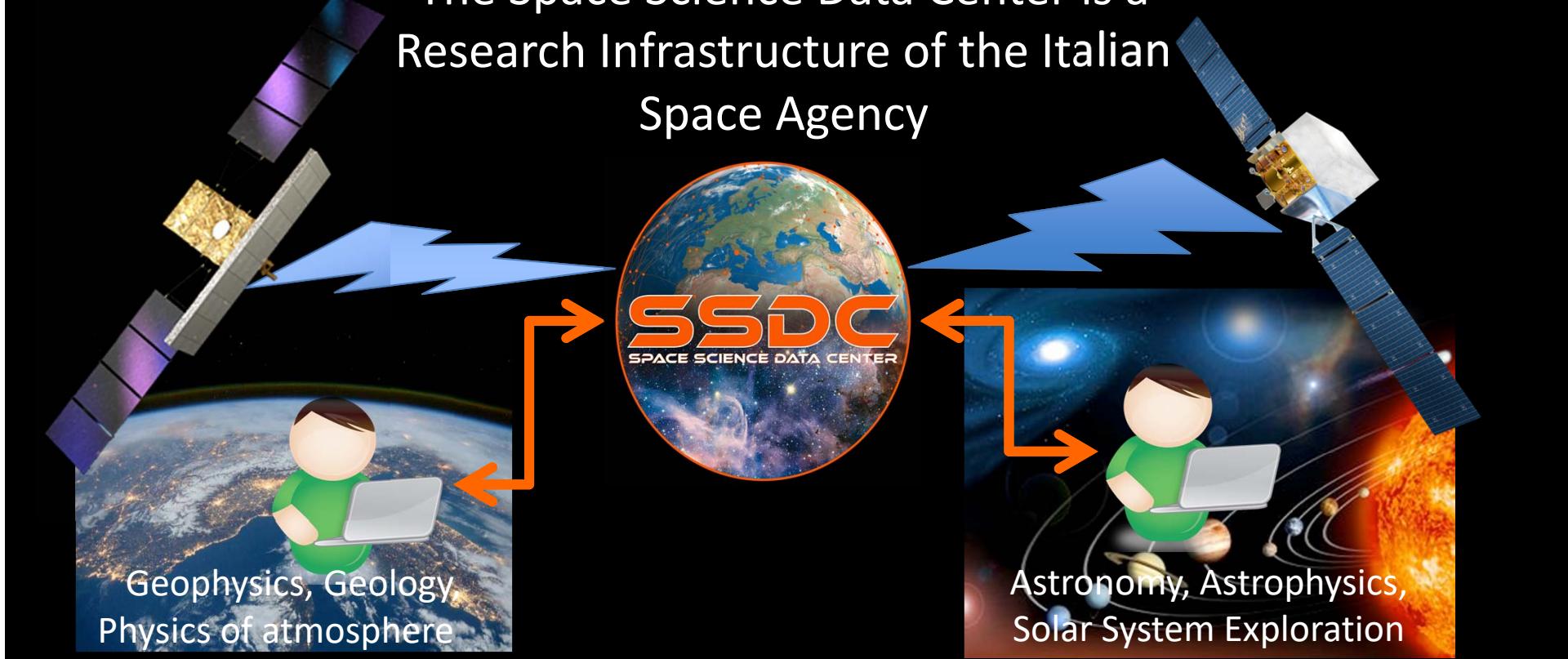
Italian Space Agency





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

Since 2017

ex-ASDC

Universe
Observation

Space Science
Data Center

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



Fermi ([Bruno Rossi Prize](#))

- 2008
- X-Ray and Gamma-Ray Astrophysics



Agile ([Bruno Rossi Prize](#))

- 2007
- X-Ray and Gamma-Ray Astrophysics



Swift ([Bruno Rossi Prize](#))

- 2004
- X-Ray and Gamma-Ray Astrophysics



Gaia

- 2013
- Astrometry and Stellar Astrophysics



Euclid

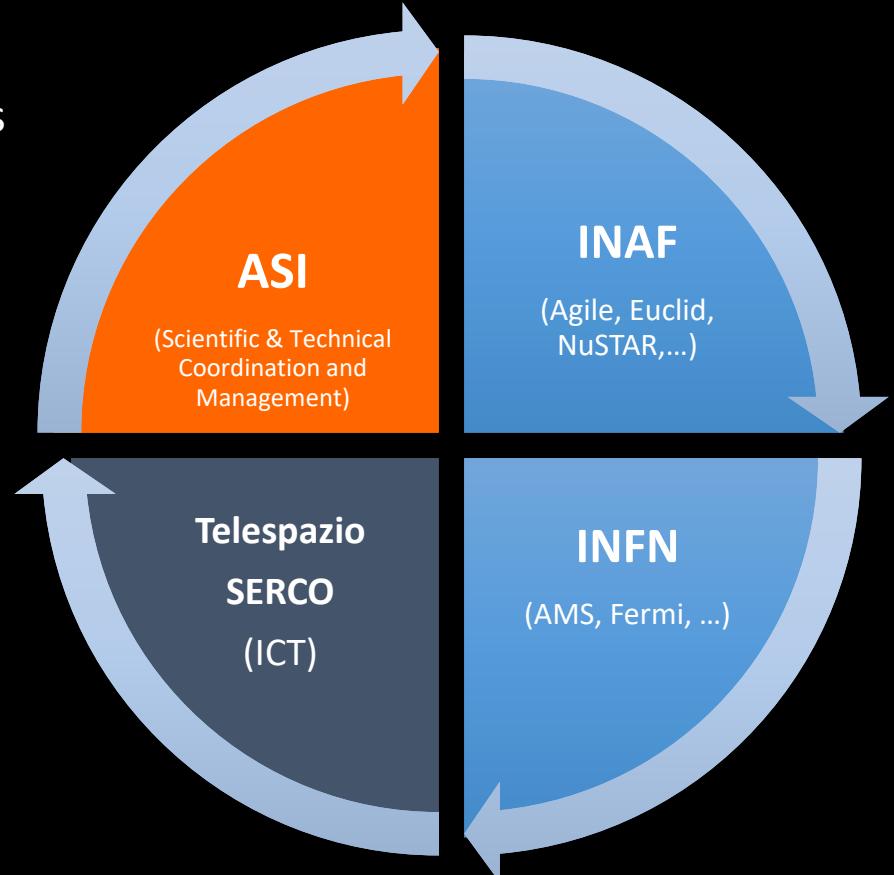
- 2022
- Dark Energy and Dark Matter

SSDC – Universe Observation

SSDC – UO management and organization involves several Research Institutes:

