Introduction on Website and Software Installation

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The 4th ASO-S Workshop on 2023 Apr 11

Outline

- Introduction on Website
- Browse and Access Data
- Software Installation

ASO-S Homepage

English

http://aso-s.pmo.ac.cn/en_index.jsp

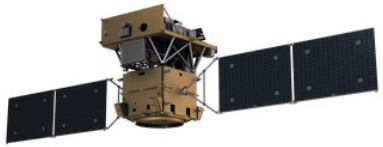
Chinese

http://aso-s.pmo.ac.cn/index.jsp

Contact e-mail: aso-s@pmo.ac.cn

Satellite

// Advanced Space-based Solar Observatory (ASO-S) //



The ASO-S mission aims at exploring connections among solar magnetic field, solar flares, and CMEs. ASO-S mission has three payloads onboard: the Full-disk solar vector MagnetoGraph (FMG), the Lyman-alpha Solar Telescope (LST), and the solar Hard X-ray Imager (HXI). They are proposed to measure solar magnetic field, to observe CMEs and solar flares. The unique combination of these payloads allows simultaneous observations of vector magnetic field of the full Sun, imaging spectroscopy at high energies of solar flares, formation and evolution of solar flares and CMEs on the disk and in the inner corona. It will not only advance our understanding of the underlying physics of solar eruptions, but also help to improve forecast capability of space weather.

ASO-S is formally approved by the Chinese Academy of Sciences (CAS) under the Strategic Priority Research Program on Space Science in June 2017. At 07:43:55 Beijing time on October 9, 2022, the satellite is launched with the CZ-2D rocket. The nominal mission life is 4 years.

According to the scientific objectives and tasks of the mission, in order to obtain as much observation time as possible, the ASO-S satellite adopts a sun synchronous orbit (SSO) with an altitude of about 720 km and an orbital period of about 99 minutes. It has an inclination angle of around 98.2 degree. The satellite will go through the shadow of the Earth between middle May and August with a maximum eclipse time of 18 minutes. The spacecraft points to the Sun with the three axes stabilized.

Science

// Science Team //

Weiqun Gan	Chief Scientist of ASO-S Mission，wqgan@pmo.ac.cn
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Xianyong Bai	Core Member of the FMG Science Team
Yang Su	HXI Payload Scientist and Data Scientist，yang.su@pmo.ac.cn
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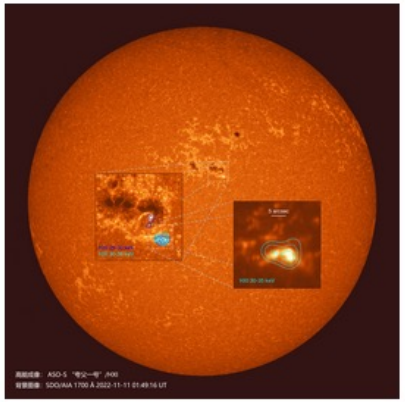
Wei Chen	Core Member of the HXI Science Team
Yu Huang	Core Member of the HXI Science Team
Dong Li	Core Member of the HXI Science Team
Li Feng	LST Payload Data Scientist，lfeng@pmo.ac.cn
Hui Li	LST Payload Scientist
Ying Li	Core Member of the LST Science Team
Jie Zhao	Core Member of the LST Science Team
Lei Lu	Core Member of the LST Science Team
Yu Huang	Core Member of the LST Science Team
Qingmin Zhang	Core Member of the LST Science Team

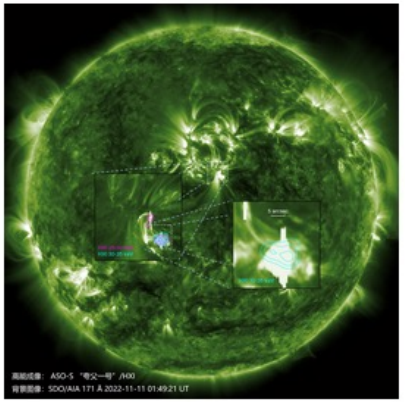
Gallery

Image Gallery

Video Gallery

// Image Gallery //





Resource

- The Sun
- Media
- Video

- Sunspots
- The Sun's Magnetic Fields
- Solar magnetic field and Solar activities
- Periodic Variation of Solar Magnetic Fields
- Solar prominence and filament
- Solar Flares
- Coronal Mass Ejections

Email：aso-s@pmo.ac.cn

Outline

- Introduction on Website
- Browse and Access Data
- Software Installation

Data Software

- Data Policy
- ASO-S Today
- Image Browser
- Data Archive
- Cutout Service
- Analysis Software
- Analysis Guide

// Data Policy of ASO-S Mission //

1. The scientific data of ASO-S mission are completely open to the community except the data obtained during the mission commissioning phase and some of the engineering data. All users have the same right to use the scientific data of ASO-S mission as the team members .

2. In order to have the best knowledge of the instrumentation and meaning of the data, users when writing papers are encouraged to collaborate with team members (one is enough), who might be the payload scientist, payload data scientist, or any of team members listed on the homepage of ASO-S mission, especially for the first two years of the mission.

3. All the scientific data, calibration and processing software, usage documentation, and update information are provided via the ASO-S homepage at http://aso-s.pmo.ac.cn/en_index.jsp. Browse and quick-look products are not intended for science analysis and publications.

4. Users are suggested to acknowledge the sources of data used in all publications as **"ASO-S mission is supported by the Strategic Priority Research Program on Space Science, the Chinese Academy of Sciences, Grant No. XDA15320000"**. The use of ASO-S images, animations and videos for non-commercial purposes and public outreach efforts is strongly encouraged. It is requested, however, that any such use should mention explicitly the source from the ASO-S mission.

5. Any software contributions to the data processing and analyzing by the users are welcome. The payload data scientists are the corresponding persons to contact.

