

X-ray archives, databases and article retrieval

X-ray archives:

A quick guide

Typologies of archives

Generic (i.e., multi-mission) archives



NASA

ESA

ASI

Not necessarily only X-ray

Additional tools for data

analysis available

Mission-specific archives



XMM-Newton

Chandra

NuSTAR

Swift

and many others

**+ NED & Simbad to search for multi-wavelength information
and references about sources**

X-ray archives. I. NASA



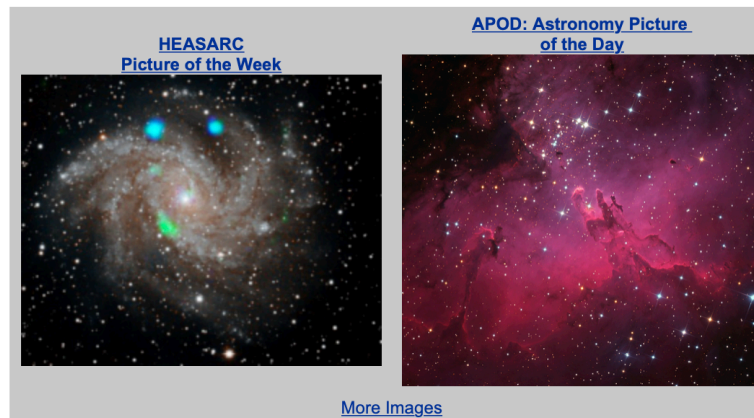
High Energy Astrophysics Science Archive Research Center (HEASARC) - NASA

<https://heasarc.gsfc.nasa.gov> → Archive → Browse

Chandra	Fermi
Hitomi	INTEGRAL
MAXI	NICER
NuSTAR	SRG/eROSITA
Swift	TESS
XMM-Newton	XRISM
Historic Guest Observer Facilities/Science Centers	
ASCA	BeppoSAX
CGRO	COBE
EUVE	GALEX
HETE-2	LPF DRS
ROSAT	RXTE
Suzaku	WMAP
NASA Archives	
ADS	EOSDIS
ExoArchive	HORIZONS
IRSA	KOA
LAMBDA	MAST
NED	NSSDCA
PDS	SDAC
SPDF	SSC
Virtual Observatory Resources	
HEASARC in the VO	IVOA
NAVO	USVAO

energetic cosmic phenomena ranging from black holes to the Big Bang. Since its merger with the Legacy Archive for Microwave Background Data Analysis ([LAMBDA](#)) in 2008, the HEASARC archive contains data obtained by high-energy astronomy missions observing in the extreme-ultraviolet (EUV), X-ray, and gamma-ray bands, as well as data from space missions, balloons, and ground-based facilities that have studied the relic cosmic microwave background (CMB) radiation in the sub-mm, mm and cm bands.

The HEASARC is a member of the [NASA Astronomical Virtual Observatories \(NAVO\)](#) where we work with other NASA archives to ensure comprehensive and consistent VO access to NASA mission datasets. Users may now query the HEASARC's catalogs using VO-enabled services and specialized tools. [This page](#) describes how to get to the HEASARC VO-enabled services and provides information on other HEASARC VO activities.



Xamin Quick Search [Xamin](#) [Browse](#)

Query Parameters:

The Chandra CalDB 4.8.5 is now installed and available at the HEASARC. Chandra 4.8.5 was released by the CXC on November 7, 2019...

- [NASA's NICER Catches Record-setting X-ray Burst](#) (07 Nov 2019) NICER detected an intense burst of X-rays at about 10:04 p.m. EDT on Aug. 20 from a massive thermonuclear flash on the surface of the pulsar SAX J1808.4-3658. This is the brightest burst seen by NICER so far. The burst shows a remarkable two-stage evolution in flux, along with and burst oscillations at the known pulsar spin frequency.

- [NICER Background Estimator Tools](#) (30 Oct 2019)

Software tools to estimate background in NICER observations are under development, based on analysis of deep NICER exposures of "blank-sky" fields. "Alpha-release" versions of these tools are now available to help NICER observers better estimate background in observations and proposals. Understanding of the NICER background is still evolving so the estimates provided by these new tools should be used with caution.

- [NICER detection of two thermonuclear \(Type I\) X-ray bursts establishes that MAXI J1807+132 hosts a neutron star.](#) (29 Oct 2019)

NICER has detected two thermonuclear X-ray bursts from the new MAXI X-ray transient MAXI J1807+132, discovered in March 2019. The detection of these bursts show that the system is an LMXB with a neutron star primary.

- [NuSTAR Cycle 6 now Accepting Proposals](#) (25 Oct 2019)

The NuSTAR General Observer (GO) Program is soliciting proposals for observations during observing Cycle 6. Phase-1 science proposals

NASA's HEASARC: Archive

[Xamin](#)[Browse](#)[ASCII Catalogs](#)[FTP Area](#)[SkyView](#)[ARK/RPS](#)[VO](#)[DataScope](#)[Other Archives](#)[Latest News](#)[Other Resources](#)[Archive Information](#)

Access to the catalogs and astronomical archives of the HEASARC

Select an interface or start using our keyword search tool below.

HEASARC Data Access

• New Xamin Interfaces

[Xamin Web Interface](#)[Intro](#)[HELP](#)

Our new faster and more powerful access to HEASARC data

[Xamin Batch Interface](#)[Download](#)[HELP](#)

Use Xamin from the command line on your machine

• Traditional Browse Interfaces

[Tips Archive](#)[Browse Mission Interface](#)[HELP](#)

Our traditional full-featured interface

[Browse Keyword Search](#)[HELP](#)

Search-Engine-like query using keywords

[Browse Table Index](#)

List of all tables in the HEASARC database: if we don't have the one you want, [ask us to add it](#)

[Browse Correlation](#)[HELP](#)

Cross-correlation of full tables

[Browse Notification Service](#)[HELP](#)

Get notified when new data is available in the archive

[Browse Batch Interface](#)[Download](#)[HELP](#)

Perl scripts (by default these now query Xamin database)

Xamin Quick Search

Query Parameters:

Try **ROSAT 3c273 1d** to get ROSAT data within one degree of 3c273 or **chanmaster bil>80 status='archived'** to get archived Chandra Observations data near the north galactic pole.

Note: For more than one target or when using any qualifier other than a mission name, use quotes around targets that have embedded white space.(e.g., 'ar lac').

[More information and examples](#)

ASCA: <input type="checkbox"/>	BEPPOSAX: <input type="checkbox"/>	CGRO: <input type="checkbox"/>
Chandra: <input type="checkbox"/>	Fermi: <input type="checkbox"/>	FUSE: <input type="checkbox"/>
HST: <input type="checkbox"/>	INTEGRAL: <input type="checkbox"/>	NuSTAR: <input type="checkbox"/>
Planck: <input type="checkbox"/>	ROSAT: <input type="checkbox"/>	RXTE: <input type="checkbox"/>
Spitzer: <input type="checkbox"/>	Suzaku: <input type="checkbox"/>	Swift: <input type="checkbox"/>
WMAP: <input type="checkbox"/>	XMM-Newton: <input type="checkbox"/>	Select all: <input type="checkbox"/>

Search on the basis of coordinates/source name + multi-wavelength missions

1. Do you want to search around a position ... ?

(If you want to search on parameters other than object name or coordinates, select "Detailed Mission/Catalog Search".)

Object Name or Coordinates:

and/or

**Select
Local
File:**

no file selected

e.g. Cyg X-1 or 12 00 00, 4 12 6 or
Cyg X-2; 12.235, 15.345 (Note use of semi-colons
(;) to separate multiple object names or coordinate
pairs)

File should contain objects and/or coordinate pairs one per
line or separated by semi-colons.

Coordinate System: J2000

Search Radius: Default

arcmin

Default uses the optimum radius for each catalog searched.

... and/or search by date?

Observation Dates:

YYYY-MM-DD hh:mm:ss or MJD: DDDDD.ddd

Not all tables have observation dates. For those that do, the time portion of the date is optional. Separate multiple dates/ranges
with semicolons (;). Range operator is '..' (e.g. 1992-12-31; 48980.5; 1995-01-15 12:00:00; 1997-03-20 .. 2000-10-18)

2. What missions and catalogs do you want to search? (Bold text indicates mission is active)

Most Requested Missions

- | | | | |
|---|--|--|--|
| <input type="checkbox"/> Chandra [CXC,CSC] | <input type="checkbox"/> Fermi | <input type="checkbox"/> Hitomi | <input type="checkbox"/> NuSTAR [CalTech] |
| <input type="checkbox"/> ROSAT | <input type="checkbox"/> RXTE | <input type="checkbox"/> Suzaku | <input type="checkbox"/> Swift |
| <input type="checkbox"/> WMAP | <input type="checkbox"/> XMM-Newton [XSA] | | |

Other X-Ray and EUV Missions

- | | | | |
|-------------------------------------|-----------------------------------|--|---|
| <input type="checkbox"/> Ariel V | <input type="checkbox"/> ASCA | <input type="checkbox"/> BBXRT/Astro-1 | <input type="checkbox"/> BeppoSAX |
| <input type="checkbox"/> Copernicus | <input type="checkbox"/> Einstein | <input type="checkbox"/> EUVE [MAST] | <input type="checkbox"/> EXOSAT |
| <input type="checkbox"/> Ginga | <input type="checkbox"/> HEAO 1 | <input type="checkbox"/> Kvant | <input type="checkbox"/> MAXI [JAXA] |
| <input type="checkbox"/> OSO8 | <input type="checkbox"/> SAS 3 | <input type="checkbox"/> Uhuru | <input type="checkbox"/> Vela 5B |

Other Gamma-Ray Missions

- | | | | |
|--|--------------------------------|---|--|
| <input type="checkbox"/> AGILE [ASDC] | <input type="checkbox"/> CGRO | <input type="checkbox"/> COS B | <input type="checkbox"/> HETE-2 |
| <input type="checkbox"/> INTEGRAL [ISDA,ISDC] | <input type="checkbox"/> SAS 2 | <input type="checkbox"/> Gamma-Ray Bursts | <input type="checkbox"/> RHESSI |

Missions and Facilities

- | | | | |
|---|-----------------------------------|--|---|
| <input type="checkbox"/> AKARI (IR) [Project] | <input type="checkbox"/> ANS (UV) | <input type="checkbox"/> COBE (IR/sub-mm) [LAMBDA] | <input type="checkbox"/> CoRoT (Opt) [CNES] |
|---|-----------------------------------|--|---|

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(If you want to search on parameters other than object name or coordinates, select "Detailed Mission/Catalog Search".)