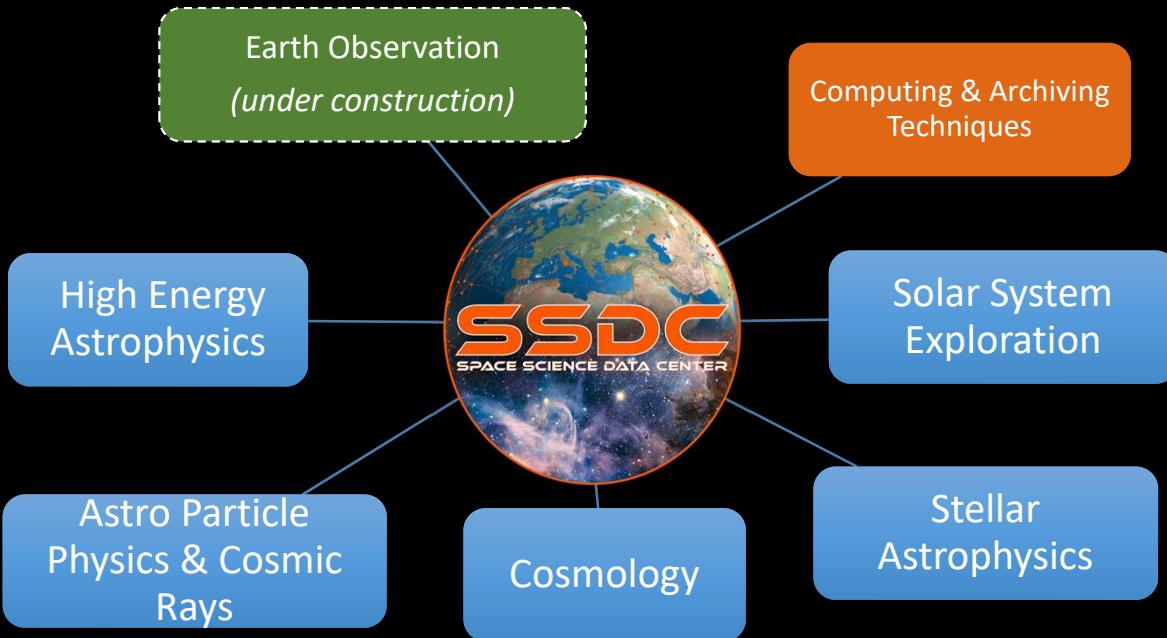
- **ASI** – Italian Space Agency
- **INAF** – National Institute for Astrophysics
- **INFN** – National Institute for Nuclear Physics

Industries are involved for Information and Communication Technology supports.



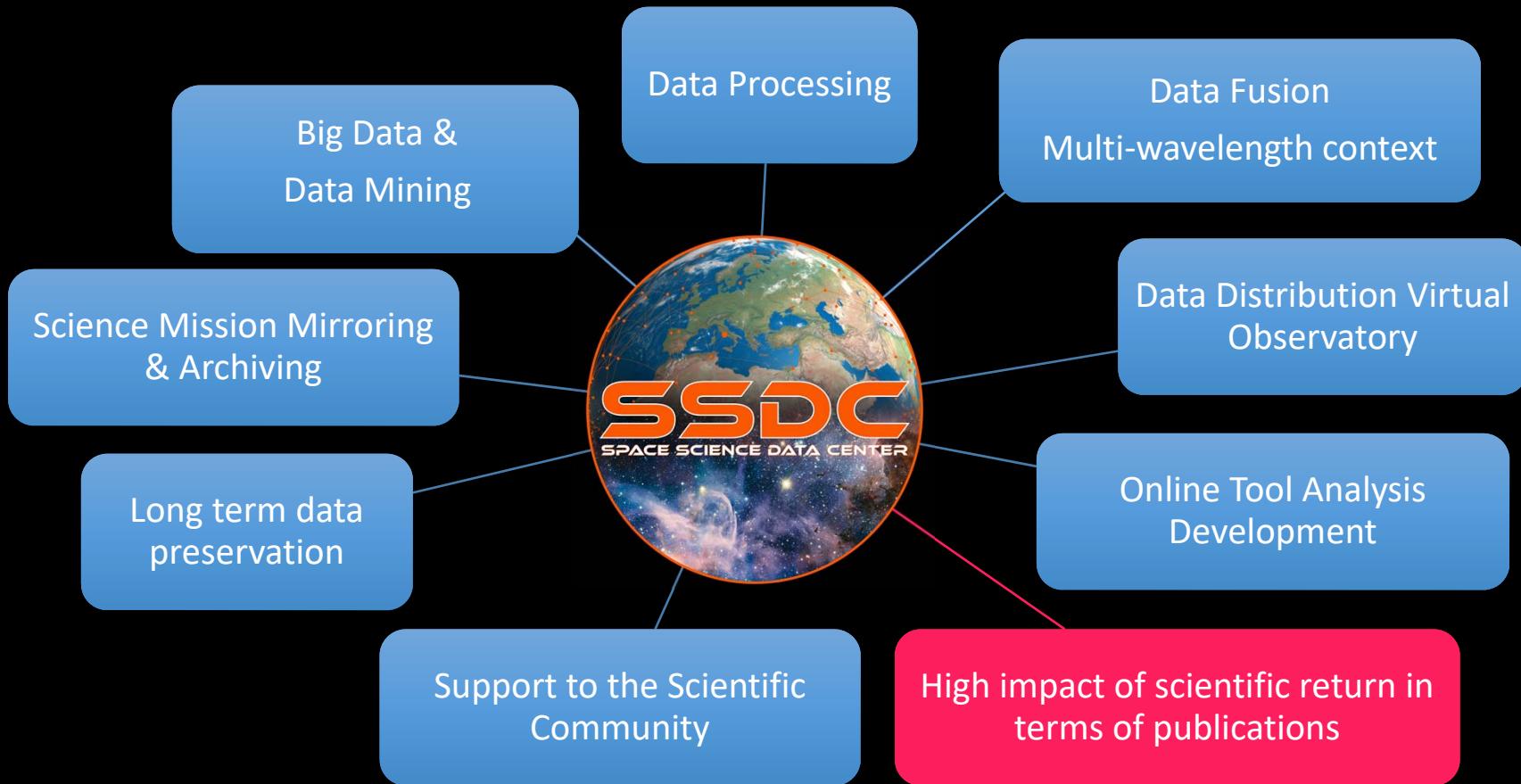
SSDC Scientific Expertise

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 homepage of the Space Science Data Center (SSDC) Science Gateway. The top navigation bar includes links for 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 in space, a red and yellow heat map, and a small inset graph. To the right is a grid of mission logos: AGILE, SWIFT, FERMI, NUSTAR, AMS-02, PLANCK, SOLAR SYSTEM, PAMELA, GAYA, HERSCHEL, BEPPO SAX, SIMBOL X, CHEOPS, EUCLID, and PLATO. Below this are sections for MEDIA (SEDn' BUILDER, SKY EXPLORER, MATISSE), TOP NEWS, CATALOGS (SSDC MULTIMISSION ARCHIVE FOR SPACE SCIENCE, SSDC CATALOGS, SSDC BIBLIOGRAPHY TOOL, NEWSLETTER), and EVENTS.