ASO-S Today

Quick Look

- ✓ ASO-S Today
- ✓ Image Browser

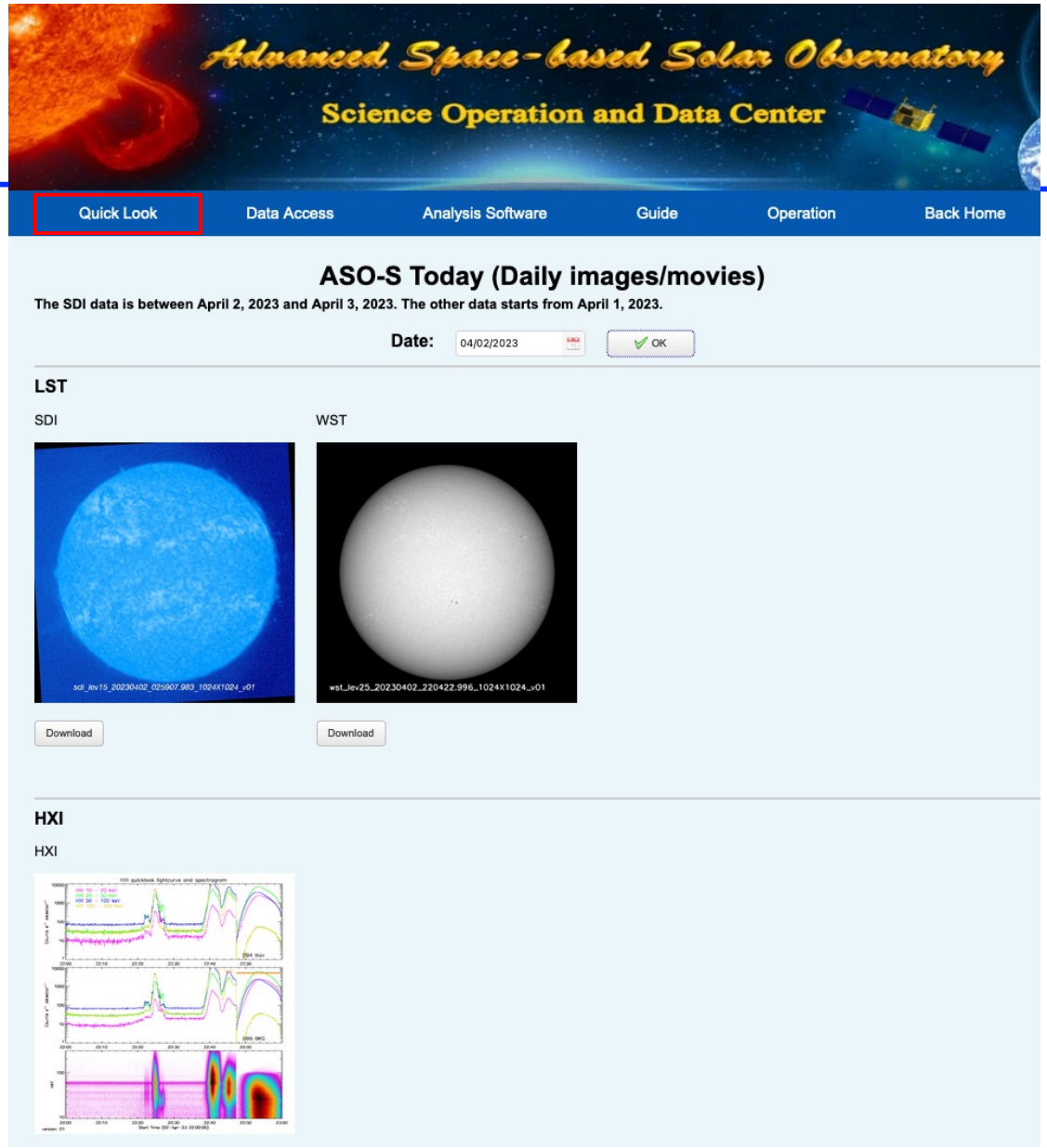


