

JSOC-SDP

Web access to SDO HMI and AIA data

The following pages show an excursion through the SDO JSOC-SDP web pages to provide an example of how to preview data, examine metadata, and export selected subsets of HMI or AIA data directly from the JSOC.

The JSOC access tools shown here are intended for users who have a pretty good idea of what data is available, and which data subsets they are interested in locating and exporting from the JSOC. These tools are not particularly convenient for browsing the data or the Sun, but are the most direct portal into the active archive.

This document can be found at:
<http://jsoc.stanford.edu/doc/exports/tour.pdf>

SDO JSOC-SDP is the SDO Joint Science Operations Center – Science Data Processing for the HMI and AIA instruments. The home page for the JSOC-SDP is:

<http://jsoc.stanford.edu>

These notes prepared Dec 2010.

HMI - AIA

JOINT SCIENCE OPERATIONS CENTER - SCIENCE DATA PROCESSING

Welcome to the Joint Science Operations Center (JSOC) [HMI](#) - [AIA](#) Science Data Processing (SDP) home. The HMI and AIA instruments on the [SDO](#) mission operate the JSOC SDP and Instrument Operations Center (IOC) at Stanford University and Lockheed-Martin Solar and Astrophysics Laboratory respectively.

The SDP center at Stanford University is the point of contact for access to HMI and AIA primary observable datasets. The SDP is also the home of most HMI processing and access to higher level data products. AIA higher level processing is performed at the LMSAL JSOC-AVC (AIA Visualization Center) which also houses JSOC IOC.

JSOC Documentation

- [Wiki](#) - General discussion of how to use the JSOC
- [Man pages](#) - Detailed information about JSOC software
- [AIA SDO Docs](#) - AIA Doc collection

Access to HMI and AIA Image Library

- [AIA - Sun Today](#) - Recent AIA and some HMI images and solar search tools.
- [HMI Most Recent Images](#)
- **Images by year, month, day for HMI and AIA**
 - [HMI Images, Continuum and Magnetic Field](#) - Select year, month, day, then time, size, quantity.
 - [AIA Images, All Filters](#) - Select by year, month, day, channel then time, type, etc.
- [HMI Movies for last 48 hours](#)

Access to JSOC Data

- **Note - These tools are designed for standards compliant browsers.**
 - They work with Firefox, Safari, Opera, Chrome, etc.
 - They do not work with MSIE at present.
- <http://jsoc.stanford.edu/ajax/lookdata.html> - Prototype Web-based data access tool
Use lookdata to explore data and to request an export of the chosen data.
- <http://jsoc.stanford.edu/ajax/exportdata.html> - Prototype Web-based data export tool
Use this link to export recordsets when you know the query to use.
- <http://jsoc.stanford.edu/ajax/exportfile.csh> - Prototype user script-based data export tool
Use this sample script to export recordsets when you know the query to use and you want to use a local script to automate the request.
You will want to tune the script to meet your needs.

Data Availability and Notes

- [SDO Data Use Policy](#)
- [HMI Coverage Tables and Release Notes](#)
- [AIA Coverage Tables and Release Notes](#)

JSOC System Status

- [JSOC system status report](#)

[Home pages for [HMI](#) | [AIA](#) | [SDO](#)]

<http://jsoc.stanford.edu> – Serves as primary entry point into SDO/HMI and SDO/AIA data access via the JSOC-SDP. Explore all the links. Comments are welcome. The next pages start with a “click” on the lookdata link shown by the arrow.

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Lookdata JSOC Export Data http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Data Explore Info and Export

Reset Page Disable Tabs Disable Help 0 Requests Pending

? About Help jsoc.stanford.edu gives access to export series. Consult JSOC staff for access to internal series.

Series Select Series Content RecordSet Select Values Display Export Data Test

? You may go directly to Step 3 on the above RecordSet Select tab if you know which series you want.

1. Find list of dataseries

Enter a dataseries match pattern to search for seriesnames, or leave blank to select from all series.

hmi.*45s ? Seriesname filter

Fetch seriesname list

10 Series match this selection filter.

2. Pick series to use

? Select data series here.

hmi.Ic_45s — continuum intensities with a cadence of 45 seconds.
hmi.Ld_45s — linedepths with a cadence of 45 seconds.
hmi.Lw_45s — linewidths with a cadence of 45 seconds.
hmi.M_45s — magnetograms with a cadence of 45 seconds. **hmi.M_45s**
hmi.V_45s — Dopplergrams with a cadence of 45 seconds
hmi_test.Ic_45s — continuum intensities with a cadence of 45 seconds.
hmi_test.Ld_45s — linedepths with a cadence of 45 seconds.
hmi_test.Lw_45s — linewidths with a cadence of 45 seconds.

Done

<http://jsoc.stanford.edu/ajax/lookdata.html> is entry to explore and preview the holdings at the JSOC. The first step is to select the dataseries you need. This interface assumes that you already understand the types of data obtained by SDO HMI and AIA and have an idea of what you need.

For this example some HMI data will be selected. The series filter chosen is **hmi.*45s** which finds the 45-second cadence HMI science level data. The series **hmi.M_45s** is chosen.

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Lookdata JSOC Export Data http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Data Explore Info and Export Reset Page Disable Tabs Disable Help 0 Requests Pending

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Series Select Series Content RecordSet Select Values Display Export Data Test

Information about selected series

Current Series is: hmi.M_45s
 PrimeKeys: T_REC, CAMERA
 DBIndex: T_REC_index, CAMERA
 Data is archived, online retention 10000 days
 Unitsize: 32 records

Series Description magnetograms with a cadence of 45 seconds.
[Release Notes for hmi](#)

First Record = hmi.M_45s[2010.08.23_00:06:00_TAI][2]
 Last Record = hmi.M_45s[2010.12.01_23:53:15_TAI][2]
 First Rec., Last Rec. and largest used recnums: 305456, 328775, 328781 resp.

3. Select Records and Get Record Count

Enter RecordSet Specification here for keyword listings and for export. [Examples](#)
 Check box to show the QueryBuilder.
 Request may take a while if the recordset is large (more than a few thousand records).

? hmi.M_45s

Record Limit Optional, + for from start, - for from end.

GetRecordCount Record Count:

Check to Get Record Query.
 Check to Allow Huge Record Queries.
 Check to show full segment info
 Check to make local file links (only at JSOC).
 Prepare value table in 'show_info' format in new window. (No *psuedo* keywords yet please) Segments fail

[Fetch Keyword Values for RecordSet](#)

Select Keywords, Segments, and Links for table of values.

