

Go to mast.stsci.edu
Click "Advanced Search"

MAST: Barbara A. Mikulski Archive for Space Telescopes

The MAST Portal lets you search multiple collections of astronomical datasets all in one place. Use this tool to find astronomical data, publications, and images.

Note: This site uses cookies in order to monitor feature usage, track user preferences, and provide authentication for some services. By using this site you consent to the use of cookies for such purposes.

What's New

JWST Instrument metadata have changed. Now, the complete configuration is specified; for example, an Observation previously labeled "MIRI" might now be labeled "MIRI/IMAGE." This update brings JWST metadata in line with HST and allows for greater specificity in your search. See the [JWST Instrument Names](#) page for a full list of configurations.

Data from [FIMS-SPEAR](#), a joint Korean-US UV satellite, are now available in MAST. In addition to its invaluable spectral maps of the UV sky, FIMS-SPEAR has paved the way for us to ingest new cubesat, balloon, and small-rocket missions. Stay tuned as we add more of these missions to our collection!

You can now [access the PLATO MAST Catalog](#) using the API or catalog search form.

Data Retrieval Notes

- MAST FTP:** Starting October 25 2021, the MAST FTP server archive.stsci.edu will no longer support unencrypted FTP connections. Only encrypted FTPS will be supported. Read more about this change and some related FAQ on the [MAST FTP Service page](#).
- Auth.MAST Authentication:** New authentication mechanism for accessing exclusive access data via cURL or Astroquery. Please visit <https://auth.mast.stsci.edu> for authentication needs or view the [tutorial video](#).
- Access MAST Programmatically:** with [Astroquery](#) or the [general API](#).

Release Notes

[MAST Portal software release notes](#).

Upload Targets Quick Start:

Currently available data collections:

- MAST Observations: Millions of observations from JWST, Hubble, Kepler, GALEX, IUE, FUSE, and more.
- Virtual Observatory: Search thousands of astronomical data archives from around the world for images, spectra, and catalogs.
- Hubble Source Catalog: A master catalog with a hundred million measurements of objects in Hubble images.
- MAST Catalogs: Access to catalog data such as Gaia and TESS Input Catalog, with more coming soon.

Featured tutorial: Using Auth.MAST, MAST's authorization token system.



See all video tutorials on the [MAST YouTube channel](#).

Select a collection... and enter target: anonymous

MAST Advanced Search

Search Export Table Records Found: 19,908

Applied Filters

Clear All ☒ Observation Type: science ☒ Mission: JWST ☒ Provenance Name: CALJWST ☒ Instrument: NIRCAM/IMAGE ☒ Product Type: image ☒ Data Rights: PUBLIC

Columns ☒ **Filters**

Defaults Hide All

Filter Columns:

Object Name or Position ☒
 Observation Type ☒
 Mission ☒
 Provenance Name ☒
 Instrument ☒
 Project ☒
 Filters ☒
 Waveband ☐
 Target Name ☒
 Target Classification ☐
 Sequence Number ☐
 Observation ID ☐
 RA ☒
 Dec ☒
 Proposal ID ☒
 Principal Investigator ☐
 Product Type ☒
 Calibration Level ☐
 Start Time ☒
 End Time ☐

Object Name or Position

☒ Enter object name or RA and Dec to cone search

[Show Examples...](#)

No cone search performed.

Observation Type

☒ ☒ Enter text here or choose from below

| Name | Quantity |
|---------------------------------------------|---------------------|
| <input checked="" type="checkbox"/> science | (150,872,816 Total) |
| <input type="checkbox"/> calibration | (981,567 Total) |

Mission

☒ Enter text here or choose from below

| Name | Quantity |
|--------------------------------------|---------------------|
| <input type="checkbox"/> HISP | (142,733,270 Total) |
| <input type="checkbox"/> SPITZER_SHA | (3,073,080 Total) |
| <input type="checkbox"/> TESS | (1,379,476 Total) |
| <input type="checkbox"/> HST | (1,295,012 Total) |
| <input type="checkbox"/> PS1 | (998,018 Total) |

Show 17 More

Provenance Name

☒ Enter text here or choose from below

| Name | Quantity |
|--------------------------------------------|--------------------|
| <input type="checkbox"/> QLP | (62,773,409 Total) |
| <input type="checkbox"/> GSFC-ELEANOR-LITE | (39,271,936 Total) |
| <input type="checkbox"/> TGCL | (16,335,794 Total) |
| <input type="checkbox"/> TASOC | (11,080,238 Total) |
| <input type="checkbox"/> TESS-SPOC | (9,599,294 Total) |