Image Browser

Image Types

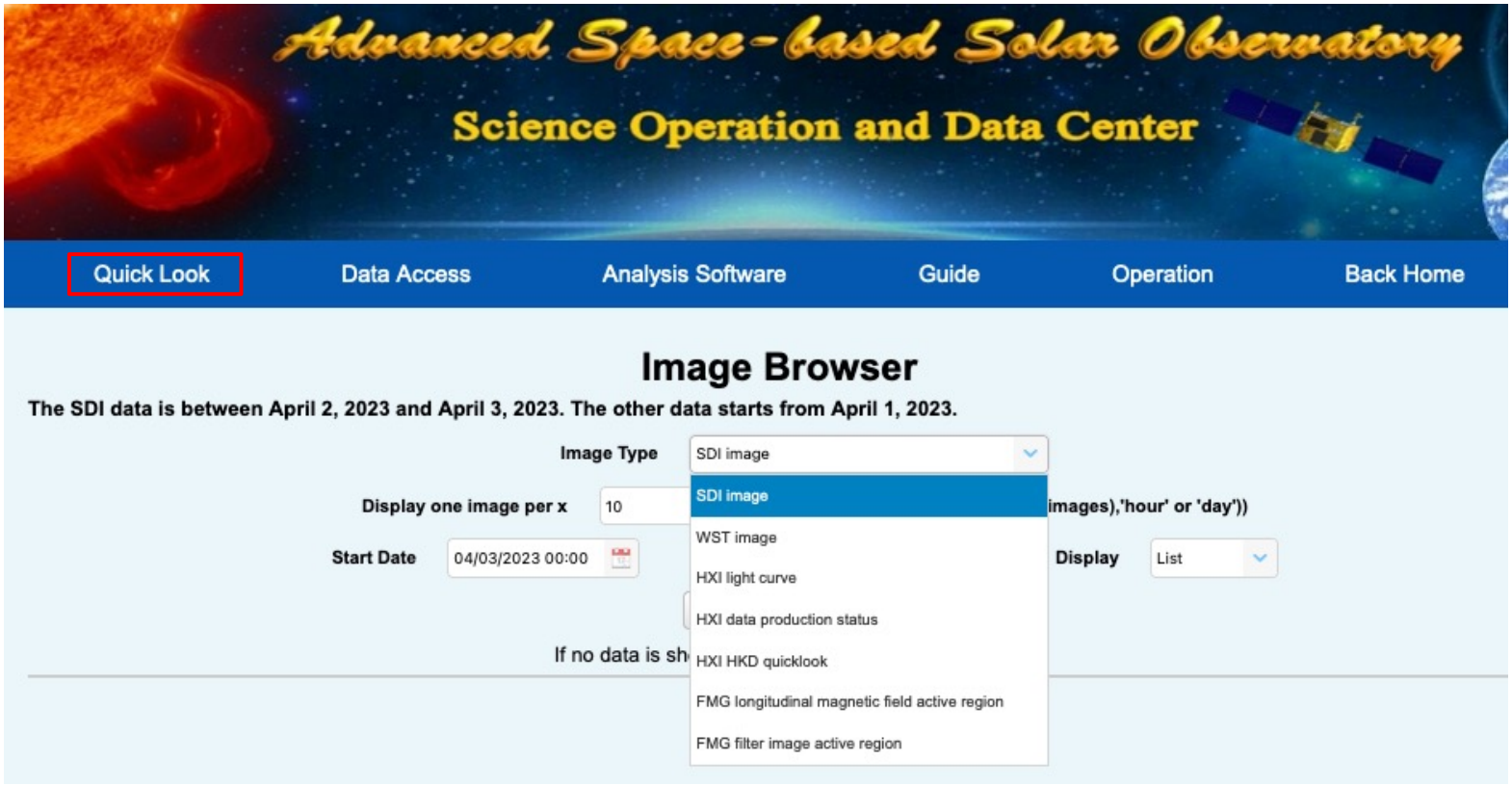
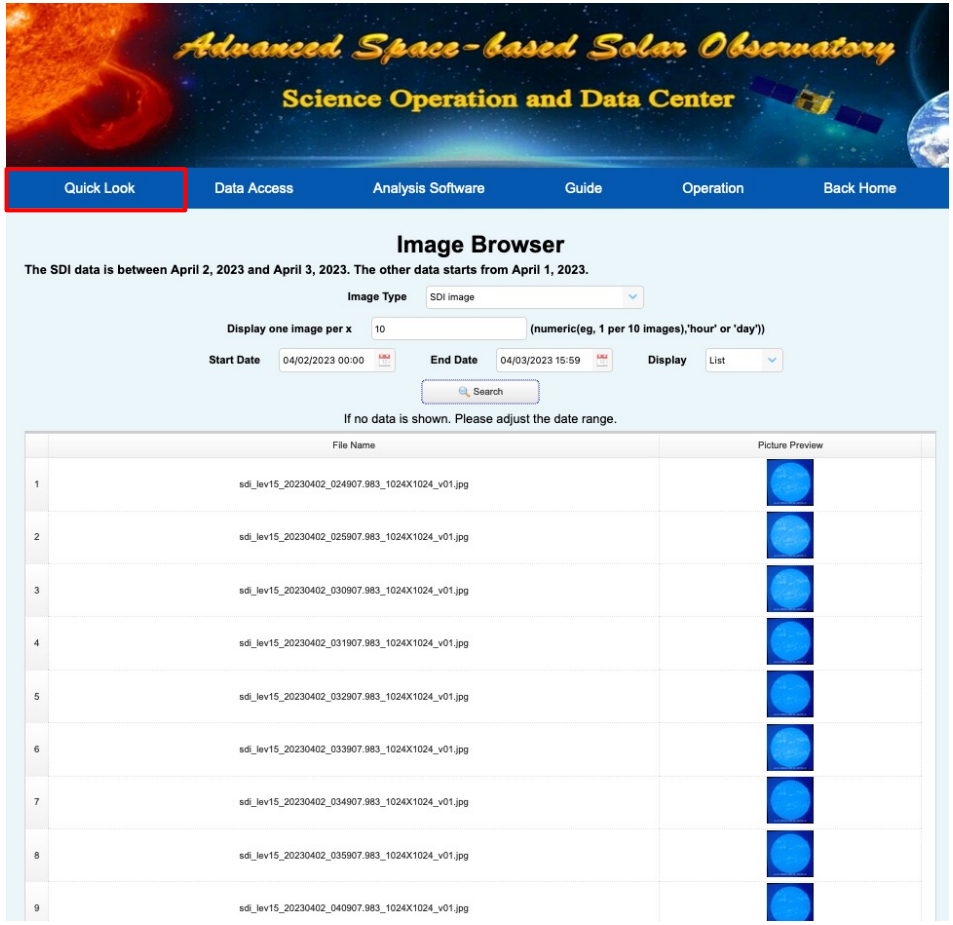