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

On-line Access to Space Missions Data Archives

The Multi-Mission Interactive Archive

The screenshot shows the homepage of the Space Science Data Center (SSDC). The header features the SSDC logo and the text "Space Science Data Center". Below the header is a navigation menu with links to Home, About SSDC, Public Outreach, Quick Look, Missions, Multimission Archive, Catalogs, Tools, Links, Bibliographic services, and Helpdesk. A "Privacy" link is also present. The main content area has a banner titled "Multi-Mission Interactive Archive for Space Science" and "Astrophysics/Cosmology". Below the banner, there are five filter panels: "Astrophysics/Cosmology", "Exploration of the Solar System", "Particle Astrophysics Cosmic rays", "Atmospheric Physics TGF", and "all missions". The "Astrophysics/Cosmology" panel contains filters for Radio-Micro wave, IR-Optic-UV, X ray, and Gamma ray missions. The "Exploration of the Solar System" panel lists Rosetta, Dawn, Chang'E 1, Chang'E 2, and Messenger. The "Particle Astrophysics Cosmic rays" panel lists Pamela, AMS-02, AMS-01, Fermi-LAT, CREAM, BESS-Polar I, BESS-Polar II, TS93, Chang'E 1 (soon available), and Chang'E 2 (soon available). The "Atmospheric Physics TGF" panel lists Agile. At the bottom, there are search filters for Spectral band (Energy from $1e-8$ to $1e9$ keV), Sensitivity (mCrab from $1e-3$ to $1.00e+3$ mCrab), and Temporal range (Year from 1975 to 2017). A "Submit" button is located to the right of the temporal range filter. At the very bottom, there is a "Source name:" input field and a "Name Resolver:" checkbox group containing SSDC Name Server, SIMBAD, and NED.

The Multi-Mission Interactive Archive

Space Science Data Center

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 (Energy (keV)): from $1e-8$ to $1e9$

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

Sensitivity (mCrab): $1e3$

[$1.00e+3$ mCrab]

Temporal range (Year): from 1975 to 2017

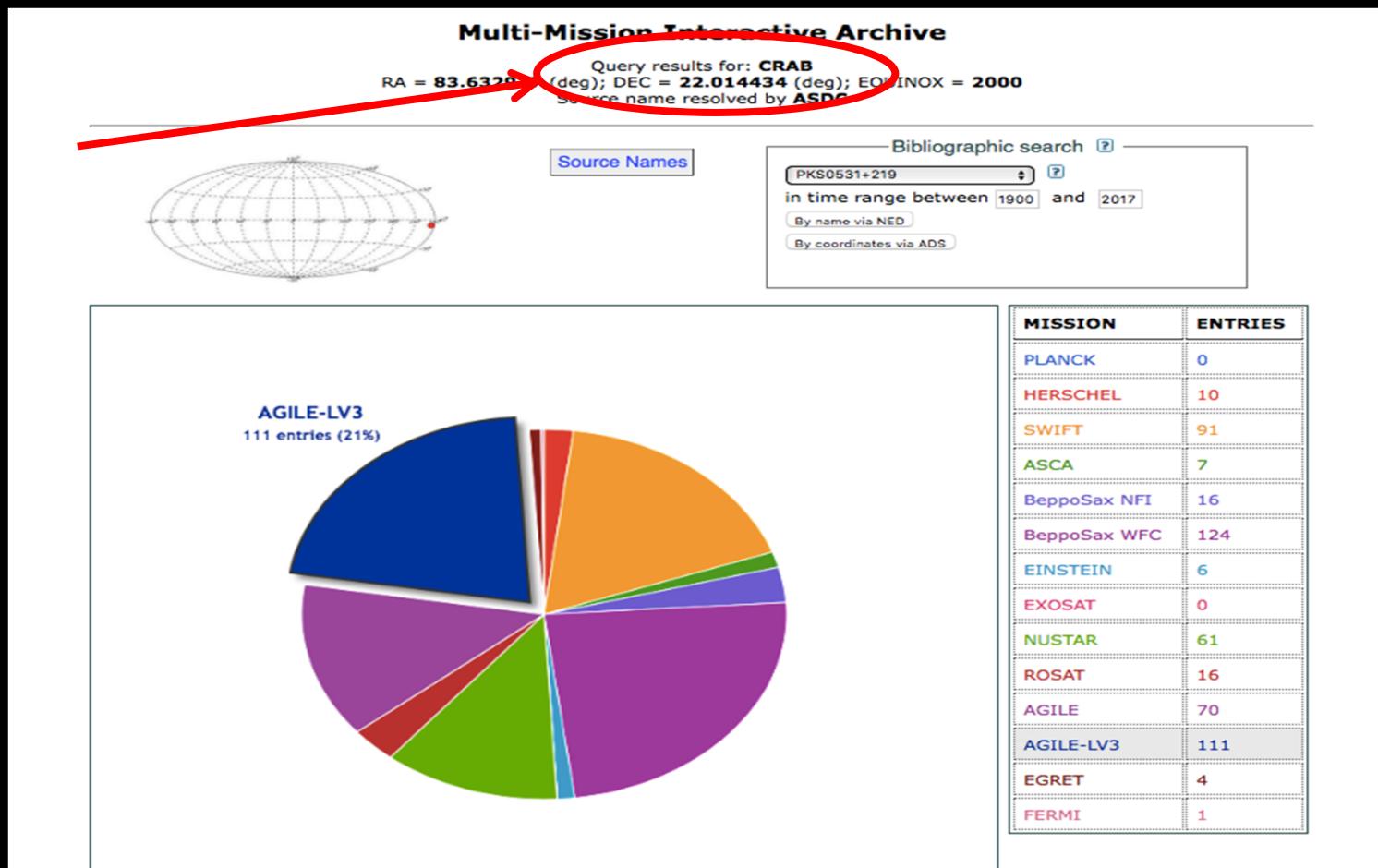
[1975 -- 2017]