Object Name or Coordinates:

3C111

and/or

Select
Local
File:

Choose File no file selected

e.g. **Cyg X-1** or **12 00 00, 4 12 6** or
Cyg X-2; 12.235, 15.345 (Note use of semi-colons
(;) to separate multiple object names or coordinate
pairs)

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Default

arcmin

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Chandra [**CXC,CSC**]

Fermi

Hitomi

NICER

NuSTAR [**CalTech**]

ROSAT

RXTE

Suzaku

Swift

WMAP

XMM-Newton [**XSA**]

Other X-Ray and EUV Missions

Ariel V

ASCA

BBXRT/Astro-1

BeppoSAX

Copernicus

Einstein

EUVE [**MAST**]

EXOSAT

Ginga

HEAO 1

Kvant

MAXI [**DARTS**]

OSO8

SAS 3

Uhuru

Vela 5B

Other Gamma-Ray Missions

AGILE [**ASDC**]

CGRO

COS B

HETE-2

INTEGRAL [**ISDA,ISDC**]

SAS 2

Gamma-Ray Bursts

RHESSI

Missions and Facilities

AKARI (IR) [**Project**]

ANS (UV)

COBE (IR/sub-mm) [**LAMBDA**]

CoRoT (Opt) [**CNES**]

[View Selected Tables](#)[Reset](#)**Active HEASARC Missions**

<input type="checkbox"/> ASCA	<input type="checkbox"/> ASCA Proposals	1	<input type="checkbox"/> ASCA Master Catalog	1	<input type="checkbox"/> Tartarus: Reduced ASCA AGN Data (Version 3.1)	1
<input type="checkbox"/> CHANDRA	<input type="checkbox"/> Chandra Observations	7	<input type="checkbox"/> Chandra XAssist Source List	2	<input type="checkbox"/> Chandra ACIS GSG Point-Like X-Ray Source Catalog	6
<input type="checkbox"/> FERMI	<input type="checkbox"/> Fermi GBM Burst Catalog	1	<input type="checkbox"/> Fermi GBM Trigger Catalog	3		
<input type="checkbox"/> GALEX	<input type="checkbox"/> Galaxy Evolution Explorer (GALEX) Observation Log	2				
<input type="checkbox"/> HETE-2	<input type="checkbox"/> HETE-2 Timeline	8822				
<input type="checkbox"/> INTEGRAL	<input type="checkbox"/> INTEGRAL Science Window Data	2549	<input type="checkbox"/> INTEGRAL IBIS AGN Catalog	1	<input type="checkbox"/> INTEGRAL Reference Catalog	1
	<input type="checkbox"/> Second INTEGRAL AGN Catalog	1	<input type="checkbox"/> INTEGRAL Observing Program	3	<input type="checkbox"/> INTEGRAL Public Data Results Catalog	3
	<input type="checkbox"/> INTEGRAL ISGRI 4-Year Source Catalog	1	<input type="checkbox"/> INTEGRAL Public Pointed Science Window Data	1259	<input type="checkbox"/> Fifth IBIS/ISGRI Soft Gamma-Ray Survey Catalog	1
	<input type="checkbox"/> INTEGRAL IBIS All-Sky Survey of Hard X-Ray Sources	1	<input type="checkbox"/> INTEGRAL IBIS 9-Year Galactic Hard X-Ray Survey Catalog	1	<input type="checkbox"/> INTEGRAL IBIS Hard X-Ray Survey Above 100 keV Source Catalog	1
<input type="checkbox"/> RXTE	<input type="checkbox"/> XTE Master Catalog	1007	<input type="checkbox"/> XTE Target Index Catalog	15	<input type="checkbox"/> XTE Proposal Info & Abstracts	15
	<input type="checkbox"/> XTE Archived Public Slew Data	1995	<input type="checkbox"/> XTE Mission-Long Source Catalog	1		
<input type="checkbox"/> SPITZER	<input type="checkbox"/> Spitzer Space Telescope Observation Log	3				
<input type="checkbox"/> SUZAKU	<input type="checkbox"/> Suzaku Master Catalog	4	<input type="checkbox"/> Suzaku XIS Configuration Log	24		
<input type="checkbox"/> SWIFT	<input type="checkbox"/> Swift Master Catalog	14	<input type="checkbox"/> Swift BAT Instrument Log	211	<input type="checkbox"/> Swift XRT Instrument Log	329
	<input type="checkbox"/> Swift UVOT Instrument Log	270	<input type="checkbox"/> Swift/UVOT Serendipitous Source Catalog, v1.1	28	<input type="checkbox"/> Swift BAT 60-Month Survey of Active Galactic Nuclei Catalog	1
	<input type="checkbox"/> Swift/UVOT Serendipitous Source Catalog, v1.1: Observations IDs	2				
<input type="checkbox"/> XMM-NEWTON	<input type="checkbox"/> XMM-Newton Accepted Targets	5	<input type="checkbox"/> XMM-Newton XAssist Source List	14	<input type="checkbox"/> XMM-Newton Master Log & Public Archive	3
	<input type="checkbox"/> XMM-Newton Slew Survey Full Source Catalog, v2.0	1	<input type="checkbox"/> XMM-Newton Slew Survey Clean Source Catalog, v2.0	1	<input type="checkbox"/> XMM-Newton Serendipitous Source Catalog (3XMM DR7 Version)	3
	<input type="checkbox"/> XMM-Newton Optical Monitor SUSS Catalog, v3.0: Observation IDs	2				

X

[Query Information](#)

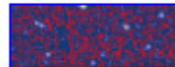
[Query Results](#)

[Data Products Retrieval](#)

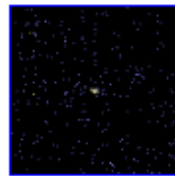
[Help](#)

[Processing Query...](#)

Images generated by [SkyView](#)
Click on image to see full [SkyView](#) image



[DSS Optical image, 2.83'](#)



[RASS X-ray image, 75.0'](#)

Images centered on requested position

Click to view information about your query

Object/Coordinates:
resolved by SIMBAD (local cache) to [04 18 21.28, +38 01 35.8]

Using the coordinates from the SIMBAD resolver for 3c111.

Coord. System: Equatorial, equinox 2000

Maximum Rows:

Search Radius: arc minutes

as

Browse Tip: Do you know how to get all rows of a table without doing a search? [Learn more on this topic](#) or [See all tips](#)

Table Name/Row Count Summary: [Querying table 5 out of 7.](#)

Click on table name to view search results

xmmao:XMM-Newton Accepted Targets	5	xmmxassist:XMM-Newton XAssist Source List	14
xmmmaster:XMM-Newton Master Log & Public Archive	3	xmmlewfuf:XMM-Newton Slew Survey Full Source Catalog, v2.0	1
xmmlewfuf:XMM-Newton Slew Survey Clean Source Catalog, v2.0		xmmssc:XMM-Newton Serendipitous Source Catalog (3XMM DR7 Version)	
xmmomsuob:XMM-Newton Optical Monitor SUSS Catalog, v3.0: Observation IDs			

[Query Information](#)
[Query Results](#)
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[Help](#)

[xmm-newton](#)

[xmmao](#)
[xmmxassist](#)
[xmmmaster](#)
[xmmslewfuf](#)
[xmmslewcln](#)
[xmmssc](#)
[xmmomsuob](#)

Click mission tabs (middle tab level) to display table tabs. Move cursor over tabs to see more information.