Image Browser



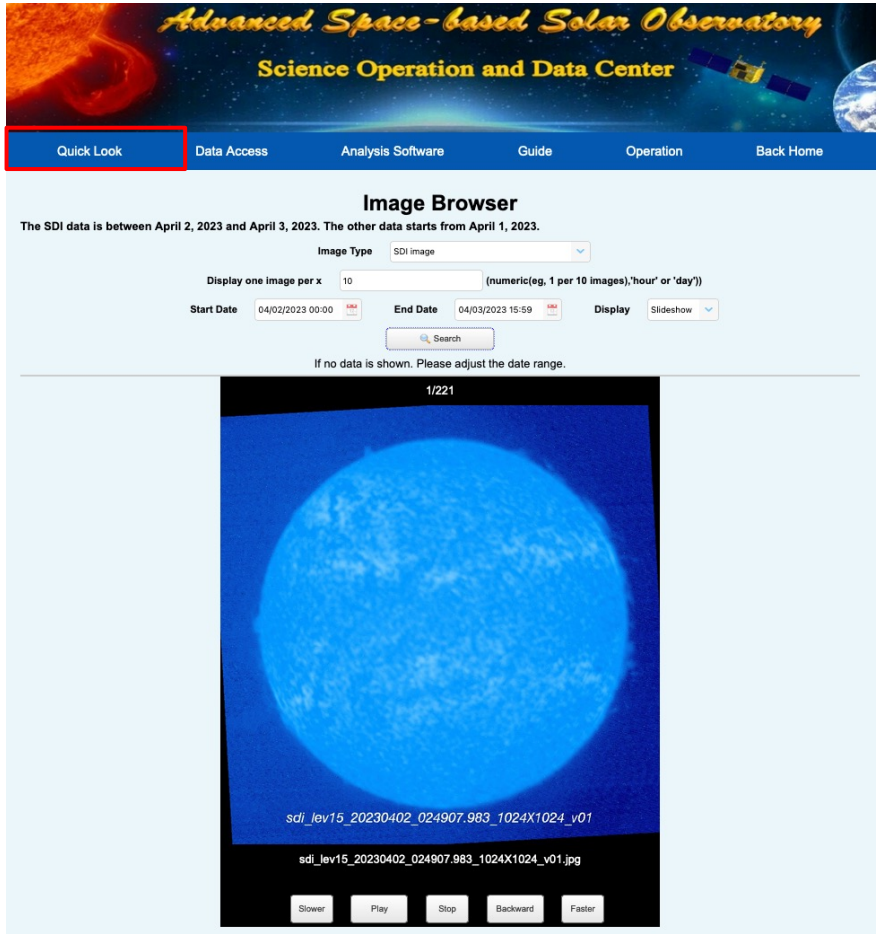
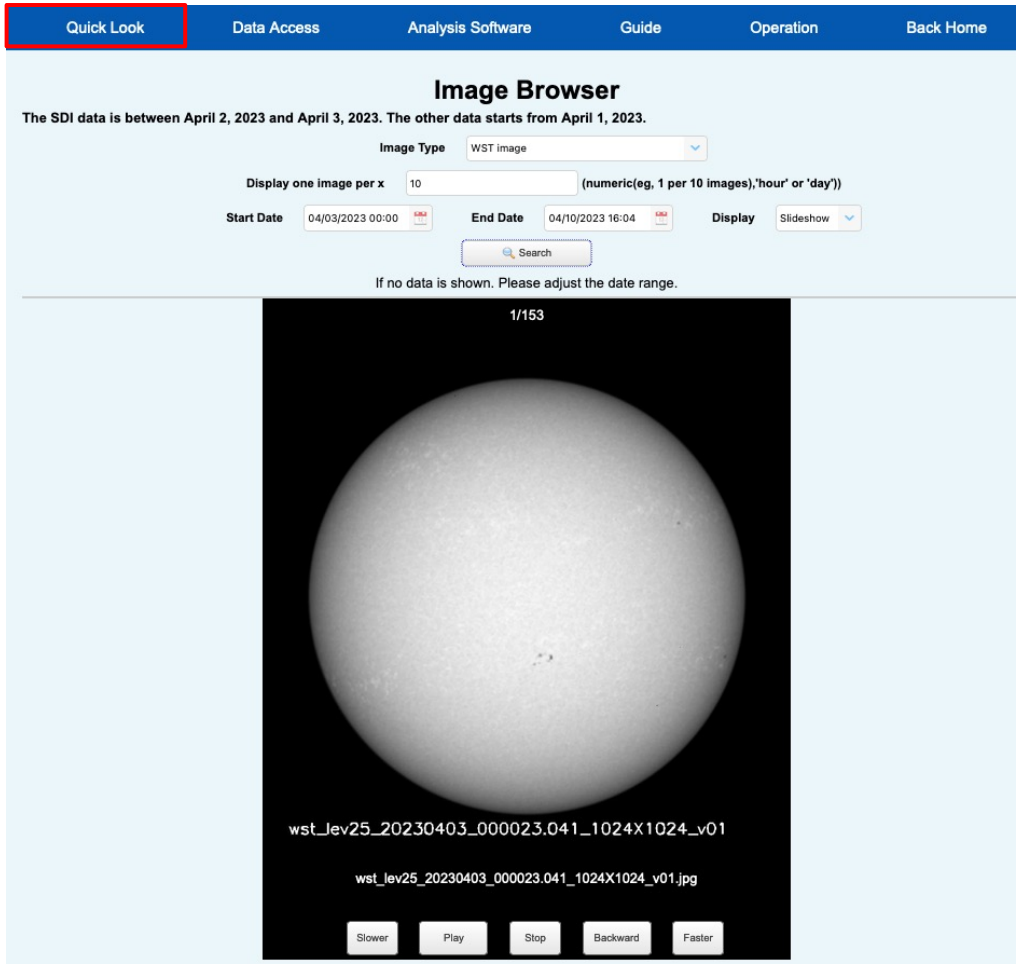