Submit

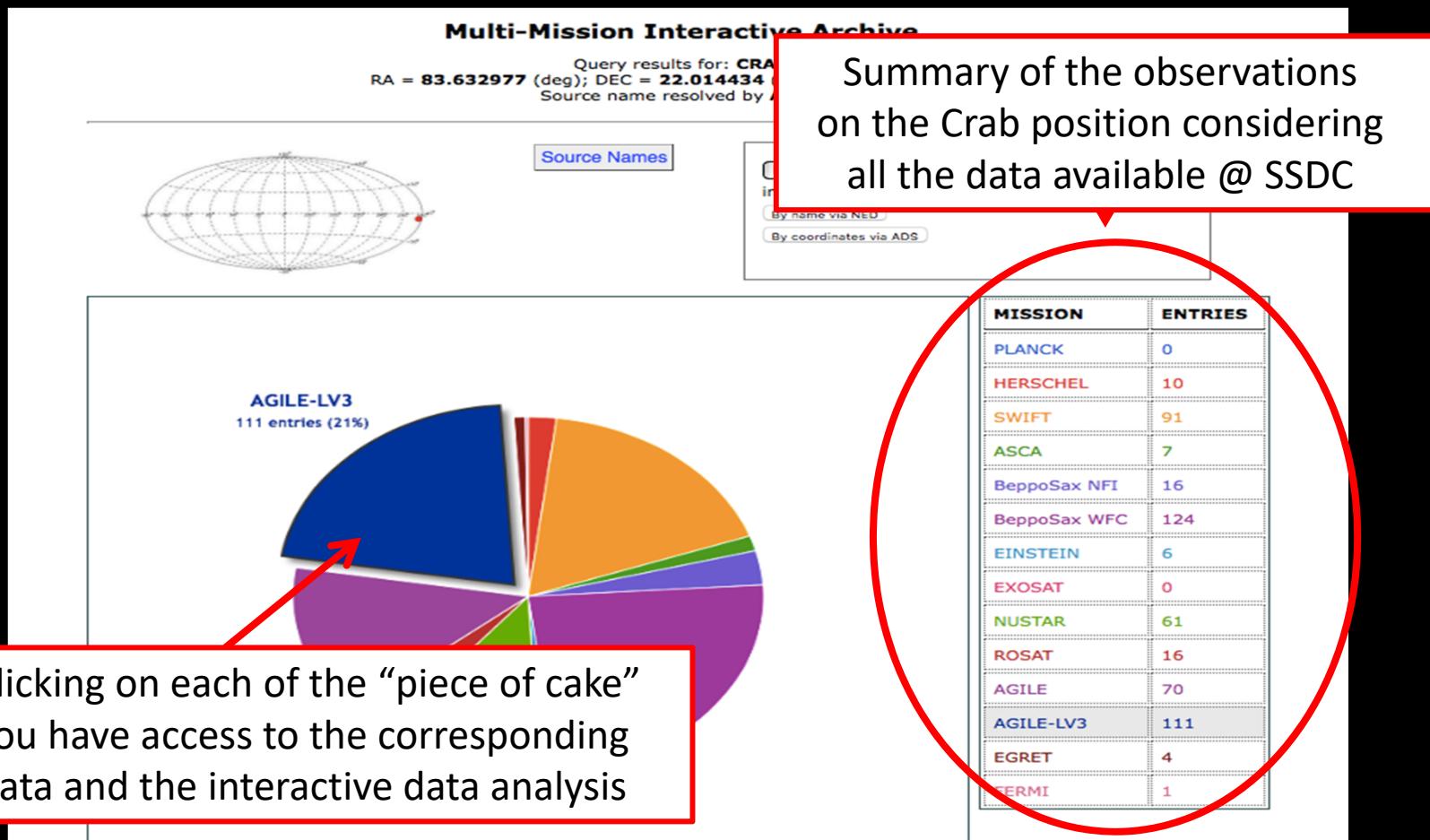
Source name: Type name and wait for name resolver

Name Resolver: SSDC Name Server SIMBAD NED

The Multi-Mission Interactive Archive



The Multi-Mission Interactive Archive



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 cm² s sr; sort by **START DATE**; max lines retrieved 5000;

[Modify AGILE-LV3 query parameters](#)

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

Make Light Curve: LC likelihood

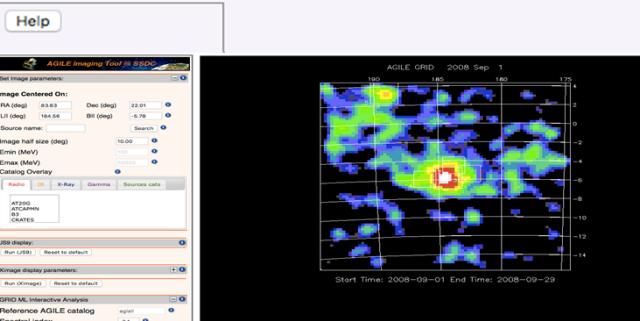
Export Current view of Table in: Latex format FITS format Raw text format CSV text format Browse table

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

s 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 ² s sr)	Dist. from searched position degrees	
Selection mode: <input type="checkbox"/> Include <input checked="" type="checkbox"/> All	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	2008-01-21 12:00:00	2008-02-18 12:00:00	04 36 06.62 +17 42 29.52	863.166	14.38
1	<input checked="" type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	2008-03-17 12:00:00	2008-04-14 12:00:00	04 36 06.62 +17 42 29.52	1773.82	14.38
2	<input checked="" type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	2008-06-09 12:00:00	2008-07-07 12:00:00	04 36 06.62 +17 42 29.52	163.635	14.38
3	<input checked="" type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	2008-07-07 12:00:00	2008-08-04 12:00:00	04 36 06.62 +17 42 29.52	1343.54	14.38
4	<input checked="" type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access	<input type="checkbox"/> Select SSDC Data Explorer Data Access					

The Multi-Mission Interactive Archive



A red arrow points from the text "s view includes 111 entries" down to the table below.

Entry number	GRID LV3 data retrieved	GRID Interactive Analysis	START DATE	STOP DATE	RA (J2000)	DEC (J2000)	MEAN EXP (cm ² s sr)	Dist. from searched position	
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

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;
.2-2007; End date = 03-11-2017; Duration = 28 day(s); Min EXP = 100 cm² 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) 200 [Reset all filters](#) [Show all entries](#)

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; I = 184.557455; V = -5.784478; Start date = 2007-02-28; End date = 2017-03-11; Duration = 28 day(s); Min EXP = 100 cm⁻² s⁻¹ MeV⁻¹

Modify AGILE-LV3 query parameter

Make Light Curve: LC likelihood

Light curve plot showing $F(100 \text{ MeV}) (\text{ph}/\text{cm}^2/\text{s})/10^{-6}$ versus Time (MJD). The plot shows a series of data points with error bars, indicating flux measurements over time.