Table Legend:

Display all parameters for a row XMM-Newton Accepted Targets
 Sort by a column in order: 1,2,3 Sort by column in reverse order: 3,2,1 Current table sort
 Services links: O: Digitized Sky Survey image, R: ROSAT All-Sky Survey image, N: NED objects near coordinates,
 S: SIMBAD objects near coordinates, D: get list of data products, B: ADS bibliography holdings, F: FOV plot for obser

Data Products: Click checkbox to add row to Data Product Retrieval List

Low off-axis angle = the selected source is the target of the pointing

[XMM-Newton Accepted Targets \(xmmao\)](#)
[Bulletin](#)
 Search radius used: 15.00 '

Select	Services	pno	name	ra	dec	proposal type	priority	exposure	pi lname	pi fname	target id	Search Offset
<input type="checkbox"/> All								[s]				(') from (target)
	O R N S D	55218	3C111	04 18 21.30	+38 01 36.0	AO-7	B	132000	MARSCHER	ALAN	05521801	0.006 (3c111)
	O R N S D	72424	3C 111	04 18 21.30	+38 01 36.0	AO-12	T	102000	TORRESI	ELEONORA	07242402	0.006 (3c111)
	O R N S D	69169	3C 111	04 18 21.30	+38 01 36.0	AO-11	T	92000	TOMBESI	FRANCESCO	06916901	0.006 (3c111)
	O R N S D	6594	3C 111	04 18 21.07	+38 01 32.6	AO-1	B	44554	ERACLEOUS	MICHAEL		0.067 (3c111)
	O R N S D	55150	3C 111	04 18 21.30	+38 01 36.0	AO-7	T	0	VERCELLONE	STEFANO	05515023	0.006 (3c111)

5 rows retrieved from xmmao

List of observations with the main observing information

X-ray archives. II. ASI (Italian Space Agency)



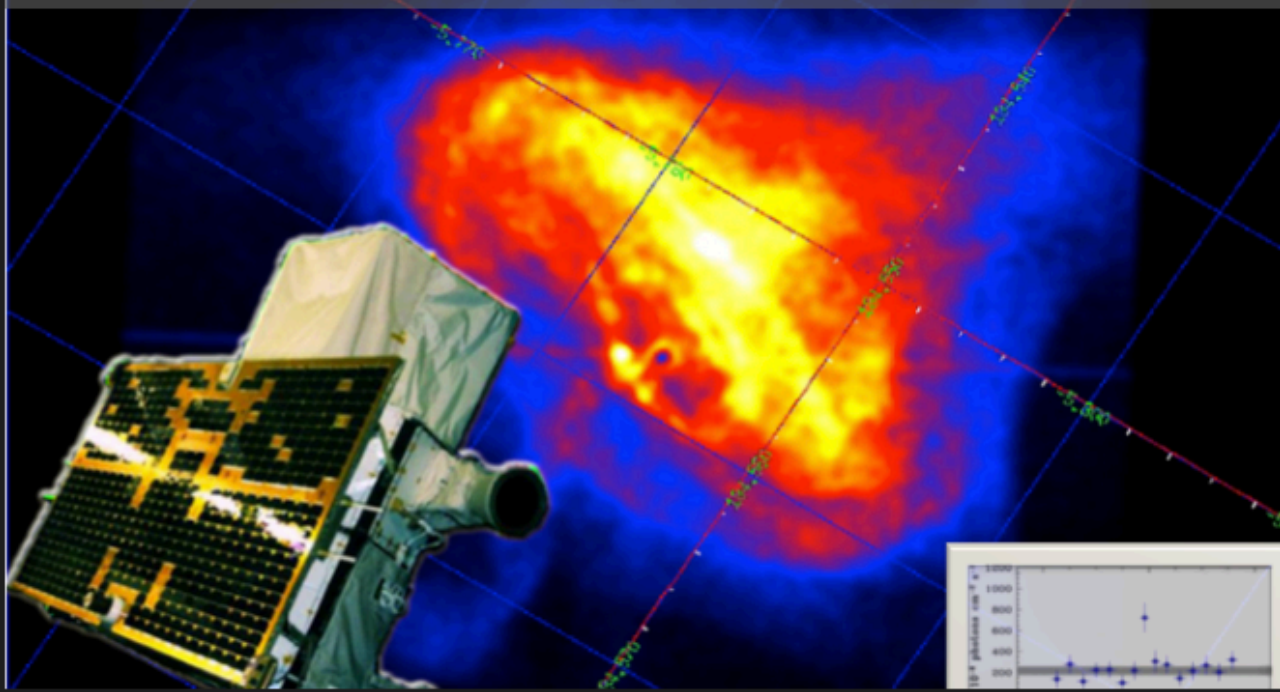
Space Science Data Center



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

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Privacy

AGILE discovery of gamma-ray flares from the Crab Nebula in 2010



Missions	Multimission Archive
AGILE Missions	
AMS	
BeppoSAX	
Chang-E	
CHEOPS	
DAWN	
EUCLID	
FERMI	
GAIA	
HERSCHEL	
NUSTAR	
OLIMPO	
PAMELA	
PLANCK	
PLATO	
ROSETTA	
SIMBOL-X	

Missions

Multimission Archive	Catalogs
All Missions (MMTA2.0) Multimission Archive	
AGILE	
AGILE-LV3	
AGILE-LV3 (restricted area)	
AMS-02	
ASCA	
BeppoSAX NFI	
BeppoSAX WFC	
EINSTEIN	
EXOSAT	
FERMI	
Herschel	
Matisse-Rosetta	
NuSTAR	
PAMELA	
ROSAT	
SWIFT	

Multi-mission archive

Catalogs	Tools	Links	Bl
SSDC Catalogs Search			
— VHE —			
TeV Catalog			
1WHSP Catalog			
2WHSP Catalog			
— Gamma-Ray —			
AGILE Catalogs			
Fermi Catalogs			
Third EGRET Catalog			
— X-ray —			
SuperAGILE			
BeppoSAX			
Swift			
— UV-optical-NIR —			
White dwarfs in the SDSS			
The Plotkin Catalog			
— Radio/Microwave —			
Planck			
WMAP3			
WMAP5			

Catalogs

X-ray archives. II. ASI (Italian Space Agency)



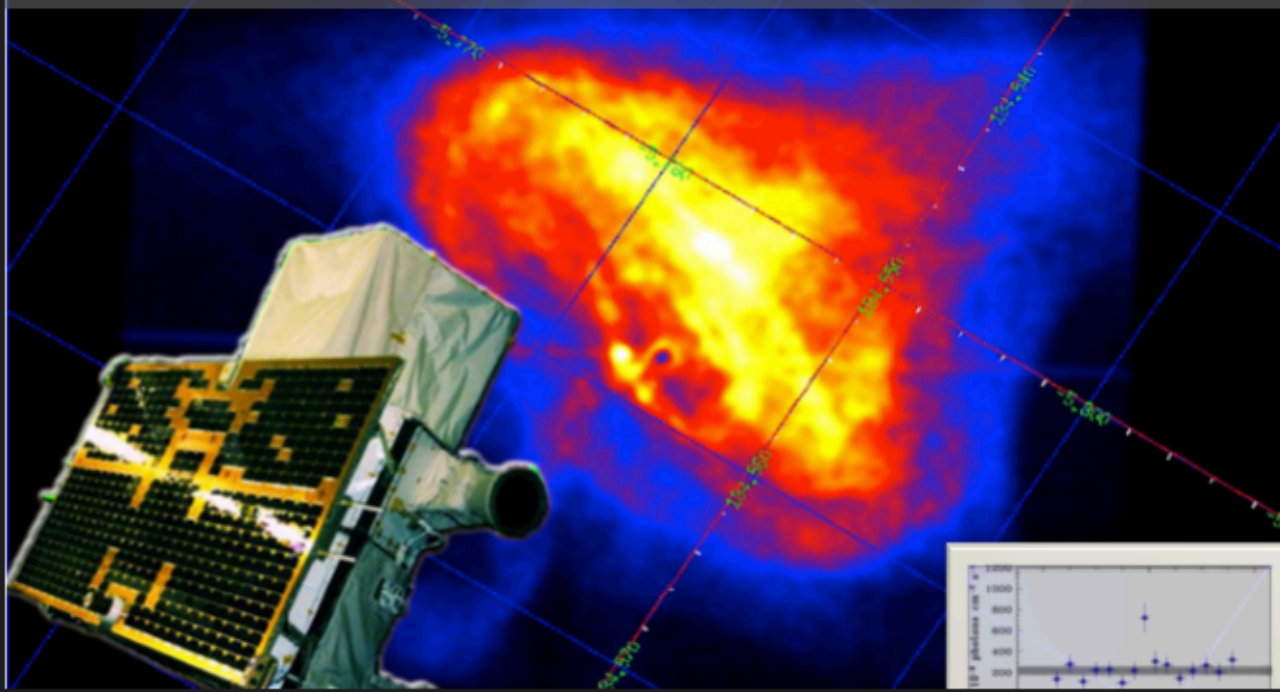
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AGILE discovery of gamma-ray flares from the Crab Nebula in 2010



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





The Nuclear Spectroscopic Telescope Array Mission (NuSTAR)

Mission Overview:

NuSTAR -launched June 13, 2012- is a Small Explorer mission led by the California Institute of Technology (Caltech) and managed by NASA's Jet Propulsion Laboratory in Pasadena. The observatory is the first focusing high-energy X-ray mission (3-80 keV) in orbit, opening the hard X-ray sky for sensitive study for the first time.

The primary science objectives are the study of the evolution of massive black holes, of compact objects, of the nature of the massive black hole in the center of the Milky Way, of the explosion dynamics and nucleosynthesis in supernovae and of the nature of particle acceleration in relativistic jets in Active Galactic Nuclei.

The Italian contribution includes the provision of the Italian Space Agency (ASI) ground station in Malindi (Kenya) and the ASI Space Science Data Center (SSDC). Moreover, Italy participates to the project with a team of scientists of the National Institute for Astrophysics (INAF) which collaborates on the primary scientific mission goals.