4. Select Keywords

NONE
 ALL
 cparms_sg000
 magnetogram_bzero
 magnetogram_bscale
 DATE
 DATE_OBS
 TELESCOP

5. Select Segments

NONE
 ALL
 magnetogram

6. Select Links

The act of selecting a dataseries causes a jump to the RecordSet tab where you can specify a subset of the series to either examine metadata or to export. The series content is summarized at the top and a link is provided to additional notes. You can select keywords or data segments (i.e. files) here for immediate inspection. Note the various checkboxes to tailor the page to your needs.

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Lookdata JSOC Export Data http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Data Explore Info and Export Reset Page Disable Tabs Disable Help 0 Requests Pending

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Series Select Series Content RecordSet Select Values Display Export Data Test

Information about selected series

Current Series is: hmi.M_45s
 PrimeKeys: T_REC, CAMERA
 DBIndex: T_REC_index, CAMERA
 Data is archived, online retention 10000 days
 Unitsize: 32 records

Series Description magnetograms with a cadence of 45 seconds.
Release Notes [for hmi](#)

First Record = hmi.M_45s[2010.08.23_00:06:00_TAI][2]
 Last Record = hmi.M_45s[2010.12.01_23:53:15_TAI][2]
 First Rec., Last Rec. and largest used recnums: 305456, 328775, 328781 resp.

3. Select Records and Get Record Count

Enter RecordSet Specification here for keyword listings and for export. [Examples](#)
 Check box to show the QueryBuilder.
 Request may take a while if the recordset is large (more than a few thousand records).

? hmi.M_45s[2010.10.02_13:30/20m]

Record Limit Optional, + for from start, - for from end.

[GetRecordCount] Record Count: 26

Check to Get Record Query.
 Check to Allow Huge Record Queries.
 Check to show full segment info
 Check to make local file links (only at JSOC).
 Prepare value table in 'show_info' format in new window. (No *psuedo* keywords yet please) Segments fail
[Fetch Keyword Values for RecordSet](#)

Select Keywords, Segments, and Links for table of values.

4. Select Keywords

NONE
 ALL
 cparms_sg000
 magnetogram_bzero
 magnetogram_bscale
 DATE
 DATE_OBS
 TELESCOP

5. Select Segments

NONE
 ALL
 magnetogram

6. Select Links

Done

The key information needed from the user here is the specification of “prime key” values that will limit the selected record set to only the desired range of, usually, time. The RecordSet specifier is actually a query into the DRMS database. Shortcuts are available for the prime-keys which are the keywords used to identify unique records. For instance the query above will select 20 minutes beginning at 13:20 on 2 October 2010. For HMI TAI is preferred vs UTC since the data is computed on “nice” TAI ticks. The example uses the default UTC however.

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata.html

JSOC Lookdata JSOC Export Data

JSOC Data Explore Info and Export

Reset Page Disable Tabs Disable Help 0 Requests

Pending

? About Help jsoc.stanford.edu gives access to export series. Consult JSOC staff for access to internal series.

Series Select Series Content RecordSet Select Values Display Export Data Test

? List of All Keywords, Links, and Segments

| keyword | type | scope | default | unit | note |
|--------------------|--------|----------|--------------------------|----------|---|
| cparms_sg000 | string | variable | compress Rice | none | |
| magnetogram_bzero | double | variable | 0 | none | |
| magnetogram_bscale | double | variable | 0.1 | none | |
| DATE | time | variable | -4712.01.01_11:59:28Z | ISO | Date_time of processing, ISO 8601 format UTC |
| DATE_OBS | time | variable | -4712.01.01_11:59:27.82Z | ISO | [DATE-OBS] DATE_OBS = T_OBS - EXPTIME/2.0 |
| TELESCOP | string | constant | SDO/HMI | none | For HMI: SDO/HMI |
| INSTRUME | string | variable | | none | For HMI: HMI_SIDE1, HMI_FRONT2, or HMI_COMBINED |
| WAVELNTH | float | constant | 6173.0 | Angstrom | For HMI: 6173.3 Angstroms |
| CAMERA | int | variable | -2147483648 | none | For HMI: 1 (side camera), 2 (front camera), or 3 (both cameras) |
| BUNIT | string | constant | Gauss | none | BUNIT: physical units of data, Gauss |
| ORIGIN | string | constant | SDO/JSOC-SDP | none | ORIGIN: location where file made |
| CONTENT | string | constant | MAGNETOGRAM | none | CONTENT: MAGNETOGRAM |
| QUALITY | int | variable | 0x80000000 | none | Level 1.5 Quality word |
| QUALLEV1 | int | variable | 0x80000000 | none | Logical OR on the bits of the level 1 Quality word |
| HISTORY | string | variable | | none | processing history of data |
| COMMENT | string | variable | | none | commentary on the data |
| BLD_VERS | string | variable | | none | Code release build number of program that created this record |
| HCAMID | int | variable | -2147483648 | none | HMI_SEQ_ID_EXP_PATH |
| SOURCE | string | variable | | none | level 1 filtergrams used to produce the observables |
| TOTVALS | int | variable | -2147483648 | none | Expected number of data values (pixels) |
| DATAVALS | int | variable | -2147483648 | none | Actual number of data values in images (pixels) |
| MISSVALS | int | variable | -2147483648 | none | Missing values: TOTVALS - DATAVALS |
| SATVALS | int | variable | -2147483648 | none | Saturated values |

Done

The “Series Content” tab lists the available metadata keyword names, names and structure of data segments, and any DRMS links to other dataseries from this series.

JSOC Lookdata - Mozilla Firefox

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http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Lookdata JSOC Export Data http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Data Explore Info and Export Reset Page Disable Tabs Disable Help 0 Requests Pending

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Series Select Series Content RecordSet Select Values Display Export Data Test

7. Get Keyword and Segment Values Here

RecordSet Query: hmi.M_45s[2010.10.02_13:30/20m]