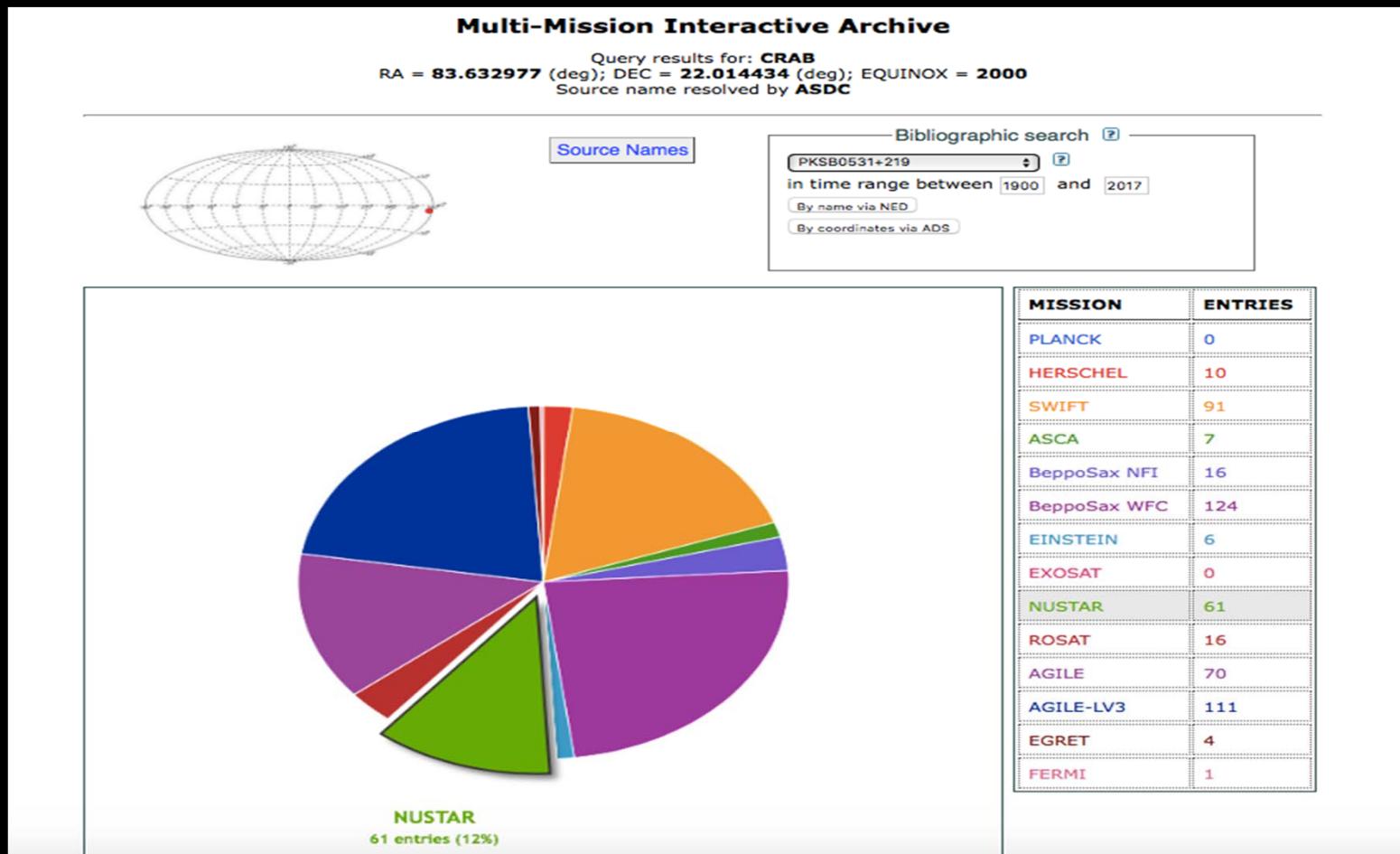
Export Current view of Table in: Latex format, FDF format, Raw text format, CSV text format, Browse

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

s view includes 111 entries

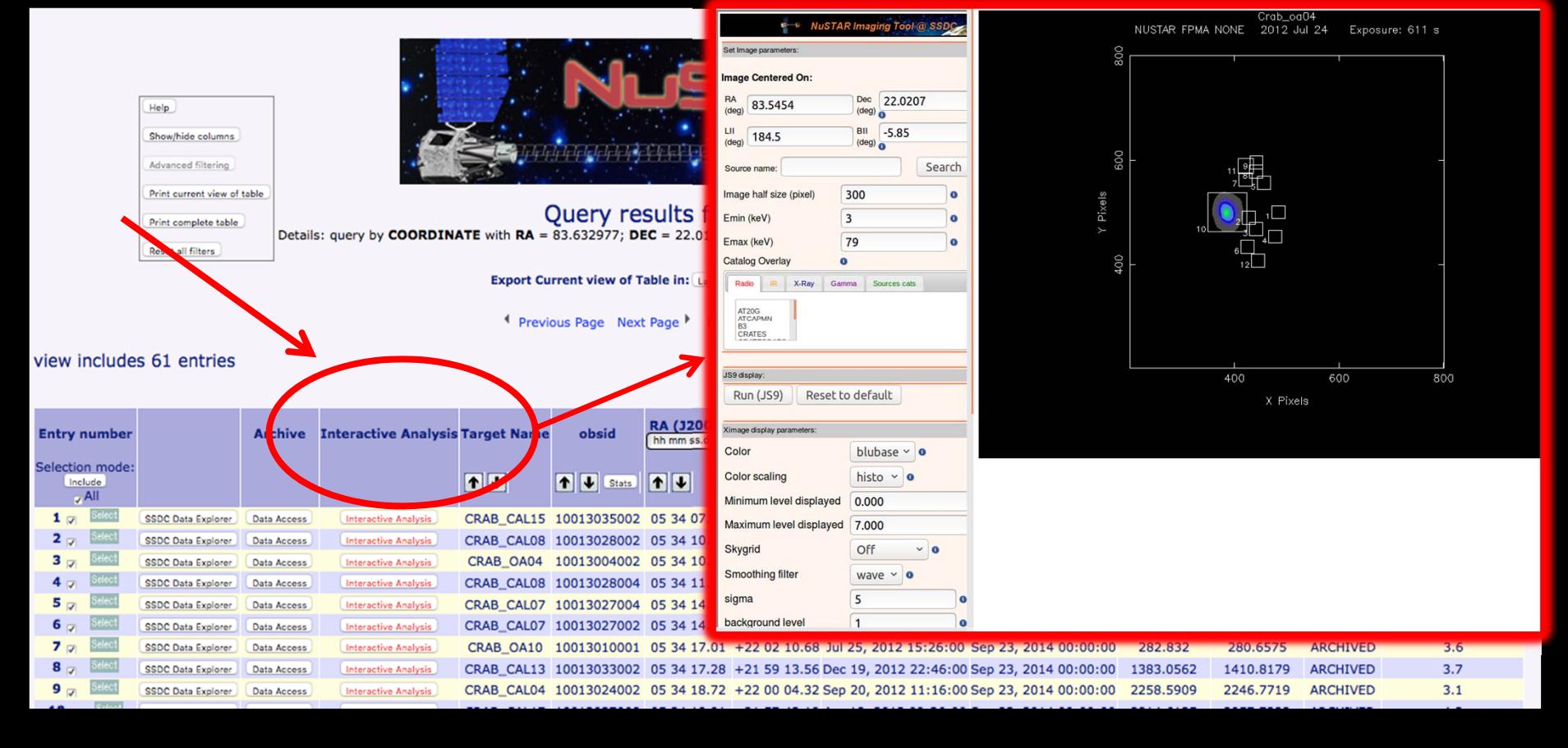
Entry number	GRID LV3 data retrieval	GRID Interactive Analysis	START DATE	STOP DATE	RA (J2000) hh mm ss.d	DEC (J2000) dd mm ss.d	MEAN EXP (cm ⁻² s sr)	Dist. from searched position degrees				
Selection mode: <input type="checkbox"/> All	<input type="checkbox"/> Select SSDC Data Explorer	Data Access	Interactive 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			
1 <input checked="" type="checkbox"/>	2 <input checked="" type="checkbox"/>	3 <input checked="" type="checkbox"/>	4 <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
				2008-06-09 12:00:00	2008-07-07 12:00:00	04 36 06.62	+17 42 29.52	163.635	14.38			
				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