The primary reference for NuSTAR is [Harrison et al. 2013](#). A full description of the mission can be found at the following link:



Latest NuSTAR News

- **(Sep 17, 2015)** NuSTAR 7th Data Release at ASDC
- **(May 12, 2015)** Asymmetric explosion of SN1987A from ^{44}Ti emission lines revealed with NuSTAR
- **(Mar 31, 2015)** NuSTAR 6th Data Release at ASDC
- **(Jan 20, 2015)** NuSTAR Principal Investigator receives the 2015 Bruno Rossi Prize

X-ray archives. III. XMM-Newton

<https://www.cosmos.esa.int/web/xmm-newton/xsa>

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Observers Info ▶
Data Analysis ▶
Archive, Pipeline & Catalogues ▶
Calibration & Background ▶
SOC Info ▶
About XMM-Newton ▶
Image Gallery
Publications ▶
Other Links ▶

XMM-NEWTON SCIENCE ARCHIVE (XSA)

From 14th March 2019 **logging into XSA** will only be possible using an **ESA Cosmos account**.
If you have an **ESA Cosmos account** but forgot your password (or username) click [here](#).
If you do not have an **ESA Cosmos account** you can register now [here](#).

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- [Watchouts](#) **New**
- [Notes on the XSA releases](#) **New**
- [Questions, Comments](#)

WEB INTERFACE ACCESS TO XMM-NEWTON DATA AND SOURCE CATALOGUES

[Search the XMM-Newton Science Archive \(XSA\)](#)

Direct access to the XSA data via URL or AIO (Archive InterOperability) form):

[Command line and URL access to the XSA data](#)

TAP (Table Access Protocol) access to the XSA Database:

[TAP queries to the XSA Database](#)

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[TOOLS](#)



XMM-Newton Science Archive Search

Position **File**

Name
 Equatorial
 Galactic

Target in Field Of View Circle Box

Name for

► **Observation and Proposal filters**

► **Display options**

[Reset Form](#)

The search using other parameters (e.g., PI of the proposal) is also a viable option

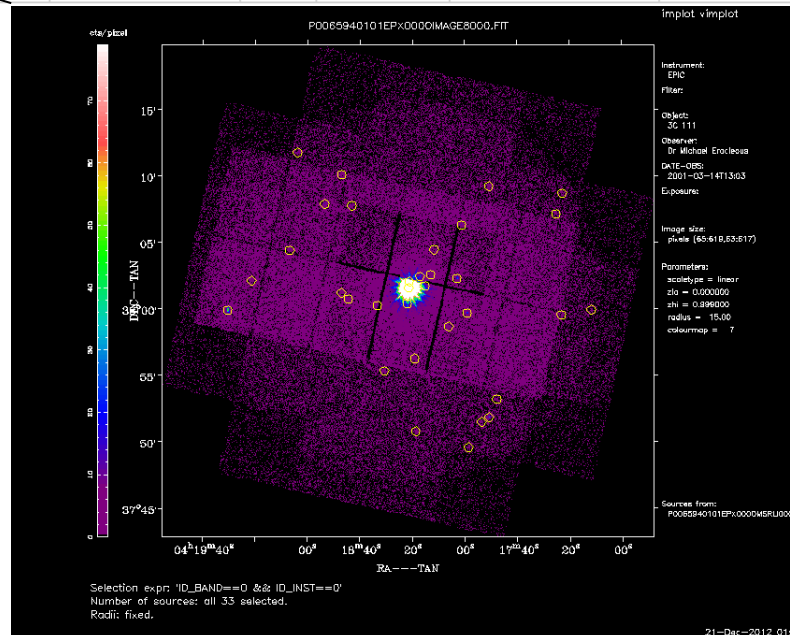
Back to Search Close all

Results #1

OBSERVATIONS (3)		SLEW EXPOSURES (7)											
Columns	Column units	Add to Basket	Save table as	Send table to	Reprocess								
	Obs.ID	EPIC	RGS	Target	RA	DEC	Rev	Distance	Start Date	End Date	Dur.		
<input type="checkbox"/>	0065940101			3C 111	04h 18m 21.07s	+38d 01' 32.6"	231	0.07	2001-03-14 12:56:44	2001-03-15 01:23:52	44828		
<input type="checkbox"/>	0552180101			3C111	04h 18m 21.27s	+38d 01' 35.7"	1683	0	2009-02-15 17:25:11	2009-02-17 04:01:23	124572	L	
<input type="checkbox"/>	0552180201	N/A	N/A	3C111	04h 18m 21.27s	+38d 01' 35.7"	1683	0	2009-02-15 14:44:57	2009-02-15 16:55:09	7812	L	

obsID data preview

You can choose the kind of data to download (odf: needed for full reprocessing)



nominal exposure

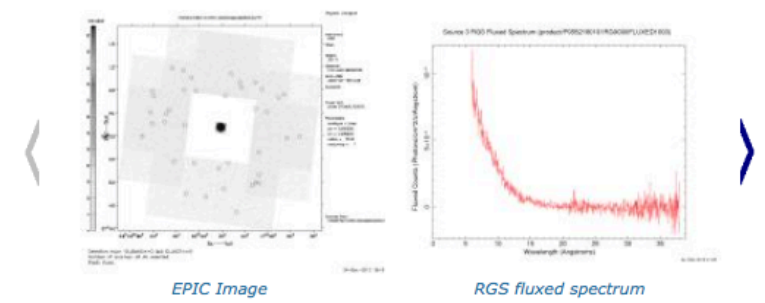
Back to Search Close all

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<input type="checkbox"/>			0552180201	N/A	N/A	3C111	04h 18m 21.27s	+38d 01' 35.7"	1683	0	2009-02-15 14:44:57	2009-02-15 16:55:09	7812

Details for Observation 0552180101

details on the observation:
summary, setup, exposures, publications + images+spectra



Summary	Exposures	Publications
Obs. ID	0552180101	
Revolution	1683	
Target	3C111	
Exposures	3 EPIC, 59 OM, 2 RGS	
Proposal Abstract		
PSD BREAK, JET SCALE, AND BLACK-HOLE MASS OF THE FR II RADIO GALAXY 3C 111		

X-ray archives. IV. Chandra



Observation Search

[New Search](#)

[Retrieval List](#) [Help](#)



Search

Reset

[File Upload](#) Choose File no file selected

[Target Name](#) [Cone Search](#)

[Name Resolver](#) [Coord System](#) arcmin

[Observation ID](#) [Sequence Number](#) [Proposal Number](#)

[Proposal Title](#) [PI Name](#) [Observer Name](#)

[Start Date](#) [Public Release Date](#)

[Exposure Time \(ks\)](#) [Approved Time \(ks\)](#) [Avg. Count Rate \(hz\)](#)

[Status](#)

[Science Category](#)

[Instrument](#)

[Grating](#)

[Exposure Mode](#)

[Type](#)

[Observing Cycle](#)

[Joint Observatories](#)

[Proposal Cycle](#)

[Grid](#)

Customize Output:

[Sort Order](#) ascending descending

[Row Limit](#)

[Coord System](#) [Format](#)

[Save As](#)

Chandra webchaser
<http://cda.harvard.edu/chaser/>

Selection possible on the basis of source name/coordinates/PI name/ObsID, etc

you can view the details of each observation



View Observation Information

Add Products to Retrieval List
 Primary package
 Secondary package
 Custom selection

Instrument

Select all | Unselect all

Select	Row	Seq Num	Obs ID	Instrument	Grating	Appr Exp	Exposure	Target Name	PI Name	RA	Dec	Status	Data Mode	Exp Mode	Avg Cnt Rate	Evt Cnt	Start Date	Public R
<input type="checkbox"/>	1	702798	14990	ACIS-S	NONE	127.0	92.1	3C 111	Perlman	04 18 21.30	+38 01 36.00	archived	VFAINT	TE	5.65	520726	2013-01-10 04:29:04	2014-0
<input type="checkbox"/>	2	703007	16219	ACIS-S	HETG	150.0	143.41	3C 111	Tombesi	04 18 21.30	+38 01 35.80	archived	FAINT	TE	7.63	1094231	2014-11-04 10:48:56	2015-1
<input type="checkbox"/>	3	703412	19615	ACIS-S	NONE	26.0	22.54	3C 111	Perlman	04 18 21.30	+38 01 36.00	observed	VFAINT	TE	3.07	69154	2017-12-26 15:46:41	2019-0
<input type="checkbox"/>	4	703412	20907	ACIS-S	NONE	32.0	28.16	3C 111	Perlman	04 18 21.30	+38 01 36.00	observed	VFAINT	TE	2.97	83648	2017-12-29 03:21:51	2019-0
<input type="checkbox"/>	5	703412	20908	ACIS-S	NONE	32.0	27.23	3C 111	Perlman	04 18 21.30	+38 01 36.00	observed	VFAINT	TE	2.93	79812	2017-12-29 18:15:31	2019-0
<input type="checkbox"/>	6	703413	19616	ACIS-S	NONE	90.0		3C 111	Perlman	04 18 21.30	+38 01 36.00	unobserved	VFAINT	TE			2018-12-25 00:00:00	
Totals						0.00	0.00									0		

Seq. # ObsID Expo

mark one (all) of these boxes to select the observations for the download.
An archive (.tar) file will be prepared for the download. This contains both primary and secondary datasets needed for immediate use for scientific purposes or complete reprocessing using the most up-to-date calibrations and CIAO tools

Details of the observation: instrument setup, CCDs in use, abstract of the proposal, pipeline-processed products, etc.