Image Browser



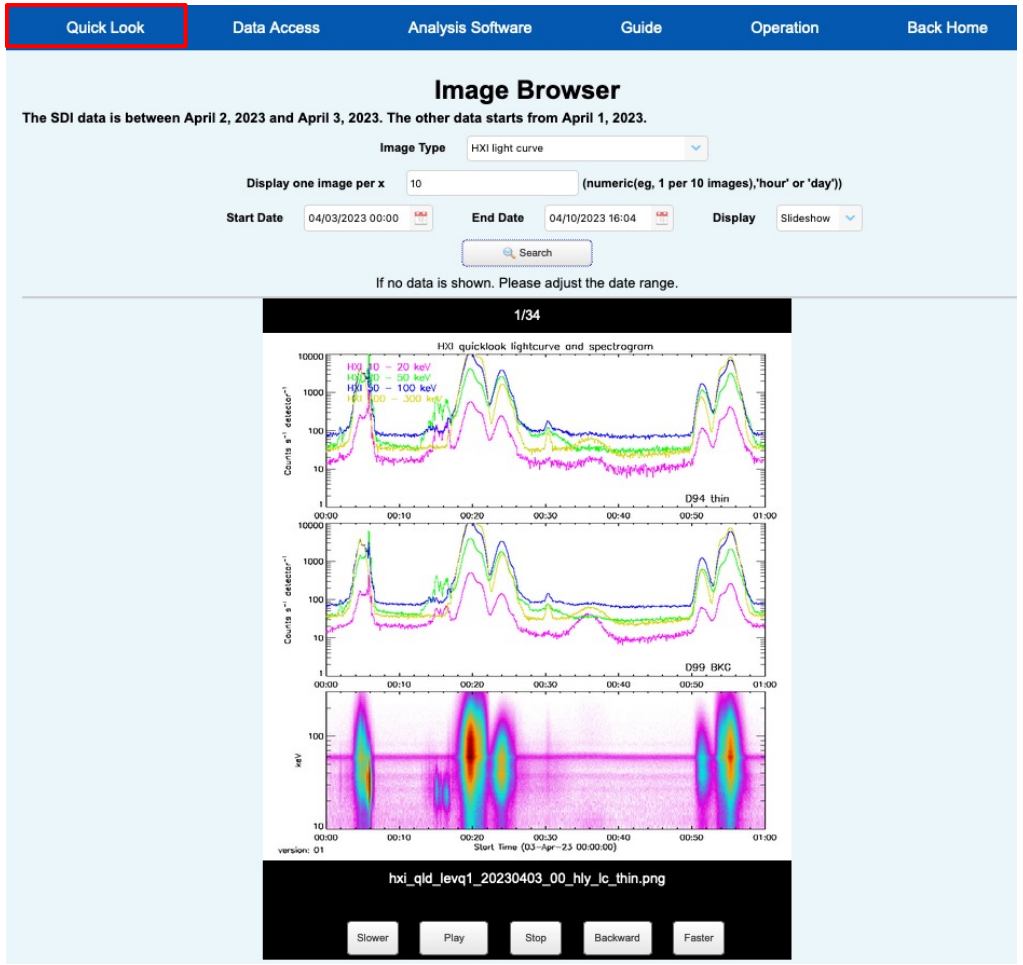
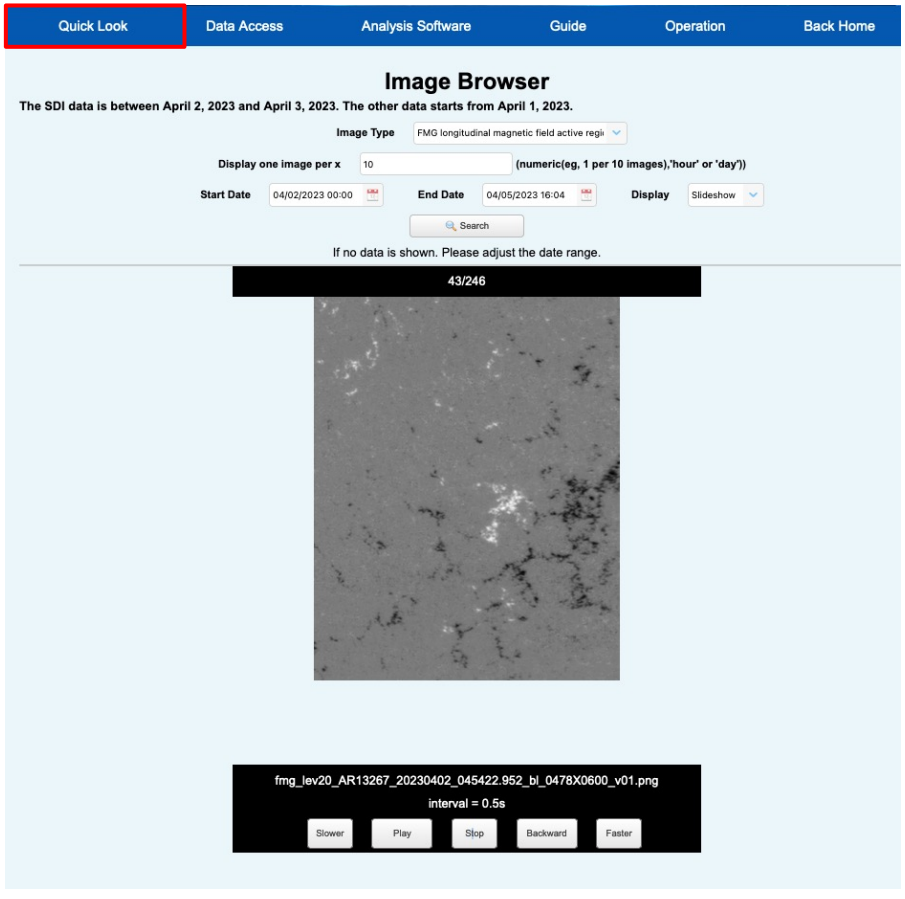


