# The US INTEGRAL Public Data Archive

*INTEGRAL User's Committee Meeting 2-21-06*

# INTEGRAL Archive Milestones

**July 2004:** The ISDC INTEGRAL Public Data Archive opened with data up to revolution 66 (5-1-03).

**September 2004:** The US INTEGRAL Public Data Archive at the HEASARC opened.

**January 2005:** All public data was reprocessed into revision 2 format.

**January 2005:** New GO and CP data released in revision 2.

**February 2005:** The US INTEGRAL Public Data Archive at the HEASARC switches over to revision 2 format data.

**March 2005:** All data available from ISDC in revision 2 format.

**February 2006:** 1.8 TB of public INTEGRAL data available from the HEASARC

# Current Public Data Archive Status

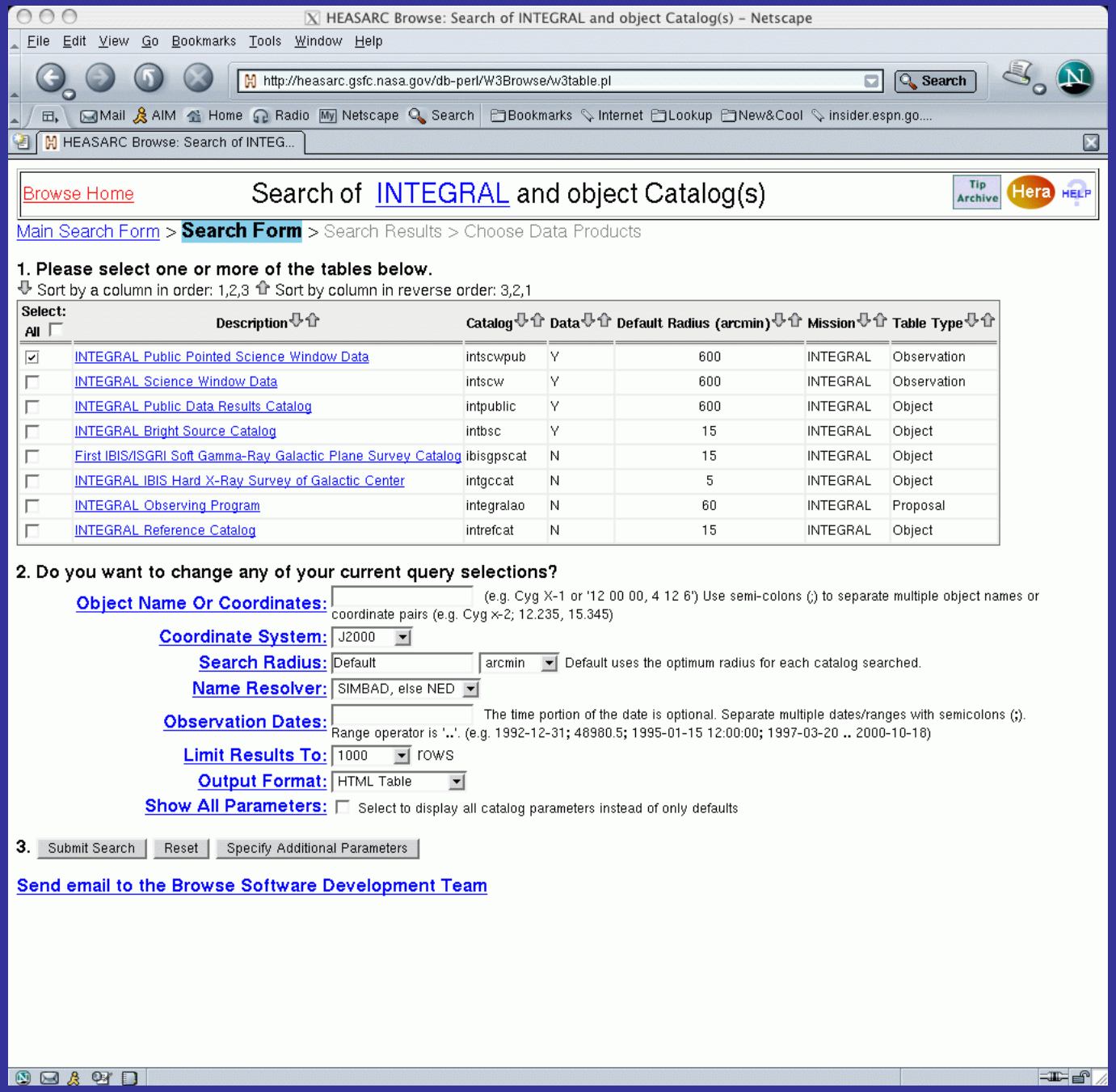
- New public data is available to the community within a few days of its release from the ISDC. The limiting factor is the low data transfer rate from the ISDC. ~3 spacecraft revolutions can be transferred per day.
- All public data through the latest release (1-30-06) is currently available from the HEASARC archive.
- Public data releases occur ~monthly with the next releases scheduled for 2-23 and 3-31.
- We have agreement with ISDC to notify us when data is reprocessed, e.g. .001 ==> .002 versions.