Observation ID: **14990**

Add to Retrieval List

- [Primary package](#)
- [Secondary package](#)
- [Custom selection](#)

- [Summary](#)
- [Details](#)
- [V&V Report](#)
- [Proposal Abstract](#)
- [Images](#)
- Data packages
 - [Primary](#)
 - [Secondary](#)
- External links
 - [Publications](#)
 - [Processing Status](#)
 - [Sequence Summary](#)
- Related Observations
 - [By Sequence](#)
 - [By Proposal](#)
 - [By Monitor/Followup](#)
 - [By Group](#)

Sequence Number:	702798	Status:	archived
Observation ID:	14990	Proposal Number:	14700630
Type:	GO	Proposal Cycle:	14
PI Name:	Perlman	Observer:	Perlman
Science Category:	ACTIVE GALAXIES AND QUASARS	Joint Observatories:	HST
Target Name:	3C 111	Grid Name:	
RA (J2000):	04 18 21.30	Data Mode:	VFAINT
Dec (J2000):	+38 01 36.00	Observing Cycle:	14
Instrument:	ACIS-S	Public Release Date:	2014-01-15 01:50:57
Grating:	NONE		
Start Date:	2013-01-10 04:29:04		
Approved Time:	127.00 ks		
Exposure Time:	92.10 ks		

Sequence number: six-digit number, the first one provides the category of your observations (7=AGN, 8=clusters, etc.)

X-ray archives. V. NuSTAR

NuSTAR Bringing the High Energy Universe into Focus

[About](#) [News](#) [Images](#) [Videos](#) [Education & Outreach](#) [For Researchers](#)



Science Operations Center

NuSTAR Users' Committee

Targets of Opportunity

For Observers

For Proposers

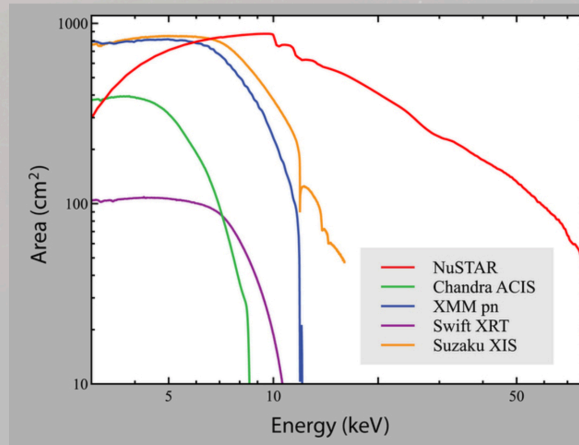
Legacy Surveys

Publications

Technical Publications

Researchers

The primary reference for NuSTAR is [Harrison, F.A. et al. \(2013; ApJ, 770, 103\)](#).



NuSTAR's effective area compared to other x-ray satellites.

Energy Band	3 - 79 keV
Angular Resolution	58" (HPD), 18" (FWHM)
Focal Plane Size	12' x 12'
Energy Resolution	0.4 keV at 6 keV, 0.9 keV at 60 keV (FWHM)
Temporal Resolution	0.1 msec
Maximum Flux Measurement Rate	10,000 cts/s
ToO response	< 24 hours
Launch date	June 13, 2012
Orbit	650 km x 610 km, 6 degree inclination
Slew Rate	0.06 deg / sec
Settle Time	142 sec

For additional information, including the As Flown Timeline (AFT), short- and long-range schedules, and list of Priority A targets, visit the [Science Operations Center \(SOC\) website](#).

<https://www.nustar.caltech.edu/page/observers>

NuSTAR Bringing the High Energy Universe into Focus

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Science Operations Center

NuSTAR Users' Committee

Targets of Opportunity

For Observers

NuSTAR at the HEASARC

Background Filtering

NuSTAR GitHub Page

For Proposers

Legacy Surveys

Publications

Technical Publications

For Observers


- [NuSTAR at the HEASARC and the NuSTAR Observatory guide.](#)
- Information about [NuSTARDAS](#) (the *NuSTAR* Data Analysis Software) and the [NuSTARDAS User's Guide](#).
- [Getting started with NuSTARDAS.](#)
- [Browse NuSTAR Observations.](#)
- [List of NuSTAR Publications at HEASARC](#) (includes some arXiv pre-prints)
- [The NuSTAR User's Group on Facebook.](#)

Description	Catalog	Data Default	Radius (arcmin)	Mission	Table Type
NuSTAR Master Catalog	numaster	Y	10	NUSTAR	Observation

1. Enter any constraints on the query below. [Help on constraint syntax](#)

(What about [wildcards](#), [spaces](#), and [case sensitivity](#)?)

2. To change the fields that are returned, select the box in the 'View' column beside each field desired.

3. To sort the results by any field, select one box in the 'Sort' column beside the field to sort on. 

View	Sort	Parameter (Unit)	Query Terms	Min Value	Max Value
<input type="checkbox"/> All					
<input checked="" type="checkbox"/>	<input type="radio"/>	name	NGC 1068	1A0535p262	gcmagnetar
<input checked="" type="checkbox"/>	<input type="radio"/>	ra		00 00 00.0	23 59 20.2
<input checked="" type="checkbox"/>	<input type="radio"/>	dec		-86 38 08	+85 54 59
<input checked="" type="checkbox"/>	<input type="radio"/>	time		2012-07-01 21:01:07	2018-01-05 02:01:09
<input checked="" type="checkbox"/>	<input type="radio"/>	obsid		00001011001	90361018001
<input checked="" type="checkbox"/>	<input type="radio"/>	status		accepted	processed
<input checked="" type="checkbox"/>	<input type="radio"/>	exposure_a (s)		-470000	472871
<input checked="" type="checkbox"/>	<input type="radio"/>	observation_mode		SCIENCE	SLEW
<input checked="" type="checkbox"/>	<input type="radio"/>	obs_type		AGN	XRB
<input checked="" type="checkbox"/>	<input type="radio"/>	processing_date		2013-10-30 16:51:35	2018-01-05 19:50:05
<input checked="" type="checkbox"/>	<input type="radio"/>	public_date		2013-08-29	2019-01-06
<input checked="" type="checkbox"/>	<input type="radio"/>	issue_flag		0	1
<input type="checkbox"/>	<input type="radio"/>	lji (degree)		0.0055	359.9951
<input type="checkbox"/>	<input type="radio"/>	bji (degree)		-89.6975	89.3302
<input type="checkbox"/>	<input type="radio"/>	roll_angle (degree)		0.0000	359.9081
<input type="checkbox"/>	<input type="radio"/>	end_time		2012-07-01 22:36:07	2018-01-05 13:01:09
<input type="checkbox"/>	<input type="radio"/>	exposure_b (s)		-470000	472222
<input type="checkbox"/>	<input type="radio"/>	ontime_a (s)		0	505999
<input type="checkbox"/>	<input type="radio"/>	ontime_b (s)		0	506051
<input type="checkbox"/>	<input type="radio"/>	instrument_mode		CPMODE	CPMODE
<input type="checkbox"/>	<input type="radio"/>	spacecraft_mode		INERTIAL	STELLAR
<input type="checkbox"/>	<input type="radio"/>	slew_mode		EIGEN	POWER
<input type="checkbox"/>	<input type="radio"/>	software_version		Hea_05Aug2013_V6.14_nustardas_07Oct13_v1.3.0	Hea_30Jun2014_V6.16_nustardas_28May14_v1.4.1
<input type="checkbox"/>	<input type="radio"/>	prnb		0	19400282
<input type="checkbox"/>	<input type="radio"/>	abstract		1E 161348-5055 (1E 161348), the source at the center of the supernova remnant RC XMM and NuSTAR Observations of a New Population of Heavily Obscured AGN	
<input type="checkbox"/>	<input type="radio"/>	subject_category		Active galaxies and Quasars	Solar System Objects
<input type="checkbox"/>	<input type="radio"/>	category_code		0	9
<input type="checkbox"/>	<input type="radio"/>	priority		1	C
<input type="checkbox"/>	<input type="radio"/>	pi_lname		Acero	van der Horst
<input type="checkbox"/>	<input type="radio"/>	pi_fname		A	Yoshihiro
<input type="checkbox"/>	<input type="radio"/>	copi_lname			
<input type="checkbox"/>	<input type="radio"/>	copi_fname			
<input type="checkbox"/>	<input type="radio"/>	country		USA	USA

Details of the observation

[NuSTAR Master Catalog \(numaster\)](#) [Bulletin](#)