Keywords to Fetch: 1 Keys Chosen: **ALL**

Segments to Fetch: 1 Segs Chosen: **ALL**

Links to Fetch:

| RecordName | DATE | DATE_OBS | TELESCOP | INSTRUME | WAVELNTH | CAMERA | BUNIT | ORI |
|---------------------------------------|----------------------|-------------------------|----------|------------|----------|--------|-------|-----|
| hmi.M_45s[2010.10.02_13:30:45_TAI][2] | 2010-11-13T02:24:15Z | 2010-10-02T13:29:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:31:30_TAI][2] | 2010-11-13T02:25:32Z | 2010-10-02T13:30:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:32:15_TAI][2] | 2010-11-13T02:26:47Z | 2010-10-02T13:31:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:33:00_TAI][2] | 2010-11-13T02:28:00Z | 2010-10-02T13:32:03.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:33:45_TAI][2] | 2010-11-13T02:29:14Z | 2010-10-02T13:32:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:34:30_TAI][2] | 2010-11-13T02:30:32Z | 2010-10-02T13:33:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:35:15_TAI][2] | 2010-11-13T02:31:47Z | 2010-10-02T13:34:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:36:00_TAI][2] | 2010-11-13T02:33:01Z | 2010-10-02T13:35:03.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:36:45_TAI][2] | 2010-11-13T02:34:15Z | 2010-10-02T13:35:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:37:30_TAI][2] | 2010-11-13T02:35:32Z | 2010-10-02T13:36:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:38:15_TAI][2] | 2010-11-13T02:36:45Z | 2010-10-02T13:37:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:39:00_TAI][2] | 2010-11-13T02:38:00Z | 2010-10-02T13:38:03.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:39:45_TAI][2] | 2010-11-13T02:39:14Z | 2010-10-02T13:38:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:40:30_TAI][2] | 2010-11-13T02:08:07Z | 2010-10-02T13:39:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:41:15_TAI][2] | 2010-11-13T02:09:19Z | 2010-10-02T13:40:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:42:00_TAI][2] | 2010-11-13T02:10:33Z | 2010-10-02T13:41:03.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:42:45_TAI][2] | 2010-11-13T02:11:46Z | 2010-10-02T13:41:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:43:30_TAI][2] | 2010-11-13T02:13:00Z | 2010-10-02T13:42:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:44:15_TAI][2] | 2010-11-13T02:14:13Z | 2010-10-02T13:43:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:45:00_TAI][2] | 2010-11-13T02:15:29Z | 2010-10-02T13:44:03.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:45:45_TAI][2] | 2010-11-13T02:16:43Z | 2010-10-02T13:44:48.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:46:30_TAI][2] | 2010-11-13T02:17:57Z | 2010-10-02T13:45:33.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |
| hmi.M_45s[2010.10.02_13:47:15_TAI][2] | 2010-11-13T02:19:10Z | 2010-10-02T13:46:18.90Z | SDO/HMI | HMI_FRONT2 | 6173.0 | 2 | Gauss | SDO |

The “Values Display” tab shows the selected metadata names and values in a scrollable table. You can sort the rows by clicking on a column name. You can change column widths by dragging the “|” in the title row. If you want to copy/paste the metadata to other applications, explore the available “pseudo-keywords” with names like “*readdir* and the checkboxes on the RecordSet Select” tab

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Lookdata JSOC Export Data http://jsoc.stanford.edu/ajax/lookdata2.html

JSOC Data Explore Info and Export Reset Page Disable Tabs Disable Help 0 Requests Pending

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Series Select Series Content RecordSet Select Values Display Export Data Test

7. Get Keyword and Segment Values Here

RecordSet Query: hmi.M_45s[2010.10.02_13:30/20m]

Keywords to Fetch: 5 Keys Chosen: QUALITY, DATAMIN, DATAMAX, DATAMEAN, DATARMS

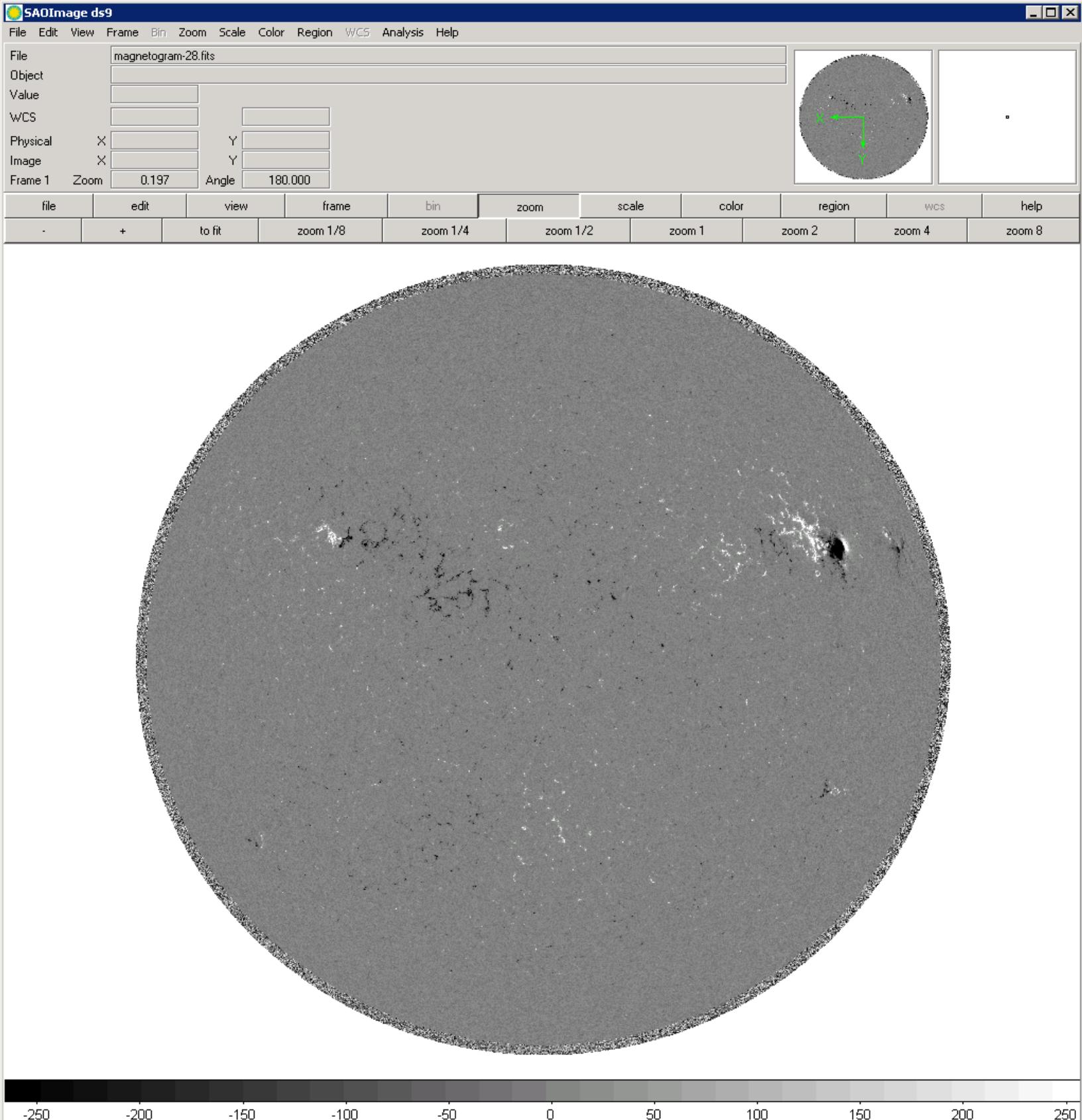
Segments to Fetch: 1 Segs Chosen: **ALL**