The Multi-Mission Interactive Archive

The Multi-Mission Interactive Archive



The Multi-Mission Interactive Archive

NuSTAR

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**)

Direct access to the *SSDC Data Explorer* tool

view includes 61 entries

Entry number	Archive	Interactive Analysis	Target Name	obsid	RA (J2000) hh mm ss.d	Dec (J2000) dd mm ss.d	time	public_date	exposure_a	exposure_b	status	Dist. from searched position arcmin	
1	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL04	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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	Select	SSDC Data Explorer	Data Access	Interactive Analysis	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
10	Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_OA08	10013008002	05 34 19.25 +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

The screenshot displays the Multi-Mission Interactive Archive interface. On the left, there is a table listing various entries with columns for Entry number, Archive, Interactive Analysis, Target Name, and obsid. A red box highlights the 'Interactive Analysis' column, and a red arrow points from this column to a larger inset window on the right. The inset window is titled 'Error circle EXPLORER' and shows a map of the sky with several data points. It includes fields for R.A. (J2000), Dec (J2000), Galactic nH, and Source Names. Below the map are two smaller plots showing source distributions. At the bottom of the inset window, there is a section for 'Additional Services' containing links to astronomical catalogs like VIZIER(X-R-G) and NED, and a bibliography search section.

Entry number	Archive	Interactive Analysis	Target Name	obsid
1 Select	SSDC Data Explorer	Data Access	CRAB_CAL15	10013035002
2 Select	SSDC Data Explorer	Data Access	CRAB_CAL08	10013028002
3 Select	SSDC Data Explorer	Data Access	CRAB_OA04	10013004002
4 Select	SSDC Data Explorer	Data Access	CRAB_CAL08	10013028004
5 Select	SSDC Data Explorer	Data Access	CRAB_CAL07	10013027004
6 Select	SSDC Data Explorer	Data Access	CRAB_CAL07	10013027002
7 Select	SSDC Data Explorer	Data Access	CRAB_OA10	10013010001
8 Select	SSDC Data Explorer	Data Access	CRAB_CAL13	10013033002
9 Select	SSDC Data Explorer	Data Access	CRAB_CAL04	10013024002
10 Select	SSDC Data Explorer	Data Access		

The Multi-Mission Interactive Archive

Spatial Data Services

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⁻²) [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⁻²) [SED Builder](#) [Source Names](#)

Additional Services -

SSDC-resident astronomical catalogs

Group of Catalogs Selected Catalogs

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

Search radius 0.2 arcmin

Search Other Services

Bibliography search

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

Access to Public Data Archives -

Entry number	Archive	Interactive Analysis	Target Name	obsid	RA	Dec	l	b	Galactic nH	Action	
1 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL15	10013035002	05 34 29.54	+22 01 09.48	184.54	-5.79	3.26E+21	SED Builder
2 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL08	10013028002	05 34 17.28	+21 59 13.56	184.54	-5.79	3.26E+21	SED Builder
3 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_OA04	10013004002	05 34 17.01	+22 02 10.68	184.54	-5.79	3.26E+21	SED Builder
4 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL08	10013028004	05 34 17.01	+22 02 10.68	184.54	-5.79	3.26E+21	SED Builder
5 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL07	10013027004	05 34 17.01	+22 02 10.68	184.54	-5.79	3.26E+21	SED Builder
6 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL07	10013027002	05 34 14.59	+22 01 14.88	184.54	-5.79	3.26E+21	SED Builder
7 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_OA10	10013010001	05 34 17.01	+22 02 10.68	184.54	-5.79	3.26E+21	SED Builder
8 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL13	10013033002	05 34 17.28	+21 59 13.56	184.54	-5.79	3.26E+21	SED Builder
9 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_CAL04	10013024002	05 34 18.72	+22 00 04.32	184.54	-5.79	3.26E+21	SED Builder
10 Select	SSDC Data Explorer	Data Access	Interactive Analysis	CRAB_OA02	10013002002	05 34 17.01	+22 02 10.68	184.54	-5.79	3.26E+21	SED Builder

The Multi-Mission Interactive Archive

SED(t) builder V 3.2

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

sed0534p2201 Ra=83.62308 deg Dec=22.01930 deg (NH=3.3E21 cm⁻²)

Log $\nu F(\nu)$ (erg cm⁻² s⁻¹) vs Log frequency ν (Hz)

Creation date: 03-Nov-2017 13:23:43(UTC)

SSDC SED builder V3.2

SSDC SPACE SCIENCE DATA CENTER

Error circle EXPLORER Source Details

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

TUTORIAL HELP Default catalogs

arcmin show sources list download image in ps format

(83.6231 deg) l=184.54
 (22.0193 deg) b=-5.79
 E+21 (cm⁻²)

SED Builder Source Names

Access to the SEDBuilder tool

Search Other Services

- IPAC-X-R-G VIZIER(O-IR) NED HEASARC(X-R-G)
- STSCI MAST 2MASS USNO-B1.0 NVO

Bibliography search

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

SSDC-resident Catalogs

Energy Band / Catalog Name	14:00:00:00	1105.0002	1096.5042	ARCHIVED	4
Radio	14:00:00:00	1182.0179	1166.5398	ARCHIVED	3.6
Infrared	14:00:00:00	282.832	280.6575	ARCHIVED	3.7
Optical	14:00:00:00	1383.0562	1410.8179	ARCHIVED	3.1
UV	14:00:00:00	2258.5909	2246.7719	ARCHIVED	1.5

MATISSE

The screenshot shows the MATISSE web application interface. At the top left is the SSDC logo and the word "MATISSE". Below it is the title "Multi-purpose Advanced Tool for Instruments for the Solar System Exploration" and a link to "Download manual PDF". A red arrow points to a button labeled "Register with SAMP HUB Not Active". This button is circled in red. To the right are links for "Login" and "Feedback". The version number "Version 1.21" is also present.