Show 113 More

Instrument

☒ Enter text here or choose from below

| Name | Quantity |
|-------------------------------------|---------------------|
| <input type="checkbox"/> Photometer | (137,063,589 Total) |
| <input type="checkbox"/> Kepler | (2,849,857 Total) |
| <input type="checkbox"/> IRAC | (2,470,294 Total) |
| <input type="checkbox"/> GPC1 | (998,018 Total) |
| <input type="checkbox"/> IRS | (480,821 Total) |

Show 122 More

Project

☒ Enter text here or choose from below

| Name | Quantity |
|---------------------------------|---------------------|
| <input type="checkbox"/> TESS | (142,228,134 Total) |
| <input type="checkbox"/> K2 | (1,768,321 Total) |
| <input type="checkbox"/> PS1 | (998,018 Total) |
| <input type="checkbox"/> HST | (996,106 Total) |
| <input type="checkbox"/> Kepler | (941,711 Total) |

Show 71 More

Filters

☒ Enter text here or choose from below

| Name | Quantity |
|---------------------------------|---------------------|
| <input type="checkbox"/> TESS | (142,228,277 Total) |
| <input type="checkbox"/> KEPLER | (2,850,659 Total) |
| <input type="checkbox"/> IRAC2 | (1,322,495 Total) |
| <input type="checkbox"/> IRAC1 | (840,861 Total) |
| <input type="checkbox"/> IRS-SL | (207,199 Total) |

Show 681 More

Target Name

☒ Enter text here

This column must be searched via the text box at the top of this panel

RA

☒ ☒ Enter text here or choose from below

Dec

☒ ☒ Enter text here or choose from below

Proposal ID

☒ Enter text here

This column must be searched via the text box at the top of this panel

Product Type

☒ ☒ Enter text here or choose from below

| Name | Quantity |
|-------------------------------------|---------------------|
| <input type="checkbox"/> timeseries | (144,968,966 Total) |

Select the following filters:

- Observation type: science
- Mission: JWST or HST
- Provenance Name:
 - CALJWST (JWST)
 - none (HST)
- Instrument:
 - NIRCAM/IMAGE or MIRI/IMAGE (for JWST)
 - ACS/HRC (for HST)
- Product Type: image
- Data Rights: PUBLIC

Select a collection... and enter target:

anonymous

MAST Advanced Search

Records Found: 19,908



Finished? Hit "Search"

Applied Filters

Clear All ☒ Observation Type: science ☒ Mission: JWST ☒ Provenance Name: CALJWST ☒ Instrument: NIRCAMP/IMAGE ☒ Product Type: image ☒ Data Rights: PUBLIC

Columns

- Defaults Hide All
- Filter Columns:
- ☒ Object Name or Position
 - ☒ Observation Type
 - ☒ Mission
 - ☒ Provenance Name
 - ☒ Instrument
 - ☒ Project
 - ☒ Filters
 - ☐ Waveband
 - ☒ Target Name
 - ☐ Target Classification
 - ☐ Sequence Number
 - ☐ Observation ID
 - ☒ RA
 - ☒ Dec
 - ☒ Proposal ID
 - ☐ Principal Investigator
 - ☒ Product Type
 - ☐ Calibration Level
 - ☒ Start Time
 - ☐ End Time

Filters

Object Name or Position

☒ Enter object name or RA and Dec to cone search

[Show Examples...](#)

No cone search performed.

Instrument

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|-------------------------------------|---------------------|
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| <input type="checkbox"/> Kepler | (2,849,857 Total) |
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| <input type="checkbox"/> GPC1 | (998,018 Total) |
| <input type="checkbox"/> IRS | (480,821 Total) |

Show 122 More



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|---------------------------------------------|---------------------|
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| <input type="checkbox"/> calibration | (981,567 Total) |

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|---------------------------------|---------------------|
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| <input type="checkbox"/> PS1 | (998,018 Total) |
| <input type="checkbox"/> HST | (996,106 Total) |
| <input type="checkbox"/> Kepler | (941,711 Total) |

Show 71 More



Mission

☒ Enter text here or choose from below

| Name | Quantity |
|--------------------------------------|---------------------|
| <input type="checkbox"/> HLSF | (142,733,270 Total) |
| <input type="checkbox"/> SPITZER_SHA | (3,073,080 Total) |
| <input type="checkbox"/> TESS | (1,379,476 Total) |
| <input type="checkbox"/> HST | (1,295,012 Total) |
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| <input type="checkbox"/> TESS-SPOC | (9,599,294 Total) |

Show 113 More

Target Name

☒ Enter text here

This column must be searched via the text box at the top of this panel

Product Type

☒ Enter text here or choose from below

| Name | Quantity |
|-------------------------------------|---------------------|
| <input type="checkbox"/> timeseries | (144,968,966 Total) |

Home

4 Total

Filters

Clear

K

Filter

F

Nan

F

F

F

F

T

Nan

S

G

D

Nan

m

07-o

f360

m

07-o

f335

m

07-o

f200

m

07-o

f300

O

Nan

3

3

325324069

325324399

Select a collection...