Links to Fetch:

| RecordName | QUALITY | DATAMIN | DATAMAX | DATAMEAN | DATARMS | magnetogram |
|---------------------------------------|------------|--------------|-------------|-----------|-----------|--|
| hmi.M_45s[2010.10.02_13:30:45_TAI][2] | 0x00000000 | -1209.045044 | 870.827271 | 0.031641 | 23.969133 | /SUM20/D110939257/D105253770/S00014/ma |
| hmi.M_45s[2010.10.02_13:31:30_TAI][2] | 0x00000000 | -1224.027344 | 892.121399 | 0.042218 | 23.978308 | /SUM20/D110939257/D105253770/S00015/ma |
| hmi.M_45s[2010.10.02_13:32:15_TAI][2] | 0x00000000 | -1204.354980 | 886.883118 | 0.024505 | 23.958693 | /SUM20/D110939257/D105253770/S00016/ma |
| hmi.M_45s[2010.10.02_13:33:00_TAI][2] | 0x00000000 | -1189.741699 | 914.597290 | 0.015923 | 23.958548 | /SUM20/D110939257/D105253770/S00017/ma |
| hmi.M_45s[2010.10.02_13:33:45_TAI][2] | 0x00000000 | -1196.272217 | 927.318481 | 0.014641 | 23.961540 | /SUM20/D110939257/D105253770/S00018/ma |
| hmi.M_45s[2010.10.02_13:34:30_TAI][2] | 0x00000000 | -1196.743164 | 878.839661 | 0.006160 | 23.965855 | /SUM20/D110939257/D105253770/S00019/ma |
| hmi.M_45s[2010.10.02_13:35:15_TAI][2] | 0x00000000 | -1184.712402 | 888.204529 | 0.010951 | 23.975298 | /SUM20/D110939257/D105253770/S00020/ma |
| hmi.M_45s[2010.10.02_13:36:00_TAI][2] | 0x00000000 | -1211.253906 | 898.442322 | 0.005805 | 23.969904 | /SUM20/D110939257/D105253770/S00021/ma |
| hmi.M_45s[2010.10.02_13:36:45_TAI][2] | 0x00000000 | -1228.223511 | 891.530457 | 0.010591 | 23.954670 | /SUM20/D110939257/D105253770/S00022/ma |
| hmi.M_45s[2010.10.02_13:37:30_TAI][2] | 0x00000000 | -1214.667236 | 919.720459 | 0.030963 | 23.981583 | /SUM20/D110939257/D105253770/S00023/ma |
| hmi.M_45s[2010.10.02_13:38:15_TAI][2] | 0x00000000 | -1187.517334 | 887.674622 | -0.018454 | 23.966215 | /SUM20/D110939257/D105253770/S00024/ma |
| hmi.M_45s[2010.10.02_13:39:00_TAI][2] | 0x00000000 | -1191.003174 | 905.246094 | 0.034729 | 23.941381 | /SUM20/D110939257/D105253770/S00025/ma |
| hmi.M_45s[2010.10.02_13:39:45_TAI][2] | 0x00000000 | -1183.399292 | 932.835571 | 0.028187 | 23.954853 | /SUM20/D110939257/D105253770/S00026/ma |
| hmi.M_45s[2010.10.02_13:40:30_TAI][2] | 0x00000000 | -1213.235718 | 925.418457 | -0.018493 | 23.989332 | /SUM21/D112683419/D105254200/S00000/ma |
| hmi.M_45s[2010.10.02_13:41:15_TAI][2] | 0x00000000 | -1192.262451 | 1060.316040 | 0.043526 | 23.997448 | /SUM21/D112683419/D105254200/S00001/ma |
| hmi.M_45s[2010.10.02_13:42:00_TAI][2] | 0x00000000 | -1173.288452 | 912.470825 | 0.028137 | 23.976288 | /SUM21/D112683419/D105254200/S00002/ma |
| hmi.M_45s[2010.10.02_13:42:45_TAI][2] | 0x00000000 | -1205.283569 | 919.334961 | 0.005679 | 23.930714 | /SUM21/D112683419/D105254200/S00003/ma |
| hmi.M_45s[2010.10.02_13:43:30_TAI][2] | 0x00000000 | -1215.856079 | 926.344421 | 0.050113 | 23.934589 | /SUM21/D112683419/D105254200/S00004/ma |
| hmi.M_45s[2010.10.02_13:44:15_TAI][2] | 0x00000000 | -1165.386841 | 930.540955 | 0.039374 | 23.931206 | /SUM21/D112683419/D105254200/S00005/ma |
| hmi.M_45s[2010.10.02_13:45:00_TAI][2] | 0x00000000 | -1161.708740 | 912.795044 | 0.025446 | 23.944498 | /SUM21/D112683419/D105254200/S00006/ma |
| hmi.M_45s[2010.10.02_13:45:45_TAI][2] | 0x00000000 | -1195.460571 | 940.108276 | 0.042581 | 23.948196 | /SUM21/D112683419/D105254200/S00007/ma |
| hmi.M_45s[2010.10.02_13:46:30_TAI][2] | 0x00000000 | -1182.397705 | 915.323669 | 0.021460 | 23.950710 | /SUM21/D112683419/D105254200/S00008/ma |
| hmi.M_45s[2010.10.02_13:47:15_TAI][2] | 0x00000000 | -1197.858032 | 904.786926 | 0.056526 | 23.941532 | /SUM21/D112683419/D105254200/S00009/ma |

The Values Display can be restricted to the keywords of interest for data preview. The “QUALITY” keyword should be present in all data series and is useful for judging the usefulness of any given data record. QUALITY=0 means nothing known to be wrong. Note that the paths to the data files are relative to <http://jsoc.stanford.edu>.

The “Test” tab reveals a graphing capability still being developed. The keywords shown will be the same as selected on the RecordSet Select section. Click on a keyword, then click on popup box to add a keyword to the graph. When all desired keywords have been selected, click on the *Create Graph* button. See <http://www.amcharts.com/> for usage information. There are still problems with the lookdata implementation as of Dec 2010.