The main search area has a "Search Params:" header. It includes fields for "Target" (set to "21 Lutetia"), "Missions" (set to "Rosetta" with a checked checkbox), and "Instrument" (checkboxes for OSIRIS/NAC, OSIRIS/WAC, VIRTIS-M IR, and VIRTIS-M VIS). There are also input fields for "Latitude: min" (-90), "max" (90), "Range to target: min" (0), "max" (90), "Incidence angle: min" (0), "max" (90), "Phase angle: min" (0), "max" (90), "Longitude: min" (0), "max" (360), "Acquisition time: min" (yyyy-mm-dd hh:mm:ss), "max" (yyyy-mm-dd hh:mm:ss), "Emergence angle: min" (0), "max" (90). Below these are "Reset" and "Search" buttons.

The "Observation:" section contains a "WaveLength (nm):" dropdown menu, a palette selection dropdown set to "B-W LINEAR", and a "Color Tables" link. It also includes a "Color Step (default 32):" input field (set to 2-255) and a "Submit" button. A "Next" button is located at the bottom left of this section.

MATISSE

MATISSE

Version 1.21

Login Feedback

Multi-purpose Advanced Tool for Instruments for the Solar System Exploration

Target: Mars Missions: MRO Instrument: CRISM-IR (Ex)

Latitude: min -20 max -10
Range to target min max
Incidence angle: min max
Phase angle: min max
No Data:

Longitude: min 0 max 20
Acquisition time: min yyyy-mm-dd hh:mm:ss max yyyy-mm-dd hh:mm:ss
Emergence angle: min max

Observation:

1053.75 + 1270.14
1257.01 * 1513.18

Palette: BLUE-RED Color Tables Color Step (default 32): 2-255

Show / hide columns Search

Show 10 entries

Instrument Name	Start Time	Stop Time	Latitude min	Latitude max	Longitude min	Longitude max
CRISM-IR			-18.611	-18.469	15.972	16.17
CRISM-IR			-18.852	-18.665	19.809	20.043
CRISM-IR			-18.443	-18.251	12.169	12.407
CRISM-IR			-10.969	-10.778	19.626	19.853
CRISM-IR			-15.183	-14.83	17.393	17.639
CRISM-IR			-16.663	-16.332	15.286	15.535
CRISM-IR			-18.239	-15.884	7.984	8.231
CRISM-IR			-12.719	-12.521	13.197	13.428
CRISM-IR			-13.338	-13.145	18.893	19.123
CRISM-IR			-11.602	-11.398	12.137	12.368

Showing 1 to 10 of 22 entries

First Previous [1] [2] [3] Next Last

OSIRIS-NAC OSIRIS-WAC VIRTIS-M IR VIRTIS-M VIS

max range 0-360 max yyyy-mm-dd hh:mm:ss max

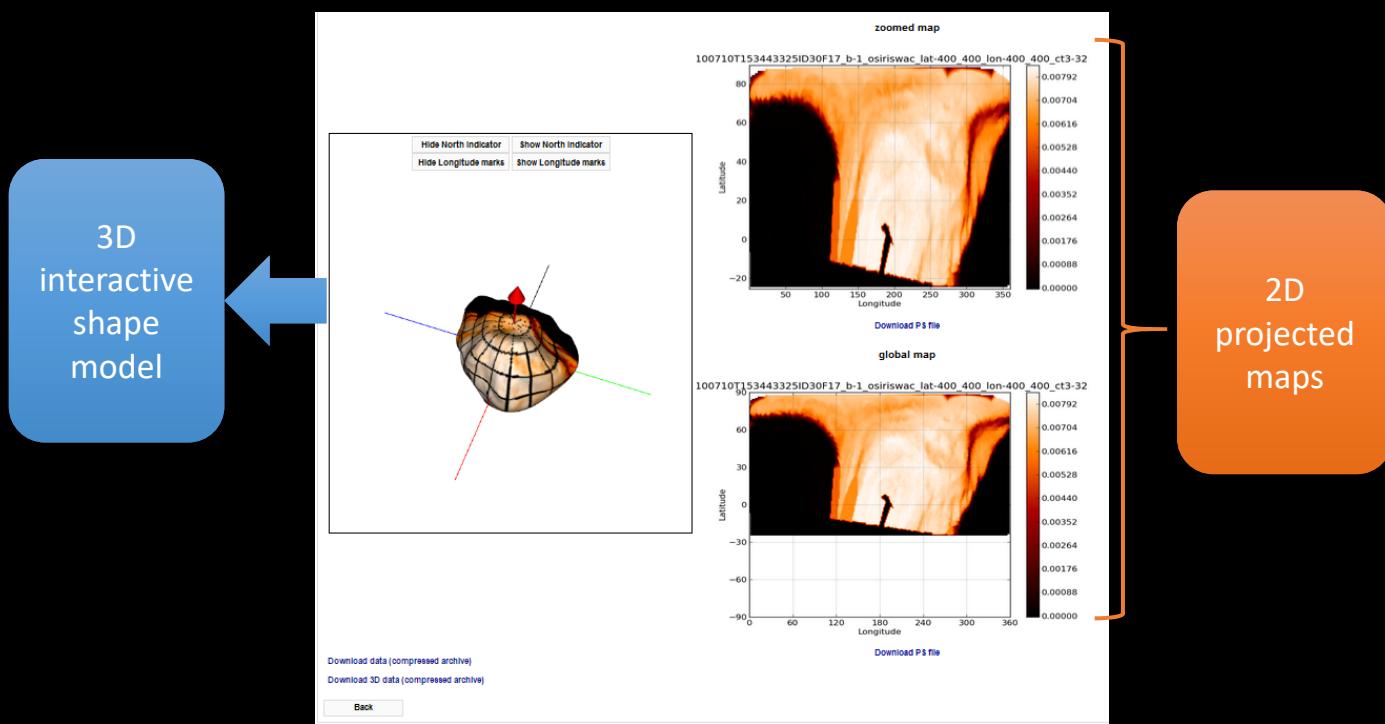
Reset Search

Color Step (default 32): 2-255

Submit

A red box highlights the main search interface, and a red arrow points from the 'Search' button in the main box to the 'Search' button in the sidebar.

MATISSE





ASI - Italian Space Agency

Since 2017

Space Science
Data Center

Universe
Observation

Information &
Computing
Technologies

Earth
Observation



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.