Select	Services	name	ra	dec	time	obsid	status	exposure a	observation mode	obs type	processing date	public date	issue flag
<input type="checkbox"/> All		↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕ [s]	↕↕	↕↕	↕↕	↕↕	↕↕
<input type="checkbox"/>	O R N S D B	NGC1068	02 42 38.1	-00 02 41	2012-12-18 16:01:07	60002030002	archived	57851	SCIENCE	OAGN	2015-05-22 10:33:30	2013-11-25	0
<input type="checkbox"/>	O R N S D B	NGC1068	02 42 36.6	-00 02 20	2015-02-05 01:16:07	60002033004	archived	53688	SCIENCE	X13	2015-06-13 10:05:54	2016-02-26	0
<input type="checkbox"/>	O R N S D B	NGC1068	02 42 42.8	+00 00 47	2014-08-18 11:11:07	60002033002	archived	52062	SCIENCE	X13	2015-06-13 09:26:35	2016-02-26	0
<input type="checkbox"/>	O R N S D B	NGC1068	02 42 40.1	-00 02 07	2012-12-20 00:36:07	60002030004	archived	48560	SCIENCE	OAGN	2015-05-22 11:18:46	2013-11-25	0
<input type="checkbox"/>	O R N S D B	NGC1068	02 42 40.4	-00 01 40	2012-12-21 08:56:07	60002030006	archived	19461	SCIENCE	OAGN	2015-05-22 11:59:39	2013-11-25	1
<input type="checkbox"/>	D	NGC1068			2012-12-18 15:31:07	60002030001	archived	0	SLEW	OAGN	2015-06-03 05:29:53	2013-11-25	0
<input type="checkbox"/>	D	NGC1068			2012-12-20 00:11:07	60002030003	archived	0	SLEW	OAGN	2015-06-03 05:33:37	2013-11-25	0
<input type="checkbox"/>	O R N S D	NGC1068	02 42 40.7	-00 00 48	2012-12-21 08:30:00	60002030005	archived	0	SCIENCE	OAGN	2013-11-01 22:30:00	2013-11-25	1
<input type="checkbox"/>	D	NGC1068			2014-08-18 10:31:07	60002033001	archived	0	SLEW	X13	2015-06-13 09:16:07	2016-02-26	0
<input type="checkbox"/>	D	NGC1068			2015-02-05 00:46:07	60002033003	archived	0	SLEW	X13	2015-06-13 09:55:12	2016-02-26	0

10 rows retrieved from numaster

Tick the box to select

Category of the observation
SCIENCE is what you want

Expo=0: not carried out yet/
still proprietary (12-month
period typically)

<input type="checkbox"/>	D	NGC1068			2014-08-18 10:31:07	60002033001	archived	0	SLEW	X13	2015-06-13 09:16:07	2016-02-26	0
<input type="checkbox"/>	D	NGC1068			2015-02-05 00:46:07	60002033003	archived	0	SLEW	X13	2015-06-13 09:55:12	2016-02-26	0

10 rows retrieved from numaster

Data Product Retrieval

- Select the checkboxes for the rows of interest above,
- Un-check any data products below you are not interested in
- Select the Data Product Retrieval tab for retrieval options

Data Products available for numaster

- All
- All NuSTAR Data Products (all)
- NuSTAR Auxiliary Data (aux)
- NuSTAR Science-Quality Pipeline Products (core)
- NuSTAR Complete Pipeline Products (evt)
- NuSTAR Housekeeping Data (hk)
- NuSTAR Processing Logs and Metadata (logs)
- NuSTAR Quicklook Products (ql)

Further Actions:

Do you want to your numaster results with another catalog or table? ([help](#))

Do you want to all the columns for the rows selected above?

Do you want to query other services for the rows selected? ([help](#))

Services:

NED
SIMBAD
SkyView:ROSAT All-Sky
SkyView:DSS
CoCo

Here you decide what kind of data you want to download (you can select 'all' and then decide later whether to reprocess all from scratch)

Parameter Name	Parameter Value	Unit	Description
name	NGC1068		Designation of the Pointed Source
ra	02 42 40.1		Right Ascension (Pointing Position)
dec	-00 02 07		Declination (Pointing Position)
time	2012-12-20 00:36:07		Start Time of the Observation
obsid	60002030004		Unique Observation/Sequence Number
status	archived		Observation Status (accepted, scheduled, observed, processed, archived)
exposure_a	48560	s	FPMA Effective Exposure on Source (s)
observation_mode	SCIENCE		Observation Mode
obs_type	OAGN		Type of Observation (e.g., TOO)
processing_date	2015-05-22 11:18:46		Date of Processing (TT)
public_date	2013-11-25		Public Date (TT)
issue_flag	0		Boolean Flag Indicates Known Issue within Observation
abstract	Observations of obscured and/or Compton-thick AGN with NuSTAR provide us with an opportunity to constrain the nature of X-ray obscurers that are characteristic among AGN, potentially without the powerful continuum to complicate things. The primary goal of this research line is to observe a few key objects across three obscuration regimes. These will yield detailed spectra of the reflection hump and reflector efficiency/covering fraction that can be compared against existing models of unobscured AGN.		Proposal Abstract
bii	-52.0926	degree	Galactic Latitude (Pointing Position)
caldb_version	20150316		CALDB Version Used in the Pipeline
category_code	6		Proposal Category Code
comments			General Information about Observation
coordinated			Coordinated Observation Observatories
copi_fname			Proposal Co-PI First Name
copi_lname			Proposal Co-PI Last Name
country	USA		Country of Proposal Principal Investigator or Collaboration
cycle	0		Proposal Cycle Number
data_gap	0	s	Missing Time within Observation
end_time	2012-12-21 01:51:07		Stop Time of the Observation
exposure_b	48510	s	FPMB Effective Exposure on Source (s)
instrument_mode	CPMODE		FPM Mode (CPMODE or Normal)
lii	171.9954	degree	Galactic Longitude (Pointing Position)
nupsdout	0	s	Metrology Out of Limit Time
ontime_a	52135	s	FPMA On-Source Time (s)
ontime_b	52148	s	FPMB On-Source Time (s)
pj_fname	Fiona		First Name of the Principal Investigator of the Proposal
pi_lname	Harrison		Last Name of the Principal Investigator of the Proposal
priority	1		Proposal Priority
prnb	00000000		Proposal Number
roll_angle	304.2119	degree	Roll Angle (degrees)
slew_mode	EIGEN		Slew Mode (EIGEN or POWER)
software_version	Hea_30Jun2014_V6.16_nustardas_28May14_v1.4.1		Software Version Used in the Pipeline
solar_activity			Solar Activity (e.g., Flare, CME)
spacecraft_mode	INERTIAL		Spacecraft Mode (INERTIAL or STELLAR)
subject_category	Active galaxies and Quasars		Proposal Category
title	Obscured AGN, Including Compton-Thick AGN, BALQSOs, and ULIRGs		Proposal Title

Details of each observation (first column in the previous panel)

X-ray archives. VI. Swift

HEASARC HOME SWIFT HOME ARCHIVE DATA ANALYSIS PROPOSALS & TOOLS EDUCATION & PUBLIC INFO

Swift: Catching Gamma-Ray Bursts on the Fly

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

ABOUT SWIFT QUICKLOOK DATA GCN SWIFT RESULTS SWIFT OPERATIONS RELATED SITES GALLERY

[Browse Home](#) Browse: Swift Mission [Swift Interface Help](#) [Tip Archive](#) [Hera](#) [HELP](#)

Latest News

[Jun 4 2014 XRT anomaly](#)

[Swift News](#)

[HEASARC News](#)

Pull down menu to select a Swift GRB. Coordinates or Target id will appear in the form below.
Not all data are available. The [Data Caveat](#) provides the latest availability information

Display Bursts By Year Display By Month Select Burst

If you already know these details about the obs.

HEASARC Archive Search [Data Caveat](#)

Target id: (e.g. 100001)

Observation id: (e.g. 00100001000)

Object Name or Coordinates: ← Target name/coordinates

Observation Dates:

Search Type

Radius: arcmin

BAT FOV beta test, Master Log only

Master Log [parameter search form](#)

BAT Log [parameter search form](#)

Observation Logs: UVOT Log [parameter search form](#)

XRT Log [parameter search form](#)

TDRSS Log [parameter search form](#)

<https://heasarc.gsfc.nasa.gov/cgi-bin/W3Browse/swift.pl>

[Swift Master Catalog \(swiftmastr\)](#) [Bulletin](#)

Search radius used: 25.00'