The links from the “Values Table” tab point right into the DRMS archive to give you the Fitsio compressed, DRMS “as-is” fits file. Set your browser to recognize fits as a mime type and you can preview the data. See also <http://heasarc.gsfc.nasa.gov/fitsio/>

Note for HMI that this raw data will need a 180 degree rotation as indicated by the CROTA2 WCS keyword. Also note that HMI level1.5 data is not cropped but the off-disk pixels can be easily identified from: $\sqrt{(x-CRPIX1)^2 + (y-CRPIX2)^2} > RSUN_OBS/CDELT1$

JSOC Lookdata - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/lookdata.html

JSOC Lookdata

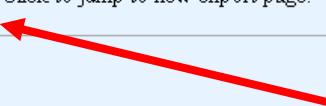
JSOC Data Explore Info and Export

Reset Page Disable Tabs Disable Help 0 Requests Pending

? About Help jsoc.stanford.edu gives access to export series. Consult JSOC staff for access to internal series.

Series Select Series Content RecordSet Select Values Display Export Data Test

8. RecordSet to export: hmi.M_45s[2010.10.02_TAI/20m] Record Limit: none Click to jump to new export page.



Done

The “Export” tab contains a link to the ajax/exportdata.html page where an actual data export request may be submitted. The current RecordSet specification will be forwarded to the export page and a new page or browser tab will be made for the export process.

NOTE: in some browsers the jump to the export page/tab only happens if there is not already an export page/tab in the current browser instance. In those cases, simply select that page/tab.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

http://jsoc.stanford.edu/ajax/exportdata.html?ds%3Dhmi.M_45s[2010.10.02_TAI%2F20m]{**ALL**}

Google

JSOC Data Export 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method Choose method, url_quick or url for now. url_quick implies protocol of "as-is"

Please only click once for export request.

RequestID This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status

Data Location

JSOC Data Export Status and Retrieval

RequestID This is the ID tag for your export request.

Please only click once for status request.

Clear old status RequestID

Status

Data Location

This is the jsoc.stanford.edu/ajax/exportdata.html as entered from lookdata. The "Method" field allows the user to select how to receive the data. "url_quick" is used to access the data as-is with no fully populated FITS headers and in fitsio compressed FITS files via links directly into the JSOC archive. This is always the fastest way to preview a few images but may not provide convenient access for large requests or when the metadata keywords are needed embedded into the files. Use the "Method" drop-down list to select any other method for more options.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

http://jsoc.stanford.edu/ajax/exportdata.html?ds%3Dhmi.M_45s[2010.10.02_TAI%2F20m]{**ALL**}

JSOC Lookdata JSOC Export Data

JSOC Data Export 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method Choose method, url_quick or url for now. url_quick implies protocol of "as-is"

Fetch your data at URLs below before starting next request

RequestID N.A. This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status Data Ready, size=378MB

| File | Record | Filename |
|------|--|---|
| 1 | hmi.M_45s[2010.10.02_00:00:00_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00000/magnetogram.fits |
| 2 | hmi.M_45s[2010.10.02_00:00:45_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00001/magnetogram.fits |
| 3 | hmi.M_45s[2010.10.02_00:01:30_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00002/magnetogram.fits |
| 4 | hmi.M_45s[2010.10.02_00:02:15_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00003/magnetogram.fits |
| 5 | hmi.M_45s[2010.10.02_00:03:00_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00004/magnetogram.fits |
| 6 | hmi.M_45s[2010.10.02_00:03:45_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00005/magnetogram.fits |
| 7 | hmi.M_45s[2010.10.02_00:04:30_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00006/magnetogram.fits |
| 8 | hmi.M_45s[2010.10.02_00:05:15_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00007/magnetogram.fits |
| 9 | hmi.M_45s[2010.10.02_00:06:00_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00008/magnetogram.fits |
| 10 | hmi.M_45s[2010.10.02_00:06:45_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00009/magnetogram.fits |
| 11 | hmi.M_45s[2010.10.02_00:07:30_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00010/magnetogram.fits |
| 12 | hmi.M_45s[2010.10.02_00:08:15_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00011/magnetogram.fits |
| 13 | hmi.M_45s[2010.10.02_00:09:00_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00012/magnetogram.fits |
| 14 | hmi.M_45s[2010.10.02_00:09:45_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00013/magnetogram.fits |
| 15 | hmi.M_45s[2010.10.02_00:10:30_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00014/magnetogram.fits |
| 16 | hmi.M_45s[2010.10.02_00:11:15_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00015/magnetogram.fits |
| 17 | hmi.M_45s[2010.10.02_00:12:00_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00016/magnetogram.fits |
| 18 | hmi.M_45s[2010.10.02_00:12:45_TAI][2]{magnetogram} | /SUM11/D110937200/D105244460/S00017/magnetogram.fits |

Done

url_quick immediate response with table of links to data. The Record column contains the DRMS record specifier and the Filename column contains the full path to the data.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

JSOC Data Export 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method

Filename Format File name template.

Processing

Protocol

Requestor

Notify

Confirm Email

Please only click once for export request.

RequestID This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status

Data Location

JSOC Data Export Status and Retrieval

RequestID This is the ID tag for your export request.

Please only click once for status request.

Clear old status RequestID

Status

Data Location

Home page for: [SDO-JSOC](#)

Method "url" reveals more options, will result in request submission and subsequent user initiated status request to do the data fetch.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

http://jsoc.stanford.edu/ajax/exportdata.html?ds%3Dhmi.M_45s[2010.10.02_TAI%2F20m]{**ALL**}

Google

JSOC Data Export Request

If the Method is changed from

After the request is submitted

If you enter an email address

Request_ID in order to access

RecordSet from file

RecordSet

Record Limit

Record Count

Method

Filename Format

Processing

Protocol

Requestor

Notify

Confirm Email

Submit Export Request

Please only click once for export request.

RequestID This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status

Data Location

JSOC Data Export Status and Retrieval

RequestID This is the ID tag for your export request.

Submit Status Request Please only click once for status request.

Clear Request Clear old status RequestID

Status

Data Location

Home page for: [SDO-JSOC](#)

A click on "?" provides help box for each field in the form. The Filename Format field allows the user to specify filenames of the exported data from explicit text and keyword values.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

http://jsoc.stanford.edu/ajax/exportdata.html?ds%3Dhmi.M_45s[2010.10.02_TAI%2F20m]{**ALL**}

Google

JSOC Data Export 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method Choose method, url_quick or url for now. url_quick implies protocol of "as-is"

Filename Format File name template.

Processing Select Pre-export processing

Protocol Choose protocol, "FITS" or "as-is".

Compression Choose compression parameters for each segment, **NONE** for no compression.

Requestor

Notify Provide your email address for notification. May be omitted for online delivery.

Confirm Email Please confirm e-mail address.

Export request submitted, please wait...

RequestID **JSOC_20101206_109** This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status Processing, size=378MB, estimate 10 seconds remaining

Data Location

JSOC Data Export Status and Retrieval

RequestID **JSOC_20101206_109** This is the ID tag for your export request.