## Schedule of Public Data Releases:

| Date | Revolutions getting public |
|---|---|
| 2006 Jul 31 | 274-276, 291, 310-321 |
| 2006 Jun 23 | 270-273, 279-282, 287-290, 292-299, 301, 302, 304-309 |
| 2006 May 08 | 300 |
| 2006 Apr 20 | 277, 284-286 |
| 2006 Mar 31 | 261-266, 268, 269, 278, 283 |
| 2006 Feb 23 | 251-260, 267 |
| 2006 Jan 30 | 210-214, 221, 222, 236, 237, 244-250 |
| 2005 Dec 9 | 215, 216, 218, 220, 226, 227, 229-231, 238 |
| 2005 Nov 17 | 207, 209, 217, 219, 223-225, 239-243 |
| 2005 Oct 17 | 232-235 |
| 2005 Sep 30 | 201-206, 208, 228 |
| 2005 Aug 8 | 168, 188, 189, 192, 194-200 |
| 2005 Jul 22 | 176, 177, 186, 187, 193 |
| 2005 Jun 17 | 184, 190, 191 |
| 2005 Jun 3 | 161-162,164, 166, 172, 173, 175, 178-182, 185 |
| 2005 May 19 | 137-141, 150-160, 163, 183 |
| 2005 May 2 | 171, 174 |
| 2005 Apr 5 | 165, 167, 169, 170 |
| 2005 Mar 21 | 126-129, 131-136, 142-149 |
| 2005 Jan 3 | 081-088, 123-125 |
| 2004 Dec 10 | 107, 108, 110-115, 130 |
| 2004 Nov 19 | 098, 099, 104, 105, 106, 109, 119-122 |
| 2004 Nov 1 | 097, 101, 116, 117, 118 |
| 2004 Oct 18 | 079, 080 |
| 2004 Oct 04 | 100, 102, 103 |
| 2004 Sep 24 | 74-76, 89-96 |
| 2004 Aug 16 | 77, 78 |

# Accessing the US INTEGRAL Public Data Archive

- The US INTEGRAL Public Data Archive is accessible from the HEASARC via Browse or FTP.
- Downloading the data as a tar file is complicated by the large size of the typical observation, 3 days of data = 7-8 GB.
- The HEASARC limit for a tar file is ~3.5 GB ==> the preferred download method is via a wget script created by Browse.
- A detailed description of all the INTEGRAL catalogs available through Browse as well as a detailed cookbook describing the downloading of data and the setting up of a local data repository are available on the GOF website: http://heasarc.gsfc.nasa.gov/docs/integral/inthp_archive.html