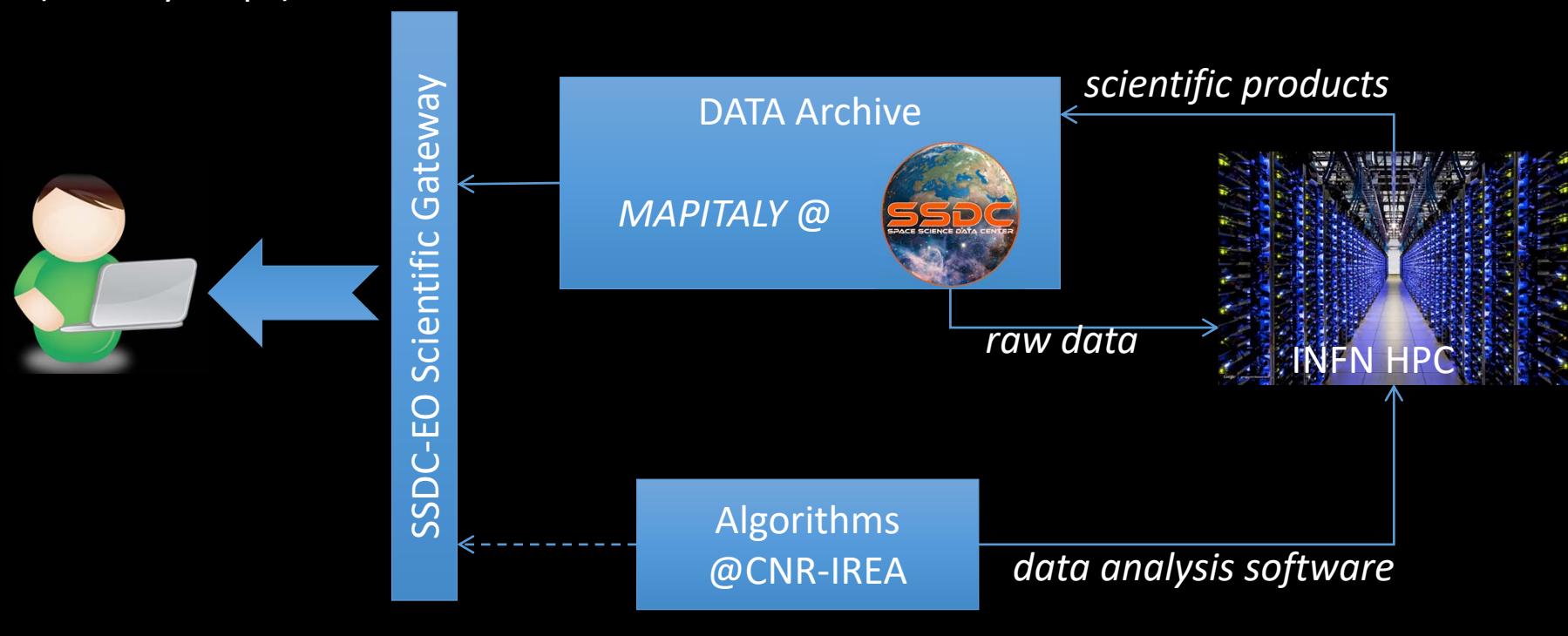
SSDC will process data from Lev0 to Lev2 of LIMADOU payload and will allow access to the italian scientific community to Lev2 data of all other instruments of CSES.

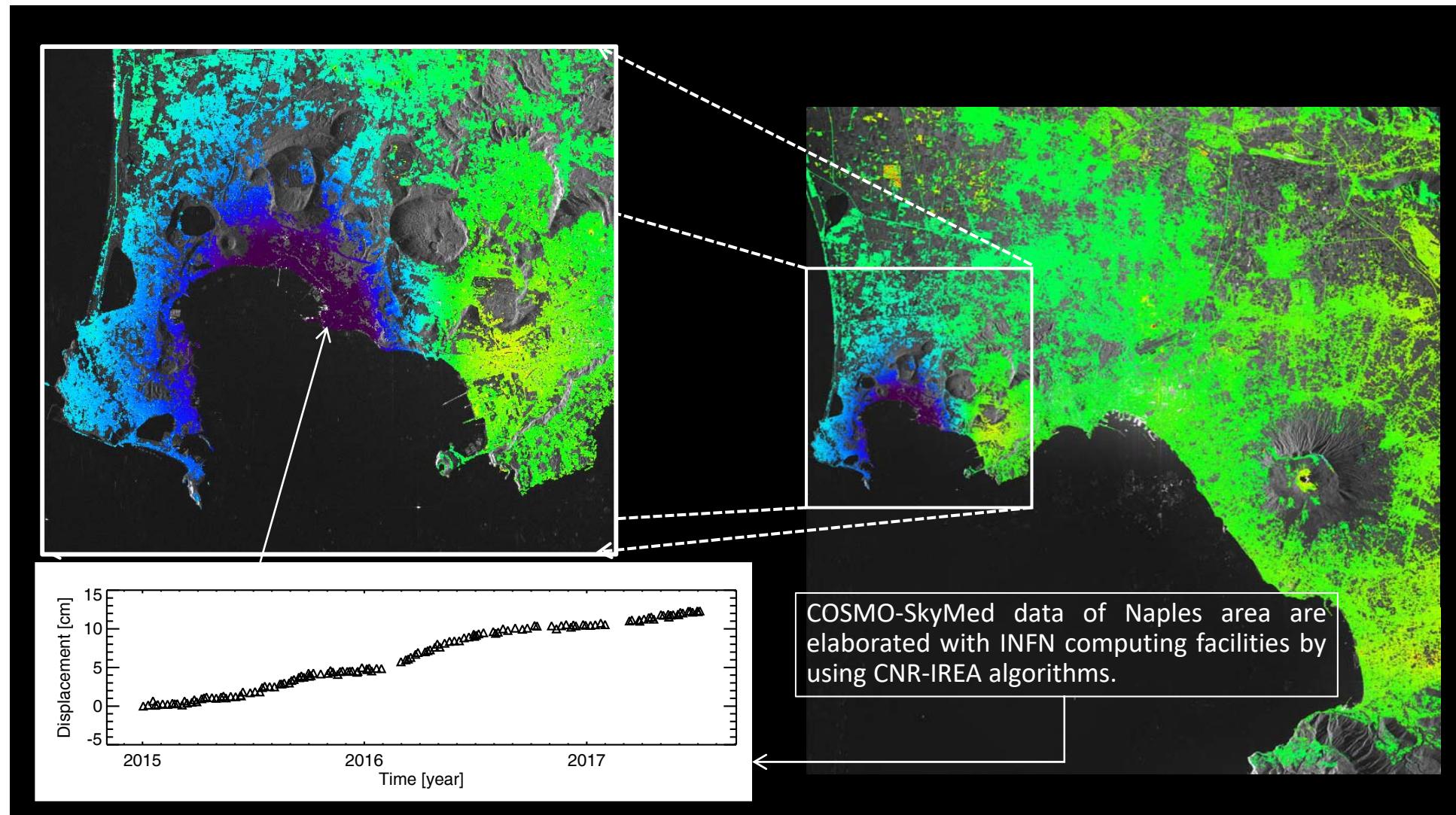
Measurement of the electrical and magnetic fields and their perturbations in ionosphere	Search-Coil Magnetometer Fluxgate Magnetometer Electric Field Detector (EFD)
Measurement of the disturbance of plasma in ionosphere	Plasma analizer Langmuir probe
Measurement of the flux and energy spectrum of the 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.





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.