MAST Observations by Object Name or RA/Dec

and enter target:

Enter object name or RA and Dec to cone search

Search

anonymous

Login...

Download Manager

Download Basket

Download History

Remove Selected

Remove All

Displaying 3 of 19018 Total Files

1.95 GB Selected / 50 GB Max

Retrieve References

Download

Batch Retrieval

?

Filters

Clear Filters

Recommended Products

Uncheck Minimum Recommended Products to see all files. [Learn more.](#)

☒ Minimum Recommended Products (3 of 15)

Product Category

☐ AUXILIARY (0 of 16875)

☒ SCIENCE (3 of 918)

☐ PREVIEW (0 of 915)

☐ INFO (0 of 310)

Extension

☒ fits (3 of 17790)

☐ jpg (0 of 915)

☐ csv (0 of 155)

☐ json (0 of 155)

☐ ersv (0 of 31)

Group

☐ GS-TRACK (0 of 7296)

☐ GS-FG (0 of 7296)

☐ GS-ID (0 of 760)

☐ GS-ACQ2 (0 of 684)

☐ GS-ACQ1 (0 of 684)

Mission > Observation > File

Files

Actions

File Size

Product Type

Batch

Description

Project

Product Group

☒ JWST 3

☒ jw02107-o029_t011_nircam_clear-f2... 1

☒ jw02107-o029_t011_nircam_clear-f3... 1

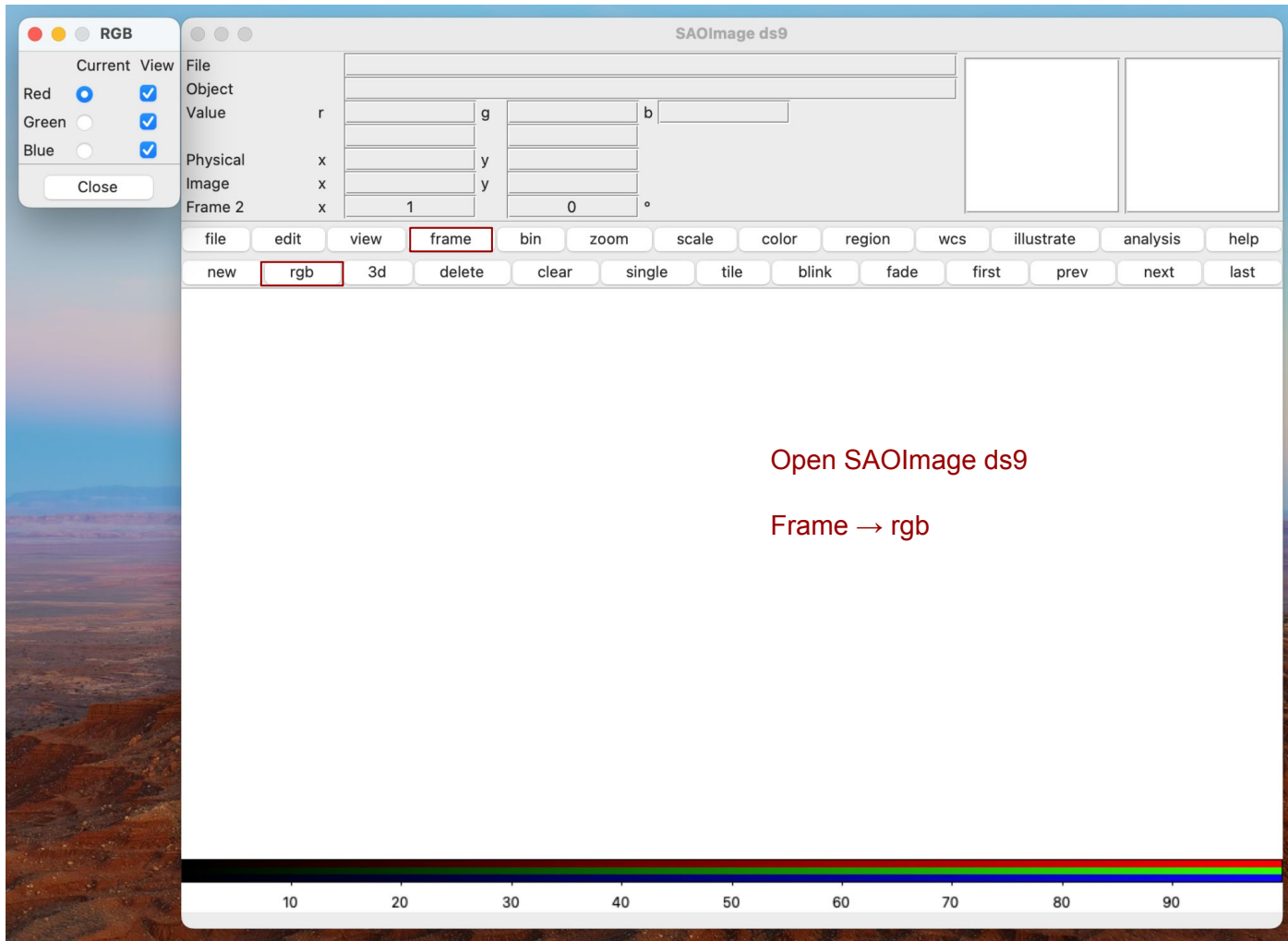
☒ jw02107-o029_t011_nircam_clear-f3... 1