Select	Related Links	Services	name	obsid	ra	dec	start time	processing date	xrt exposure	uvot exposure	bat exposure	archive date	Search Offset
<input type="checkbox"/> All			↕↕	↕↕	↕↕	↕↕	↕↕	↕↕	↕↕ [s]	↕↕ [s]	↕↕ [s]	↕↕	['] from (target)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	MASER024240.7-0000	00037216004	02 42 46.07	-00 01 14.8	2011-07-17 01:03:00	2016-09-26	6171.79100	Query results for Swift Master Catalog 7-28			1.399 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B G	GRB140628a	00602803001	02 42 33.28	-00 22 50.2	2014-06-28 17:43:16	2014-07-08	4961.54800	4946.32300	4917.00000	2014-07-09	22.119 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B G	GRB140628a	00602803002	02 42 42.12	-00 22 39.3	2014-06-29 03:19:09	2014-07-09	4926.23200	4762.07300	4924.00000	2014-07-10	21.860 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B G	GRB140628a	00602803003	02 42 39.21	-00 23 28.7	2014-07-02 01:44:59	2014-07-12	4835.81200	4833.15700	4864.00000	2014-07-13	22.684 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	XMM-LSS3	00030954003	02 42 57.12	-00 00 57.9	2007-06-23 00:56:00	2015-06-30	3625.36800	3623.13400	3673.00000	2007-07-04	4.092 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	XMM-LSS3	00030954001	02 42 50.85	+00 01 16.5	2007-06-19 04:04:01	2015-07-01	3522.25800	3784.09300	3926.00000	2007-06-30	3.262 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	XMM-LSS3	00030954002	02 42 42.60	-00 00 48.9	2007-06-21 20:14:00	2015-07-02	3406.28500	3406.04900	3458.00000	2007-07-02	0.457 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	XMM-LSS3	00030954005	02 42 49.48	+00 00 47.6	2007-06-27 03:20:00	2015-07-01	3260.82300	3386.08000	3453.00000	2007-07-08	2.697 (NGC 1068)
<input type="checkbox"/>	TDRSS BAT UVOT XRT	O R N S D B G	GRB140628a	00602803000	02 42 35.19	-00 22 13.3	2014-06-28 13:19:50	2014-07-08	3218.60800	3132.06900	6414.74700	2014-07-09	21.470 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	XMM-LSS3	00030954004	02 42 43.33	-00 01 04.4	2007-06-25 14:11:00	2015-07-02	2469.66300	2464.88600	2517.00000	2007-07-06	0.696 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D	NGC_1068	00088104004	02 42 37.11	-00 02 08.4	2017-10-31 14:03:57	2017-11-10	2271.42100	2270.93900	2294.00000	2017-11-11	1.624 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	MASER024240.7-0000	00037216001	02 42 47.48	-00 01 22.3	2011-06-28 07:29:00	2016-09-16	2120.49000	2035.82700	2173.00000	2011-07-09	1.773 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	NGC1068	00080252001	02 42 33.45	-00 00 11.2	2012-12-19 00:08:59	2017-06-30	2058.58900	2058.10300	2073.00000	2012-12-30	1.930 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D	NGC_1068	00088104005	02 42 35.35	-00 00 36.7	2017-11-06 08:40:57	2017-11-16	2024.87600	2024.89400	2040.00000	2017-11-17	1.367 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	NGC1068	00080709003	02 42 33.95	+00 01 11.7	2015-02-05 02:08:58	2015-02-15	1971.72500	1945.23500	1986.00000	2015-02-16	2.622 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	NGC1068	00080709001	02 42 47.02	-00 04 25.0	2014-08-18 10:52:59	2014-08-28	1899.03400	1874.19600	1912.00000	2014-08-29	3.942 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D	NGC_1068	00088104001	02 42 41.38	-00 04 25.3	2017-07-31 18:42:57	2017-08-11	1844.53800	1844.24100	1860.00000	2017-08-11	3.627 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B	NGC1068	00080709002	02 42 31.49	-00 00 59.0	2015-02-04 21:43:59	2015-02-14	1825.29400	1798.28900	1839.00000	2015-02-15	2.327 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D	NGC_1068	00088104002	02 42 43.15	-00 00 26.2	2017-07-31 23:58:57	2017-08-11	1494.01900	1601.39500	1616.00000	2017-08-11	0.695 (NGC 1068)
<input type="checkbox"/>	BAT UVOT XRT	O R N S D B G	GRB140628a	00602803004	02 42 51.95	-00 23 48.5	2014-07-03 03:52:33	2014-07-13	1122.32200	1114.54600	1145.00000	2014-07-14	23.180 (NGC 1068)

Alternatively, you may use the ASI web page: <http://swift.asdc.asi.it>

Leicester web page and tools: building Swift/XRT products
http://www.swift.ac.uk/user_objects/

Select products

To reduce the load on our servers, please select only the independent products you require.

Light curve: Spectrum? Position? Image?

Build products

Object details

*Name:

Find

object name

*Target ID:

Start time:

*Coordinates:

coordinates

Global options

*Try to centroid?

*Centroid method:

*Max attempts:

*Search radius (arcmin):

Super-soft source?

Show advanced pile-up controls?

*Use 1SXPS source lists:
(if available)

E-mail address:

What do you want?
Light curves?
Spectra (individual obs?
combined spectra?)
Images?

Select products

To reduce the load on our servers, please select only the independent products you require.

Light curve: Spectrum? Position? Image?

Build products

Object details

*Name:

*Target ID:

Start time:

*Coordinates:

Global options

*Try to centroid?

*Centroid method:

*Max attempts:

*Search radius (arcmin):

Super-soft source?

Show advanced pile-up controls?

*Use 1SXPS source lists:
(if available)

E-mail address:

Spectral details

*Use redshift?

*Redshift:

*Use which observations?
All

Those covering times:

Those within hrs of the
first

Grade range:

*Time for spectrum:

If you select *Spectrum*, you can decide whether to obtain all of the spectra (combined) for that particular source or the individual spectra. The same applies for the other available products

Information about sources: The NED (and Simbad) databases

<https://ned.ipac.caltech.edu>

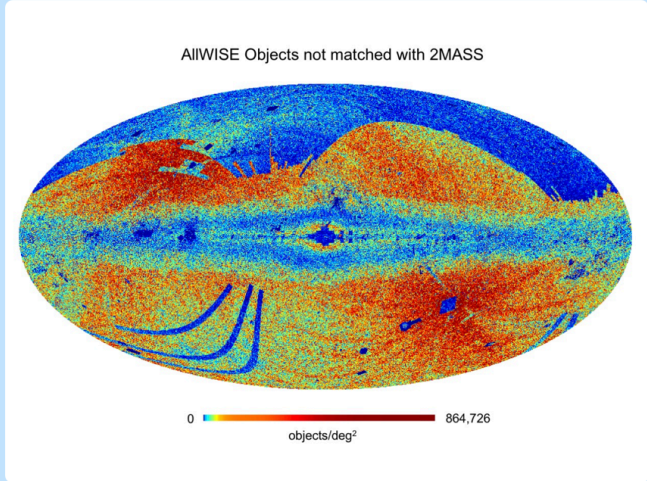
Object Name, coordinates, or position with search radius, etc.

October 2019 Database Highlights

- NED now has 1 billion distinct objects, and about 14 billion photometric counterparts.
- All 747 million entries from the *AllWISE Source Catalog* (Cutri, R. M. et al. 2013wis...1C) were integrated into NED.
- An additional 13 new NED objects were added from the literature, including galaxies, quasars, clusters of galaxies, supernovae, and clusters as well as unidentified radio, visual, infrared, X-ray, and gamma-ray sources.
- 429,143 new objects were ingested.
- 34,691 new photometric data points were integrated into SEDs.
- 1,138,363 spectra from *Sloan Digital Sky Survey DR6* (Sloan Digital Sky Survey Team 2017SDSS6.C...0000;) were added to the [LEVEL 5 Knowledgebase for Extragalactic Astronomy and Cosmology](#).

For the full list of highlights, please visit [Information » Overview » News](#). For info about the latest LIGO/Virgo GW events, please see [Services » Gravitational Wave Followup](#).

- By Name
- Near Name or Position (Cone)
- In Refcode
- By Parameters



Integration of the ALLWISE Source Catalog into NED

The process of cross-matching all 747 million entries in the AllWISE Source Catalog with NED (as of October 2019) resulted in approximately 41% of the AllWISE sources matching with prior objects in NED, meaning about 59% of the AllWISE sources became new NED objects. The figure above shows that the distribution of AllWISE objects in NED that are new to the database (not matched to objects with 2MASS PSC counterparts) are mostly in the ecliptic pole regions where the AllWISE map sensitivity is the highest. More on the AllWISE Source Catalog and its ingestion to NED can be found [here](#).



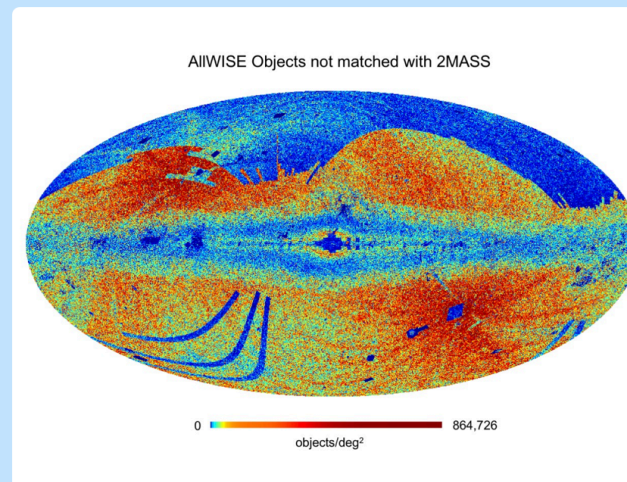
NASA/IPAC Extragalactic Database

[Home](#)[Search Objects »](#)[Tools »](#)[Services »](#)[Information »](#)**3C111**<https://ned.ipac.caltech.edu>

October 2019 Release Highlights

- NED now has over 1.1 billion distinct objects, and about 14 billion photometric data points.
- All 747 million sources from the *AllWISE Source Catalog* (Cutri, R. M. et al. [2013wise.rept....1C](#)) were integrated into NED.
- An additional 237,953 new NED objects were added from the literature, including galaxies, quasars, clusters of galaxies, supernovae, globular clusters as well as unidentified radio, visual, infrared, X-ray, and gamma-ray sources.
- 429,143 new redshifts were ingested.
- 34,691 new photometric data points were integrated into SEDs.
- 1,138,363 spectra from *Sloan Digital Sky Survey DR6* (Sloan Digital Sky Survey Team [2007SDSS6.C...0000](#);) were ingested.
- Latest review articles were added to the [LEVEL 5 Knowledgebase for Extragalactic Astronomy and Cosmology](#).

For the full list on release highlights, please visit [Information » Overview » News](#). For info about the latest LIGO/Virgo GW events, please see [Services » Gravitational Wave Followup](#).