Export request waiting for processing

Clear old status RequestID

Status

Data Location

Home page for: [SDO-JSOC](#)

Done

Upon submission of request the "Submit" button changes to the "Request Export Status" button and the RequestID is returned. This ID is used to fetch the result of the request.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

JSOC Data Export [reset page](#) [Turn Help Off](#) 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count [Recount](#)

Method Choose method, url_quick or url for now. url_quick implies protocol of "as-is"

Filename Format File name template.

Processing Select Pre-export processing

Protocol Choose protocol, "FITS" or "as-is".

Compression Choose compression parameters for each segment, **NONE** for no compression.

Requestor

Notify Provide your email address for notification. May be omitted for online delivery.

Confirm Email Please confirm e-mail address.

[Submit Export Request](#) Fetch your data at URLs below before starting next request

RequestID JSOC_20101206_109 This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status Data Ready, size=378MB

| File | Record | Filename |
|------|---------------------------------------|--|
| 1 | hmi.M_45s[2010.10.02_00:00:00_TAI][2] | hmi.M_45s.20101002_000000_TAI.2.magnetogram.fits |
| 2 | hmi.M_45s[2010.10.02_00:00:45_TAI][2] | hmi.M_45s.20101002_000045_TAI.2.magnetogram.fits |
| 3 | hmi.M_45s[2010.10.02_00:01:30_TAI][2] | hmi.M_45s.20101002_000130_TAI.2.magnetogram.fits |
| 4 | hmi.M_45s[2010.10.02_00:02:15_TAI][2] | hmi.M_45s.20101002_000215_TAI.2.magnetogram.fits |
| 5 | hmi.M_45s[2010.10.02_00:03:00_TAI][2] | hmi.M_45s.20101002_000300_TAI.2.magnetogram.fits |
| 6 | hmi.M_45s[2010.10.02_00:03:45_TAI][2] | hmi.M_45s.20101002_000345_TAI.2.magnetogram.fits |
| 7 | hmi.M_45s[2010.10.02_00:04:30_TAI][2] | hmi.M_45s.20101002_000430_TAI.2.magnetogram.fits |
| 8 | hmi.M_45s[2010.10.02_00:05:15_TAI][2] | hmi.M_45s.20101002_000515_TAI.2.magnetogram.fits |
| 9 | hmi.M_45s[2010.10.02_00:06:00_TAI][2] | hmi.M_45s.20101002_000600_TAI.2.magnetogram.fits |
| 10 | hmi.M_45s[2010.10.02_00:06:45_TAI][2] | hmi.M_45s.20101002_000645_TAI.2.magnetogram.fits |
| 11 | hmi.M_45s[2010.10.02_00:07:30_TAI][2] | hmi.M_45s.20101002_000730_TAI.2.magnetogram.fits |

Home page for: [SDO-JSOC](#)

The Status Request button on the export page, top part, gives the "packing list" of the export, but the actual fetch is accomplished by the button on the lower section of the page.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

http://jsoc.stanford.edu/ajax/exportdata.html?ds%3Dhmi.M_45s[2010.10.02_TAI%2F20m]**ALL**

JSOC Data Export 1 Requests Pending, Loading...

JSOC Data Export Request Generation

If the Method is changed from "url_quick" or "url_direct" you will have additional options to specify. "url-direct" is temporarily disabled.

After the request is submitted for Methods of "url", "ftp", "url-tar" or "ftp-tar" you will receive ON THIS PAGE a "Request_ID" that will be used to access the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method

Filename Format

Processing

Protocol

Compression

Requestor

Notify Provide your email address for notification. May be omitted for online delivery.

Confirm Email Please confirm e-mail address.

Cant locate export request: jsoc.export[JSOC_20101206_111]

The page at <http://jsoc.stanford.edu> says:

RequestID not found, status=6, error=Cant locate export request:
jsoc.export[JSOC_20101206_111]
Try again in a few seconds, may just be not ready to respond

RequestID This is the ID tag for your export request. Use the Status Request button below to retrieve the links to the data.

Status RecordSet not found

Data Location

JSOC Data Export Status and Retrieval

RequestID This is the ID tag for your export request.

Export request waiting for processing

Clear old status RequestID

Status

Data Location

Be patient. An immediate status request is likely to get a message indicating the JSOC export system has not yet begun to process the request. But read these messages carefully, they may also indicate a problem with the request.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

JSOC Data Export Status and Retrieval

RequestID JSOC_20101206_109 This is the ID tag for your export request. Success

Please only click once for status request.

Clear old status RequestID

List formats are index.html, index.json, and index.txt
export script file is JSOC_20101206_109.drmsrun