Image Browser



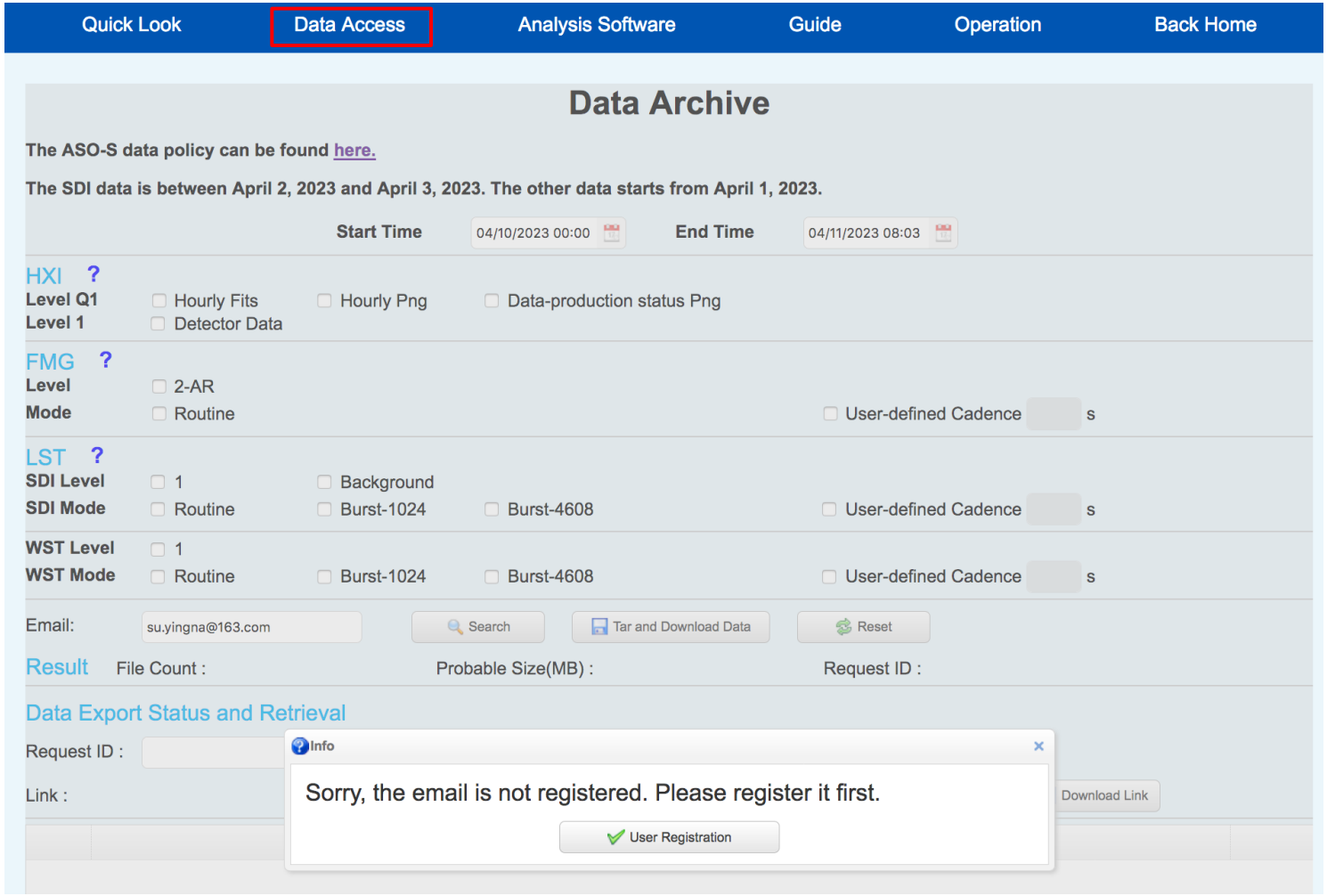
Data Archive

Data Access

- ✓ Data Policy
- ✓ Data Archive
- ✓ Cutout Service

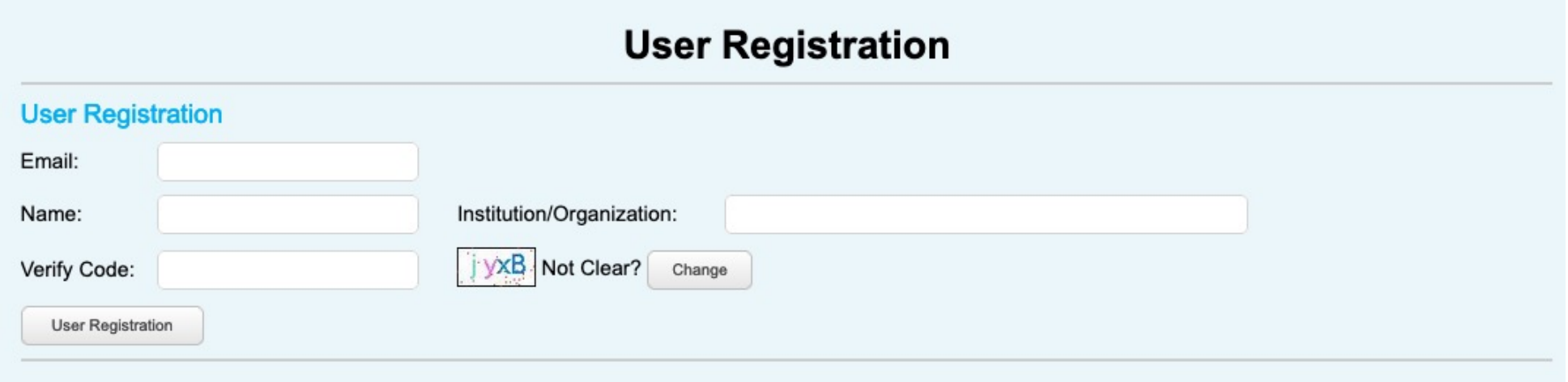
Step 1: Register

Enter your email address after “Email”, click on “Search”, then click on the “User Registration” button.