HEASARC Browse: Search of INTEGRAL and object Catalog(s) – Netscape
File Edit View Go Bookmarks Tools Window Help
http://heasarc.gsfc.nasa.gov/db-perl/W3Browse/w3table.pl
Search
Mail AIM Home Radio Netscape Search Bookmarks Internet Lookup New&Cool insider.espn.go....
HEASARC Browse: Search of INTEG...
Browse Home
Search of INTEGRAL and object Catalog(s)
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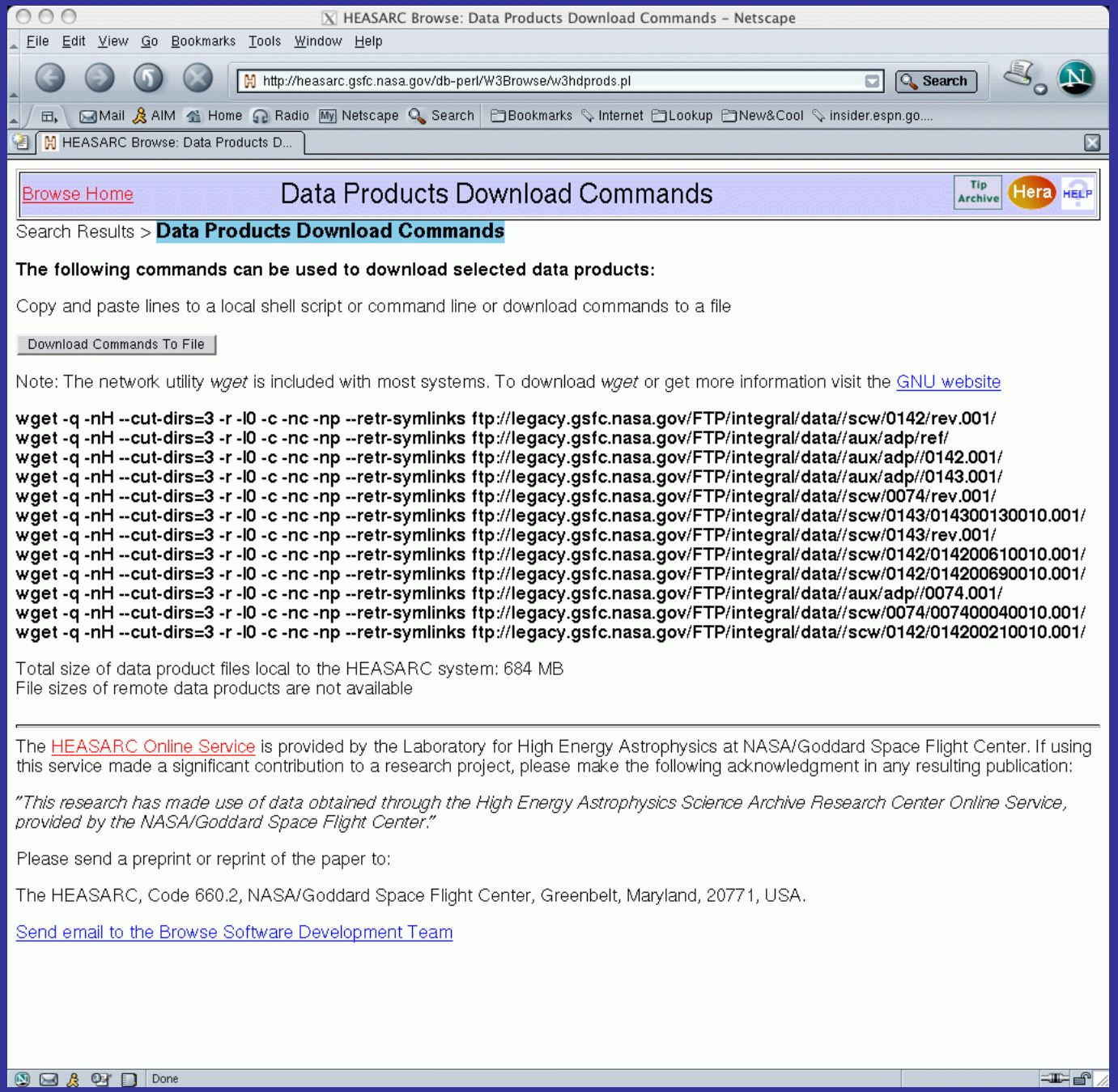
Main Search Form > Search Form > Search Results > Choose Data Products
1. Please select one or more of the tables below.
Sort by a column in order: 1,2,3 Sort by column in reverse order: 3,2,1
Select: All
Description
Catalog
Data
Default Radius (arcmin)
Mission
Table Type
INTEGRAL Public Pointed Science Window Data intscwpub Y 600 INTEGRAL Observation
INTEGRAL Science Window Data intscw Y 600 INTEGRAL Observation
INTEGRAL Public Data Results Catalog intpublic Y 600 INTEGRAL Object
INTEGRAL Bright Source Catalog intbsc Y 15 INTEGRAL Object
First IBIS/ISGRI Soft Gamma-Ray Galactic Plane Survey Catalog ibisgpscat N 15 INTEGRAL Object
INTEGRAL IBIS Hard X-Ray Survey of Galactic Center intgccat N 5 INTEGRAL Object
INTEGRAL Observing Program integralao N 60 INTEGRAL Proposal
INTEGRAL Reference Catalog intrefcat N 15 INTEGRAL Object
2. Do you want to change any of your current query selections?
Object Name Or Coordinates: (e.g. Cyg X-1 or '12 00 00, 4 12 6') Use semi-colons (;) to separate multiple object names or coordinate pairs (e.g. Cyg x-2; 12.235, 15.345)
Coordinate System: J2000
Search Radius: Default arcmin Default uses the optimum radius for each catalog searched.
Name Resolver: SIMBAD, else NED
Observation Dates: 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)
Limit Results To: 1000 rows
Output Format: HTML Table
Show All Parameters: Select to display all catalog parameters instead of only defaults
3. Submit Search Reset Specify Additional Parameters
Send email to the Browse Software Development Team