Status Data Ready, size=378MB

Data Location <http://jsoc.stanford.edu/SUM16/D114070677/S00000/>

Tar File Location /SUM16/D114070677/S00000/JSOC_20101206_109.tar

| File | Record | Filename |
|------|---------------------------------------|--|
| 1 | hmi.M_45s[2010.10.02_00:00:00_TAI][2] | hmi.M_45s.20101002_000000_TAI.2.magnetogram.fits |
| 2 | hmi.M_45s[2010.10.02_00:00:45_TAI][2] | hmi.M_45s.20101002_000045_TAI.2.magnetogram.fits |
| 3 | hmi.M_45s[2010.10.02_00:01:30_TAI][2] | hmi.M_45s.20101002_000130_TAI.2.magnetogram.fits |
| 4 | hmi.M_45s[2010.10.02_00:02:15_TAI][2] | hmi.M_45s.20101002_000215_TAI.2.magnetogram.fits |
| 5 | hmi.M_45s[2010.10.02_00:03:00_TAI][2] | hmi.M_45s.20101002_000300_TAI.2.magnetogram.fits |
| 6 | hmi.M_45s[2010.10.02_00:03:45_TAI][2] | hmi.M_45s.20101002_000345_TAI.2.magnetogram.fits |
| 7 | hmi.M_45s[2010.10.02_00:04:30_TAI][2] | hmi.M_45s.20101002_000430_TAI.2.magnetogram.fits |
| 8 | hmi.M_45s[2010.10.02_00:05:15_TAI][2] | hmi.M_45s.20101002_000515_TAI.2.magnetogram.fits |
| 9 | hmi.M_45s[2010.10.02_00:06:00_TAI][2] | hmi.M_45s.20101002_000600_TAI.2.magnetogram.fits |
| 10 | hmi.M_45s[2010.10.02_00:06:45_TAI][2] | hmi.M_45s.20101002_000645_TAI.2.magnetogram.fits |
| 11 | hmi.M_45s[2010.10.02_00:07:30_TAI][2] | hmi.M_45s.20101002_000730_TAI.2.magnetogram.fits |
| 12 | hmi.M_45s[2010.10.02_00:08:15_TAI][2] | hmi.M_45s.20101002_000815_TAI.2.magnetogram.fits |
| 13 | hmi.M_45s[2010.10.02_00:09:00_TAI][2] | hmi.M_45s.20101002_000900_TAI.2.magnetogram.fits |
| 14 | hmi.M_45s[2010.10.02_00:09:45_TAI][2] | hmi.M_45s.20101002_000945_TAI.2.magnetogram.fits |
| 15 | hmi.M_45s[2010.10.02_00:10:30_TAI][2] | hmi.M_45s.20101002_001030_TAI.2.magnetogram.fits |
| 16 | hmi.M_45s[2010.10.02_00:11:15_TAI][2] | hmi.M_45s.20101002_001115_TAI.2.magnetogram.fits |
| 17 | hmi.M_45s[2010.10.02_00:12:00_TAI][2] | hmi.M_45s.20101002_001200_TAI.2.magnetogram.fits |
| 18 | hmi.M_45s[2010.10.02_00:12:45_TAI][2] | hmi.M_45s.20101002_001245_TAI.2.magnetogram.fits |
| 19 | hmi.M_45s[2010.10.02_00:13:30_TAI][2] | hmi.M_45s.20101002_001330_TAI.2.magnetogram.fits |
| 20 | hmi.M_45s[2010.10.02_00:14:15_TAI][2] | hmi.M_45s.20101002_001415_TAI.2.magnetogram.fits |
| 21 | hmi.M_45s[2010.10.02_00:15:00_TAI][2] | hmi.M_45s.20101002_001500_TAI.2.magnetogram.fits |
| 22 | hmi.M_45s[2010.10.02_00:15:45_TAI][2] | hmi.M_45s.20101002_001545_TAI.2.magnetogram.fits |
| 23 | hmi.M_45s[2010.10.02_00:16:30_TAI][2] | hmi.M_45s.20101002_001630_TAI.2.magnetogram.fits |
| 24 | hmi.M_45s[2010.10.02_00:17:15_TAI][2] | hmi.M_45s.20101002_001715_TAI.2.magnetogram.fits |
| 25 | hmi.M_45s[2010.10.02_00:18:00_TAI][2] | hmi.M_45s.20101002_001800_TAI.2.magnetogram.fits |
| 26 | hmi.M_45s[2010.10.02_00:18:45_TAI][2] | hmi.M_45s.20101002_001845_TAI.2.magnetogram.fits |

Home page for: [SDO-JSOC](#)

Done

The Status Request button on the lower panel on the exportdata page provides links to fetch the data and a listing of the “packing list” which maps JSOC Record Specifiers to export file names.

JSOC Export Data - Mozilla Firefox

File Edit View History Bookmarks Tools Help

JSOC Lookdata JSOC Export Data

the data when it is ready.

If you enter an email address you will be notified when the data is ready. If you do not provide an email address you must leave this page open or save the Request_ID in order to access the data.

RecordSet from file Check box to allow upload of RecordSet list file, file will be requested after Submit button click.

RecordSet

Record Limit Limits number of records to export.

Record Count

Method Choose method, url_quick or url for now. url_quick implies protocol of "as-is"

Filename Format File name template.

Processing Select Pre-export processing

WARNING - Explicit Record Limit does not work for hg_patch processing

Specify patch to extract and track. The default is to track the patch from East limb to West limb. T_START and/or T_STOP can limit the tracking as can a recordset specification. If only the seriesname is given, the query will be made for the last record only, [\$], to prevent the export tools from doing a full check on the series. In this special case, the final record of the series will not actually be used unless it is in the bounds of T_START and T_STOP and is a time with the patch on the disk.

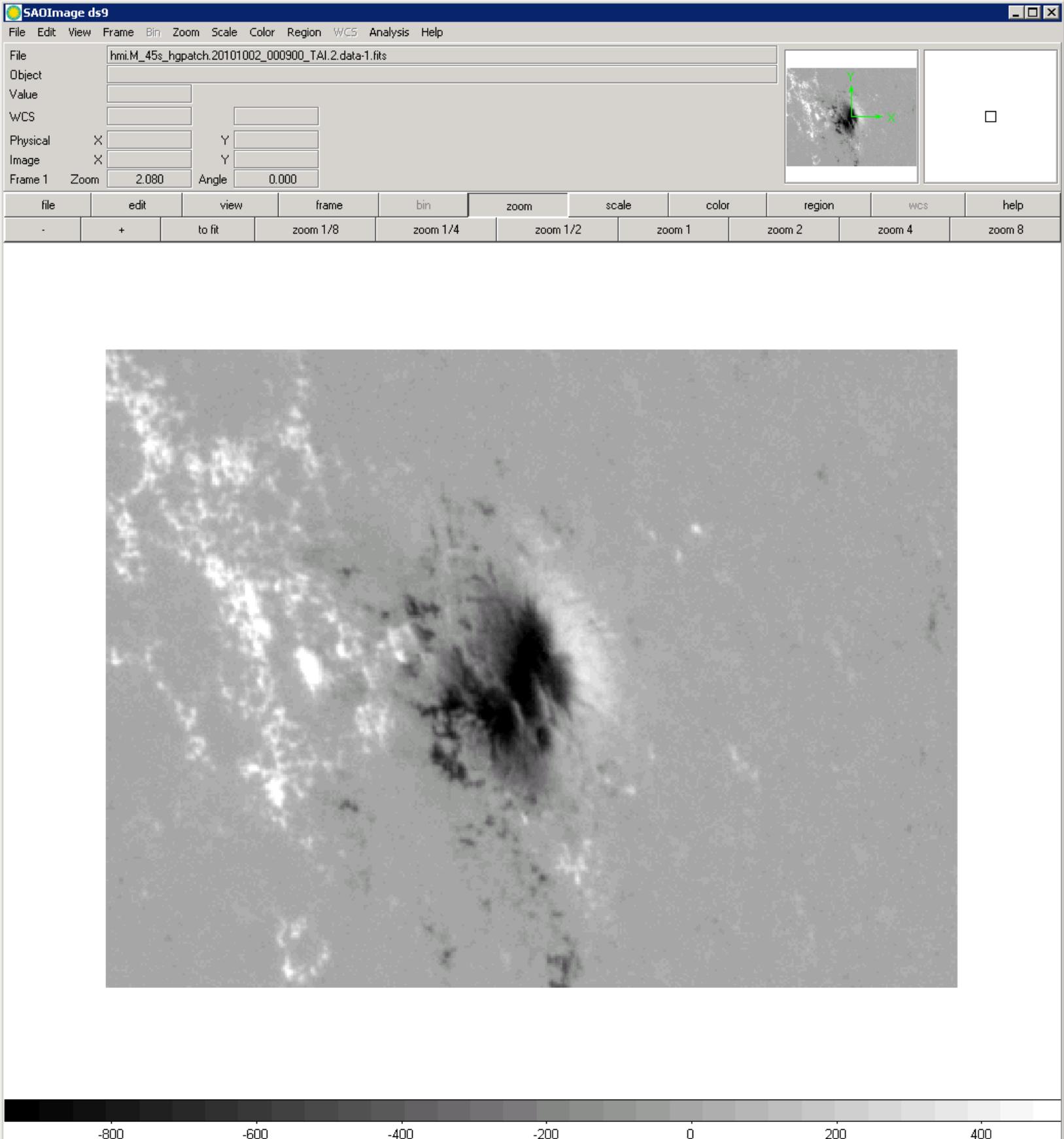
The patch center location (x,y) can be specified in Carrington Rot, Lat, and Longitude or with a reference time and location in arcsec, or degrees from CM and equator or in pixels from the lower left of the image (1,1) before any implied rotation or center offset. One of T_REF or CAR_ROT is required to locate the patch in time. Width and Height are used to specify the size of the box. The units of width and height must be specified and can be pixels, arcsec, or degrees. The pixel size is computed from these box sizes when they are at disk center.