Data Archive

Step 1: Register



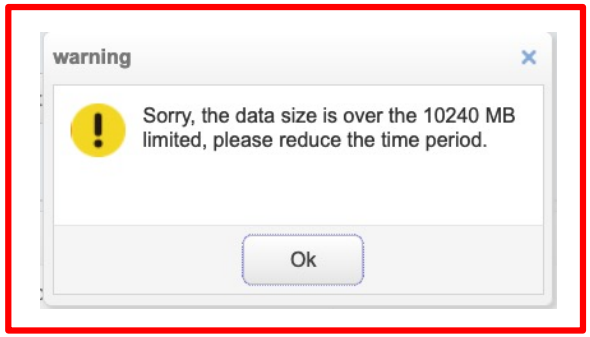
Data Archive

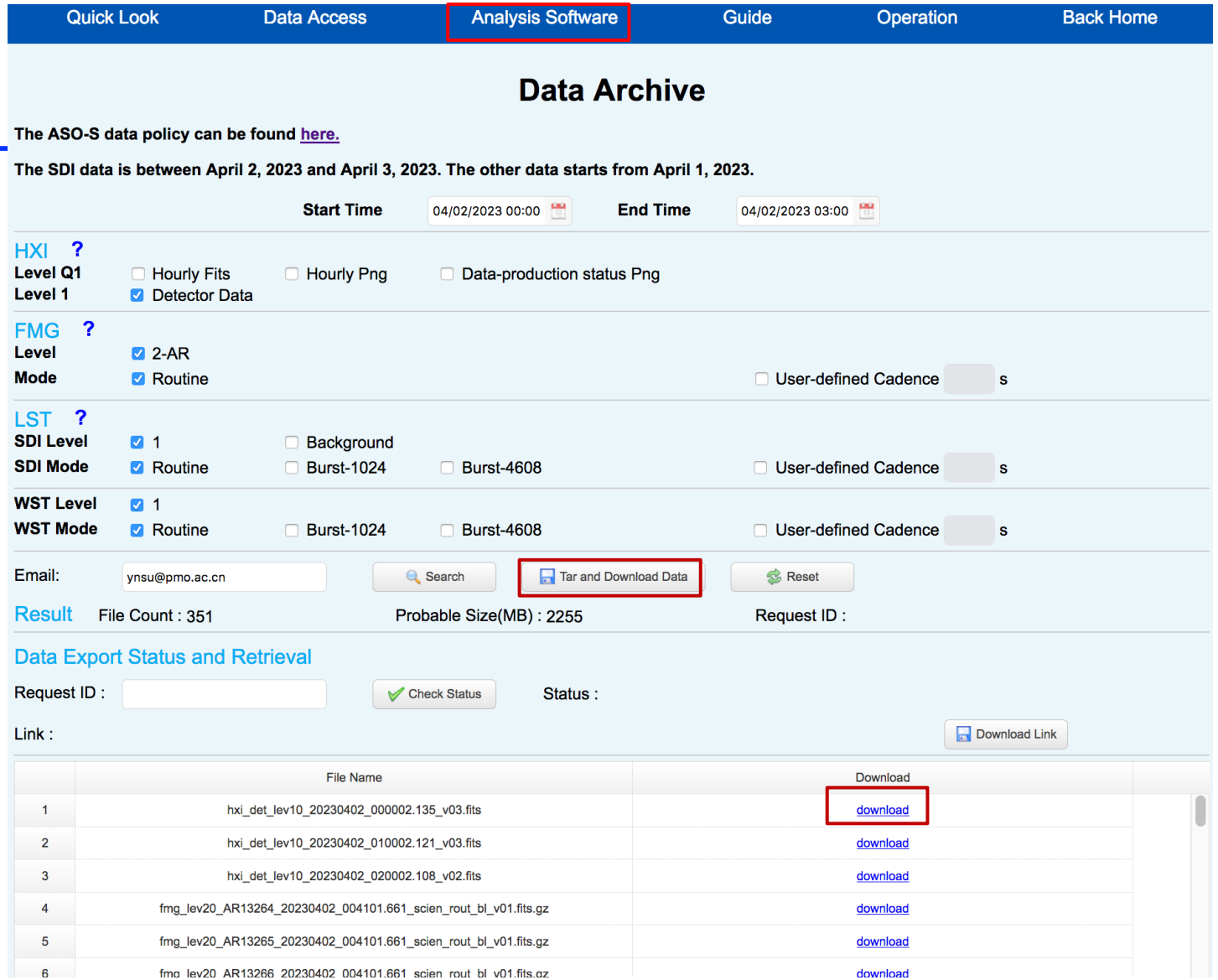
Step 2: Search and Download data

Two ways to download the data:

- Tar and Download Data
- download

Limitation



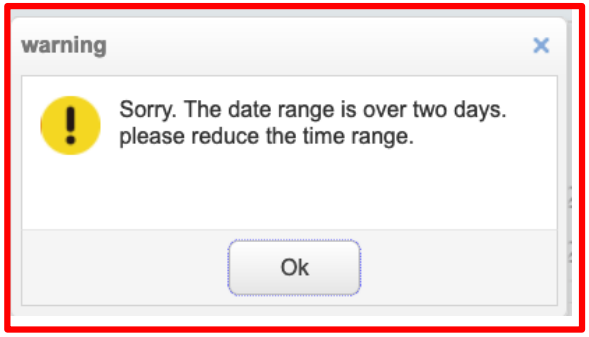


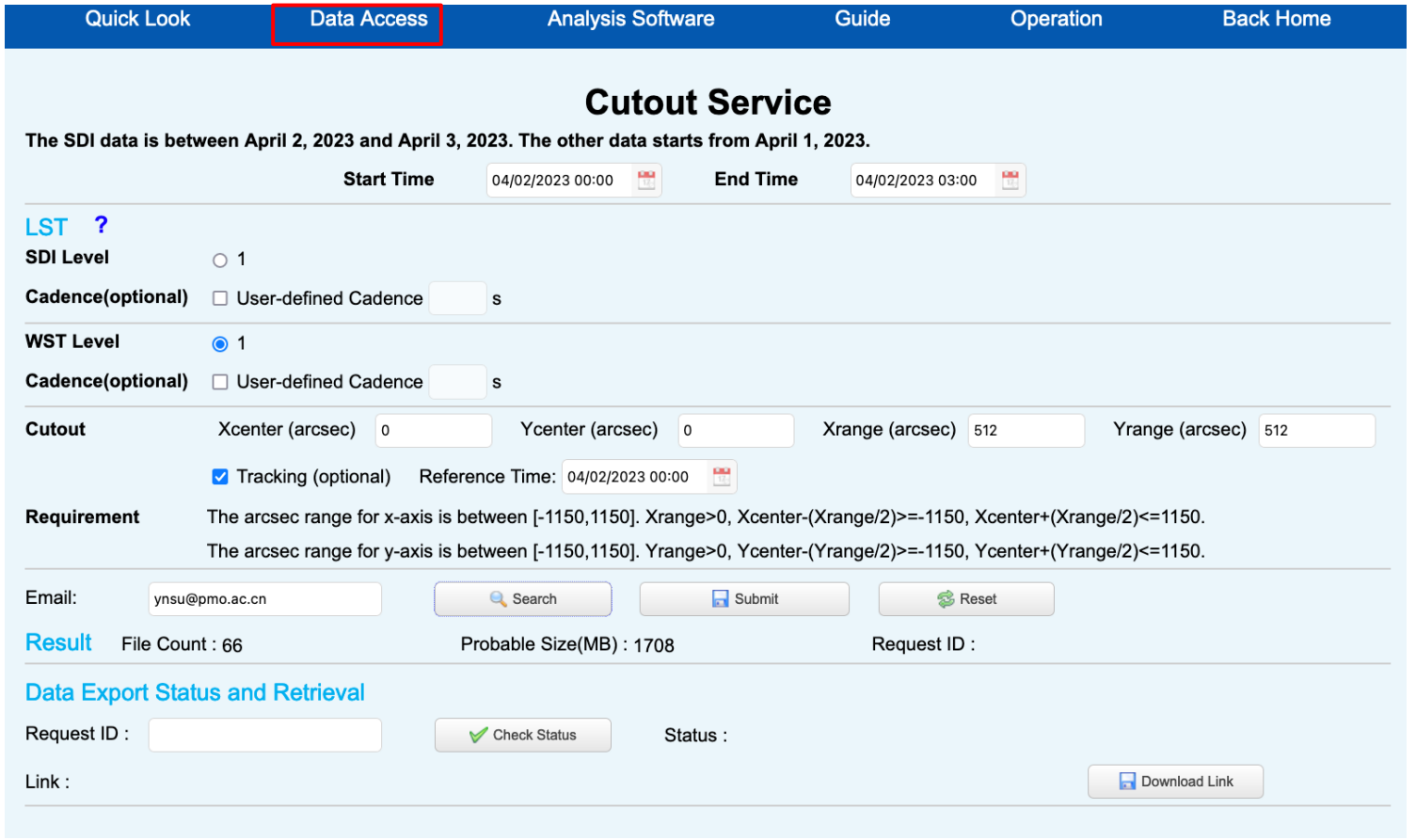
Cutout Service

Data Access

- ✓ Data Policy
- ✓ Data Archive
- ✓ Cutout Service

Limitation





Observation Application

This page will be online once we are ready to support the observation application.