HEASARC Browse: Data Products Download Commands - Netscape
File Edit View Go Bookmarks Tools Window Help
http://heasarc.gsfc.nasa.gov/db-perl/W3Browse/w3hdprods.pl
Search
Mail AIM Home Radio Netscape Search Bookmarks Internet Lookup New&Cool insider.espn.go....
HEASARC Browse: Data Products D...
Browse Home
Data Products Download Commands
Tip Archive
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HELP
Search Results > Data Products Download Commands
The following commands can be used to download selected data products:
Copy and paste lines to a local shell script or command line or download commands to a file
Download Commands To File
Note: The network utility wget is included with most systems. To download wget or get more information visit the GNU website
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0142/rev.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//aux/adp/ref/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//aux/adp//0142.001/
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wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0074/rev.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0143/014300130010.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0143/rev.001/
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wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0142/014200690010.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//aux/adp//0074.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0074/007400040010.001/
wget -q -nH --cut-dirs=3 -r -l0 -c -nc -np --retr-symlinks ftp://legacy.gsfc.nasa.gov/FTP/integral/data//scw/0142/014200210010.001/
Total size of data product files local to the HEASARC system: 684 MB
File sizes of remote data products are not available
The HEASARC Online Service is provided by the Laboratory for High Energy Astrophysics at NASA/Goddard Space Flight Center. If using this service made a significant contribution to a research project, please make the following acknowledgment in any resulting publication:
"This research has made use of data obtained through the High Energy Astrophysics Science Archive Research Center Online Service, provided by the NASA/Goddard Space Flight Center."
Please send a preprint or reprint of the paper to:
The HEASARC, Code 660.2, NASA/Goddard Space Flight Center, Greenbelt, Maryland, 20771, USA.
Send email to the Browse Software Development Team
Done

# Archive Usage Statistics

| Month | Amount Downloaded (GB) | HEASARC Ranking |
|---|---|---|
| Aug 05 | 45.1 | 5 |
| Sep 05 | 28.2 | 4 |
| Oct 05 | 93.8 | 4 |
| Nov 05 | 213.0 | 3 |
| Dec 05 | 16.7 | 8 |
| Jan 06 | 303.8 | 2 |