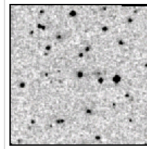
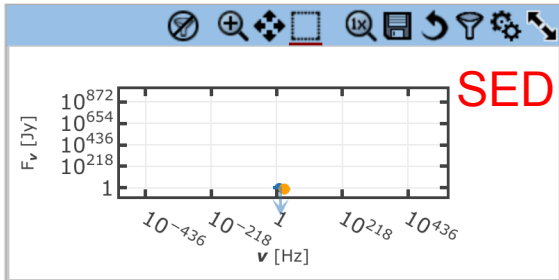
Integration of the ALLWISE Source Catalog into NED

The process of cross-matching all 747 million entries in the AllWISE Source Catalog with NED (as of October 2019) resulted in approximately 41% of the AllWISE sources matching with prior objects in NED, meaning about 59% of the AllWISE sources became new NED objects. The figure above shows that the distribution of AllWISE objects in NED that are new to the database (not matched to objects with 2MASS PSC counterparts) are mostly in the ecliptic pole regions where the AllWISE map sensitivity is the highest. More on the AllWISE Source Catalog and its ingestion to NED can be found [here](#).

Results for object 3C 111 (3c111)

Overview	Cross-IDs (51)	Coordinates (34)	Redshifts (14)	Classifications (7)	Galactic Extinctions	Notes (10)	Diameters (3)	Photometry & SED (146)
Spectra (3)	Images (97)	References (508)	External Links					

NED: <https://ned.ipac.caltech.edu>



POSS-II F (North), AAO-SES/SERC-ER (South), Red image
[Search images](#)
 Image Credit: Caltech or AAO/ROE

Selected data and derived quantities for 3C 111†. More information in the tabs above.

Cross-identifications					Essential note	
3C 111; 4C +37.12; B2 0415+37; B3 0415+379A; WISEA J041821.27+380135.7						
Coordinates for Preferred coordinates						
Equatorial (J2000)						
RA, Dec	RA, Dec [Deg]	Unc Semi-major,minor ["]	Unc PA [deg]	Reference	Galactic Lon, Lat [deg]	
04h18m21.2772s, +38d01m35.800s	64.588655, 38.026611	4.71E-03, 3.35E-03	90	2004AJ....127.3587F	161.675559, -8.819711	
Preferred Redshift & Derived Quantities [$H_0 = 67.8$ km/sec/Mpc], $\Omega_{\text{matter}} = 0.308$, $\Omega_{\text{vacuum}} = 0.692$					Redshift-independent Distances	
z (Helio)	V (Helio) [km/s]	Reference	V (CMB) [km/s]	Hubble Distance (CMB) [Mpc]	# Measurements	
0.04850 +/- N/A	14539.936250 +/- N/A	1991ApJS...75..297H	14445 +/- 7	213.05 +/- 14.91		
Classifications						
Object Type	Morphology	Reference	Activity Type	Reference	Other	
G			S1	2006A&A...455..773V	N galaxy;BLRG Sy1	
Quick-look Angular & Physical Diameters				Foreground Galactic Extinction (2011ApJ...737..103S)		
Passband	Diameter ["]	Reference	Diameter [kpc]	A_λ [mag] V	A_λ [mag] K	
K_s (2MASS "total")	61.60	20032MASX.C.....:	63.18	4.531	0.499	
Quick-look Photometry & Luminosities (brightest flux in each spectral region)						
Spectral region	Band	Apparent mag or flux	Reference	Absolute Mag or νL_ν [W]	νL_ν [L_\odot (bol)]	
X-Ray	15-150 keV (Swift)	1.1e-10 +/- 3.4e-12 erg/cm^2/s	2010A&A...524A..64C	6.42E+37 +/- 1.30E+37 [W]	1.67E+11 +/- 3.38E+10	
UV						
Visible	i (KPNO)	13.960 mag	2011ApJ...739...57K	-2.28E+01 [mag]	3.85E+10	
Near-IR	W2 (WISE)	8.996 +/- 0.021 mag	2013wise.rept....1C	-27.72 +/- 0.50 [mag]	4.28E+10 +/- 8.59E+09	
Far-IR	70 microns	342 +/- 100 milliJy	2005ApJ...629...88S	8.38E+36 +/- 2.97E+36 [W]	2.18E+10 +/- 7.72E+09	
Radio	12.6 MHz	600. +/- 15 % Jy	1969MNRAS.143..289B	4.41E+34 +/- 1.10E+34 [W]	1.15E+08 +/- 2.87E+07	

†Derived quantities are based on the median redshift-independent distance when available, otherwise the preferred redshift is used with the selected cosmological parameters (which can be changed in search options).
 Cosmological params can be changed in search options.

Articles

Besides the individual journal webpages, you can retrieve articles and additional information (e.g., tables, figures) using **ADS** and **arXiv**



I. ADS

http://adsabs.harvard.edu/abstract_service.html

Limit query to: Astronomy Physics General

Search

Author AND OR

(Last, First M) one per line

Object AND OR

SIMBAD object search (one per line)

Author(s)

- ^Name: all the papers with Name as first author
- Name1 & Name 2: all the papers in given years with both Name1 and Name2

Publication date between

MM / YYYY and MM / YYYY

Publ. Year (or period)

Object Name

Title AND OR BOOLEAN

Abstract/Keywords AND OR BOOLEAN

Refereed only Articles only

Publication(s)

Press Return Key To Add Publication

Comma-separated bibstems of journal titles

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II. ArXiv

Physics

- Astrophysics (**astro-ph** new, recent, search)
includes: Astrophysics of Galaxies; Cosmology and Nongalactic Astrophysics; Earth and Planetary Astrophysics; Condensed Matter (**cond-mat** new, recent, search)
includes: Disordered Systems and Neural Networks; Materials Science; Mesoscale and Nanoscale Physics; Other
- General Relativity and Quantum Cosmology (**gr-qc** new, recent, search)
- High Energy Physics – Experiment (**hep-ex** new, recent, search)
- High Energy Physics – Lattice (**hep-lat** new, recent, search)
- High Energy Physics – Phenomenology (**hep-ph** new, recent, search)
- High Energy Physics – Theory (**hep-th** new, recent, search)
- Mathematical Physics (**math-ph** new, recent, search)
- Nonlinear Sciences (**nlin** new, recent, search)
includes: Adaptation and Self-Organizing Systems; Cellular Automata and Lattice Gases; Chaotic Dynamics; Ex
- Nuclear Experiment (**nucl-ex** new, recent, search)
- Nuclear Theory (**nucl-th** new, recent, search)
- Physics (**physics** new, recent, search)
includes: Accelerator Physics; Applied Physics; Atmospheric and Oceanic Physics; Atomic Physics; Atomic and Molecular Physics; Geophysics; History and Philosophy of Physics; Instrumentation and Detectors; Medical Physics; Optics
- Quantum Physics (**quant-ph** new, recent, search)

<https://arxiv.org>

On daily basis you may find the submitted/accepted publications, proceedings, research notes, etc.

You can mine in the old submissions ('search', 'recent') or just check the papers newly submitted to arXiv

Mathematics

- Mathematics (**math** new, recent, search)
includes (see detailed description): Algebraic Geometry; Algebraic Topology; Analysis of PDEs; Category Theory; Mathematics; General Topology; Geometric Topology; Group Theory; History and Overview; Information Theory; Quantum Algebra; Representation Theory; Rings and Algebras; Spectral Theory; Statistics Theory; Symplectic G

Computer Science

- Computing Research Repository (**CoRR** new, recent, search)
includes (see detailed description): Artificial Intelligence; Computation and Language; Computational Complex Systems; Computers and Society; Cryptography and Security; Data Structures and Algorithms; Databases; Digital Libraries; Hardware Architecture; Human-Computer Interaction; Information Retrieval; Information Theory; Logic in Computer Science; Numerical Analysis; Operating Systems; Other Computer Science; Performance; Programming Languages; Robotics

Quantitative Biology

- Quantitative Biology (**q-bio** new, recent, search)
includes (see detailed description): Biomolecules; Cell Behavior; Genomics; Molecular Networks; Neurons and C

Quantitative Finance


- Quantitative Finance (**q-fin** new, recent, search)
includes (see detailed description): Computational Finance; Economics; General Finance; Mathematical Finance

Statistics

- Statistics (**stat** new, recent, search)
includes (see detailed description): Applications; Computation; Machine Learning; Methodology; Other Statistics

Electrical Engineering and Systems Science

November 15, 2019 (under 'New Submissions', Astrophysics Sector)

 You can download PDF (or other formats)

[15] [arXiv:1911.05791](https://arxiv.org/abs/1911.05791) [pdf, other]

The Assembly of the First Massive Black Holes

[Kohei Inayoshi](#), [Eli Visbal](#), [Zoltán Haiman](#)

Comments: Invited review in Annual Reviews of Astronomy & Astrophysics; an edited final version is to appear in volume 58, to be published in 2020

Subjects: **Astrophysics of Galaxies (astro-ph.GA)**; Cosmology and Nongalactic Astrophysics (astro-ph.CO)

The existence of $\approx 10^9$ Msun supermassive black holes (SMBHs) within the first billion year of the universe has stimulated numerous ideas for the prompt formation and r first assembled, how they may have subsequently grown as massive as $\approx 10^9$ Msun, and how multi-messenger observations could distinguish between different SMBH ass of the iceberg. Early BHs likely fill a continuum from stellar-mass (approx. 10 Msun) to the super-massive ($\approx 10^9$ Msun) regime, reflecting a range of initial masses and gr high as $z=30$, but their initial growth was typically stunted due to the shallow potential wells of their host galaxies. (3) Conditions in some larger, metal-poor galaxies soo mergers in dense stellar clusters. (4) BH masses depend on the environment (such as the number and properties of nearby radiation sources and the local baryonic streami between assembly mechanisms will be difficult, but a combination of observations by LISA (probing massive BH growth via mergers) and by deep multi-wavelength electror