Outline

- Introduction on Website
- Browse and Access Data
- Software Installation

Analysis Software

FMG

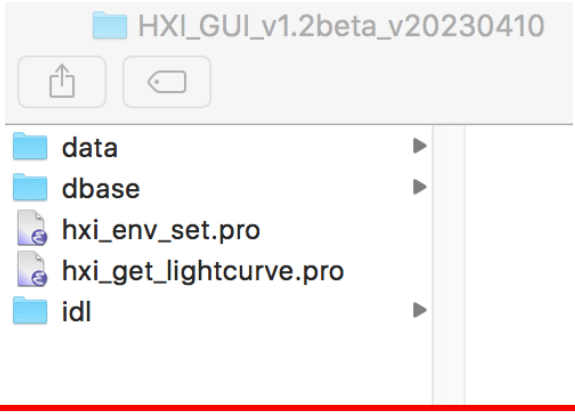
read_fmg

名称	修改日期	大小	种类
change_headerfits_ar.pro	2022年8月18日 17:13	2 KB	IDL Pro...dure File
change_headerfits_full.pro	2022年8月18日 17:14	2 KB	IDL Pro...dure File
read_fmg.pro	2023年2月20日 15:04	7 KB	IDL Pro...dure File

pil

名称	修改日期	大小	种类
fmg_arpil.pro	昨天 17:39	3 KB	IDL Pro...dure File
pil_detect.pro	2022年8月18日 17:19	1 KB	IDL Pro...dure File

HXI



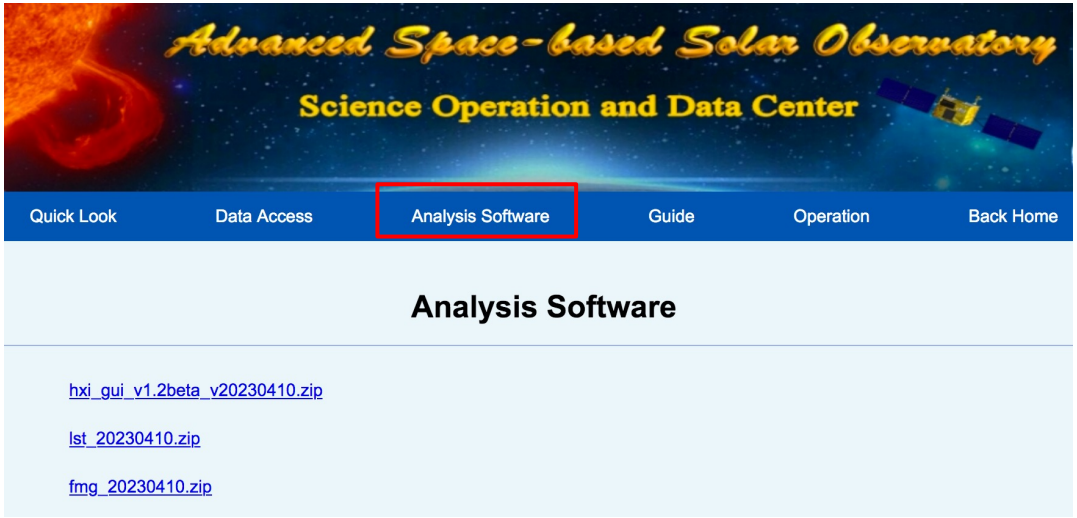
LST

LST

名称	修改日期	大小	种类
disk_despike.pro	今天 08:19	4 KB	IDL Pro...dure File
ind_la_cosmic.pro	今天 08:19	33 KB	IDL Pro...dure File
lst_fitshead2struct.pro	今天 08:19	8 KB	IDL Pro...dure File
lst_gen_hdr_cal.pro	今天 08:19	8 KB	IDL Pro...dure File
lst_lct.pro	今天 08:19	2 KB	IDL Pro...dure File
lst_prep.pro	今天 08:19	5 KB	IDL Pro...dure File
lst_radcalib.pro	今天 08:19	9 KB	IDL Pro...dure File
lst_reg.pro	今天 08:19	5 KB	IDL Pro...dure File
lst_update_history.pro	今天 08:19	3 KB	IDL Pro...dure File
percentiles.pro	今天 08:19	3 KB	IDL Pro...dure File
read_lst.pro	今天 08:19	10 KB	IDL Pro...dure File
sdi_fix_missing.pro	今天 08:19	6 KB	IDL Pro...dure File
sdi_ind_spike.pro	今天 08:19	5 KB	IDL Pro...dure File
sdi_prep.pro	今天 08:19	15 KB	IDL Pro...dure File
wst_fix_missing.pro	今天 08:19	5 KB	IDL Pro...dure File
wst_ind_spike.pro	今天 08:19	5 KB	IDL Pro...dure File
wst_prep.pro	今天 08:19	13 KB	IDL Pro...dure File

Software Installation

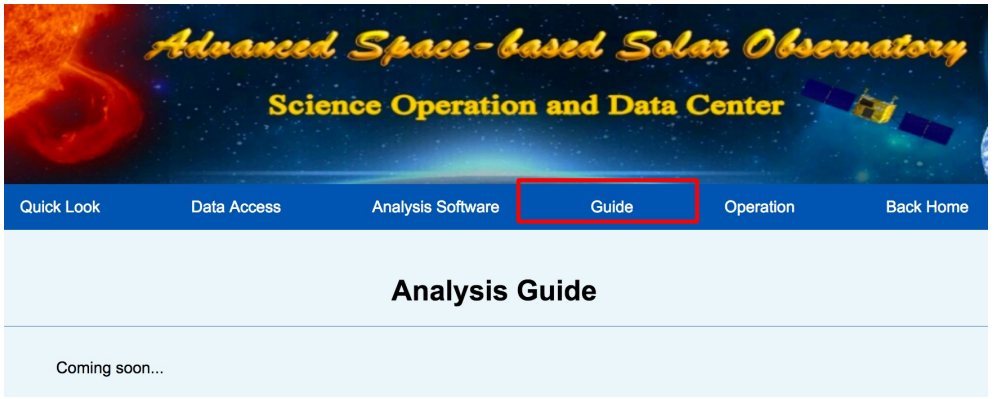
1. Access from Website



2. Access from SSW

Analysis guide

Coming soon



Advanced Space-based
ASO-S
Solar Observatory
Thank you for your attention!