HG_Patch

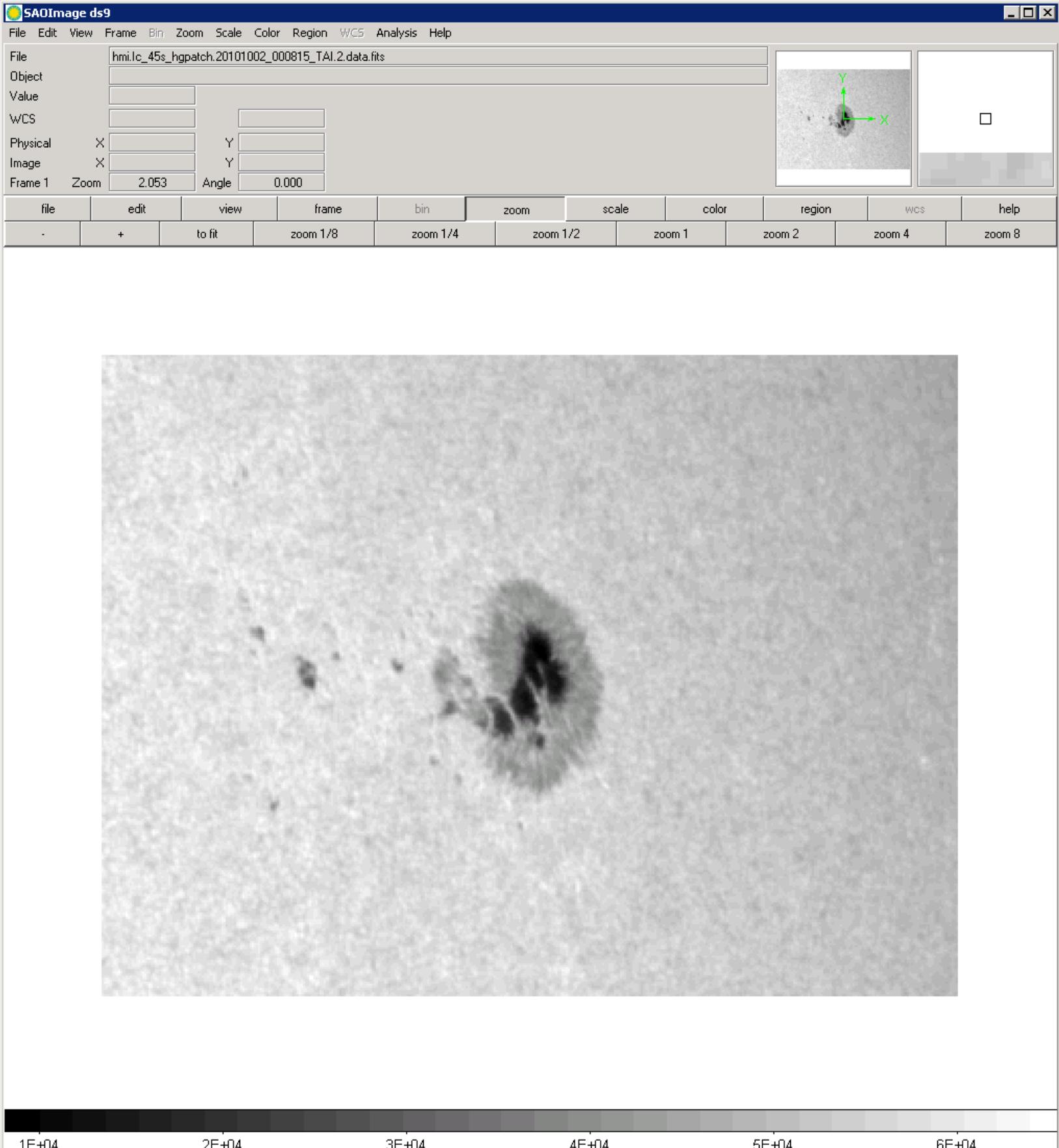
| | |
|----------|---|
| Series | <input type="text" value="hmi.M_45s"/> |
| T_START | <input type="text" value="NotSpecified"/> |
| T_STOP | <input type="text" value="NotSpecified"/> |
| CADENCE | <input type="text" value="NotSpecified"/> |
| LocUnits | <input type="text" value="Stonyhurst degrees"/> |
| T_REF | <input type="text" value="2010.10.02_TAI"/> |
| X | <input type="text" value="53"/> |
| Y | <input type="text" value="21"/> |
| BoxUnits | <input type="text" value="pixels"/> |
| Width | <input type="text" value="400"/> |
| Height | <input type="text" value="300"/> |

Protocol Choose protocol, "FITS" or "as-is".

The Processing options allow on-export processing such as extraction of a rectangular patch tracked at the Carrington rate. Here a region at 53W21N at 2010.10.02_00:00 is extracted in a 400x300 pixel box. If the time range were not given in the query or via the *T_START* and *T_STOP* fields a full disk passage would be extracted and exported. You may select from several options for box location and size units.



This sample cutout was made by the previous example, it is a 300x400 pixel cutout of a region that was at 53W21N at 2010.10.02_00:00. The data was HMI line-of-sight magnetograms.



The same cutout, but for HMI Continuum proxy. This is the same spot seen at the NW portion of the full disk magnetogram on page 10.