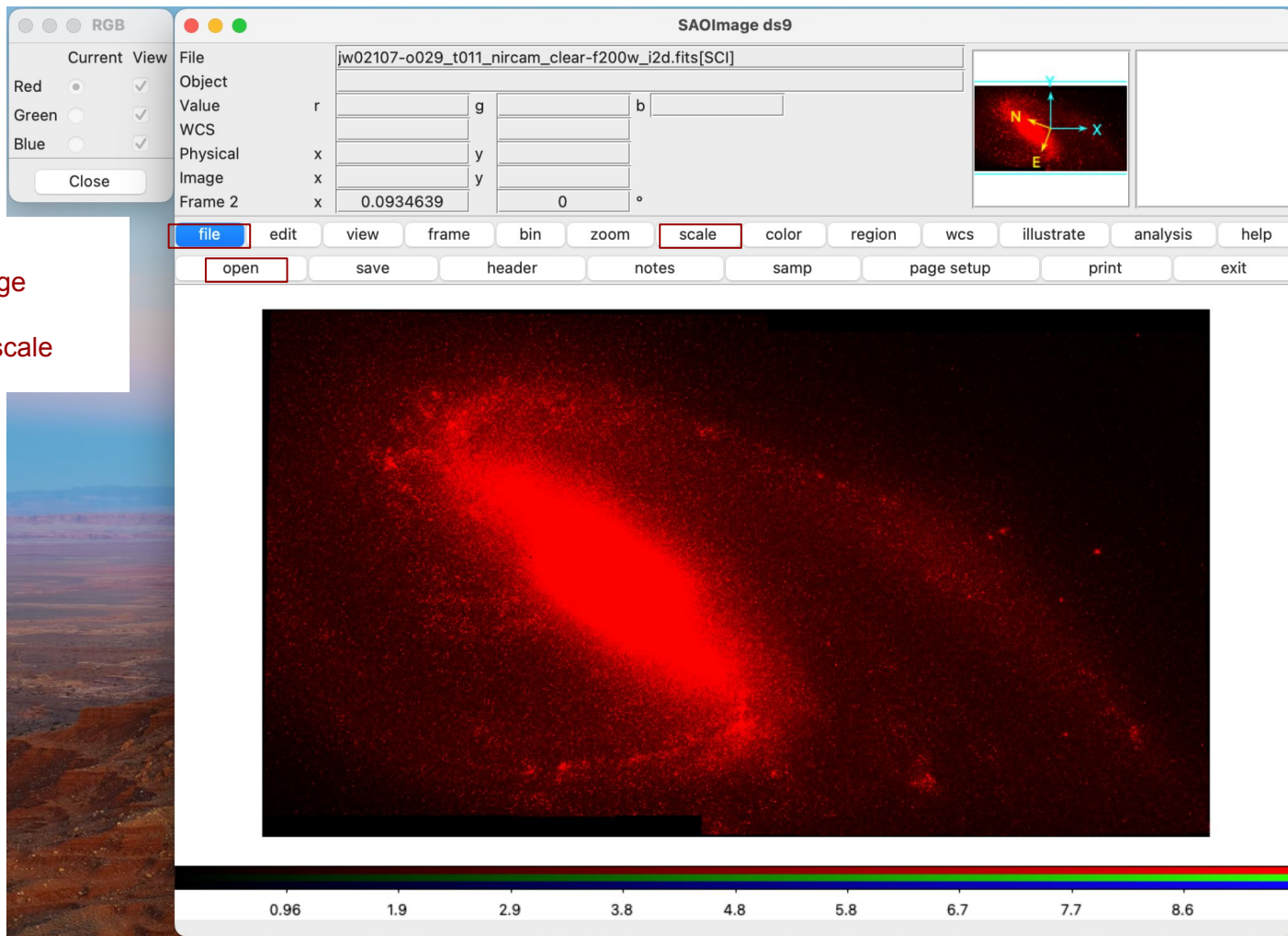
Details

Summary

Select an observation or file to view details

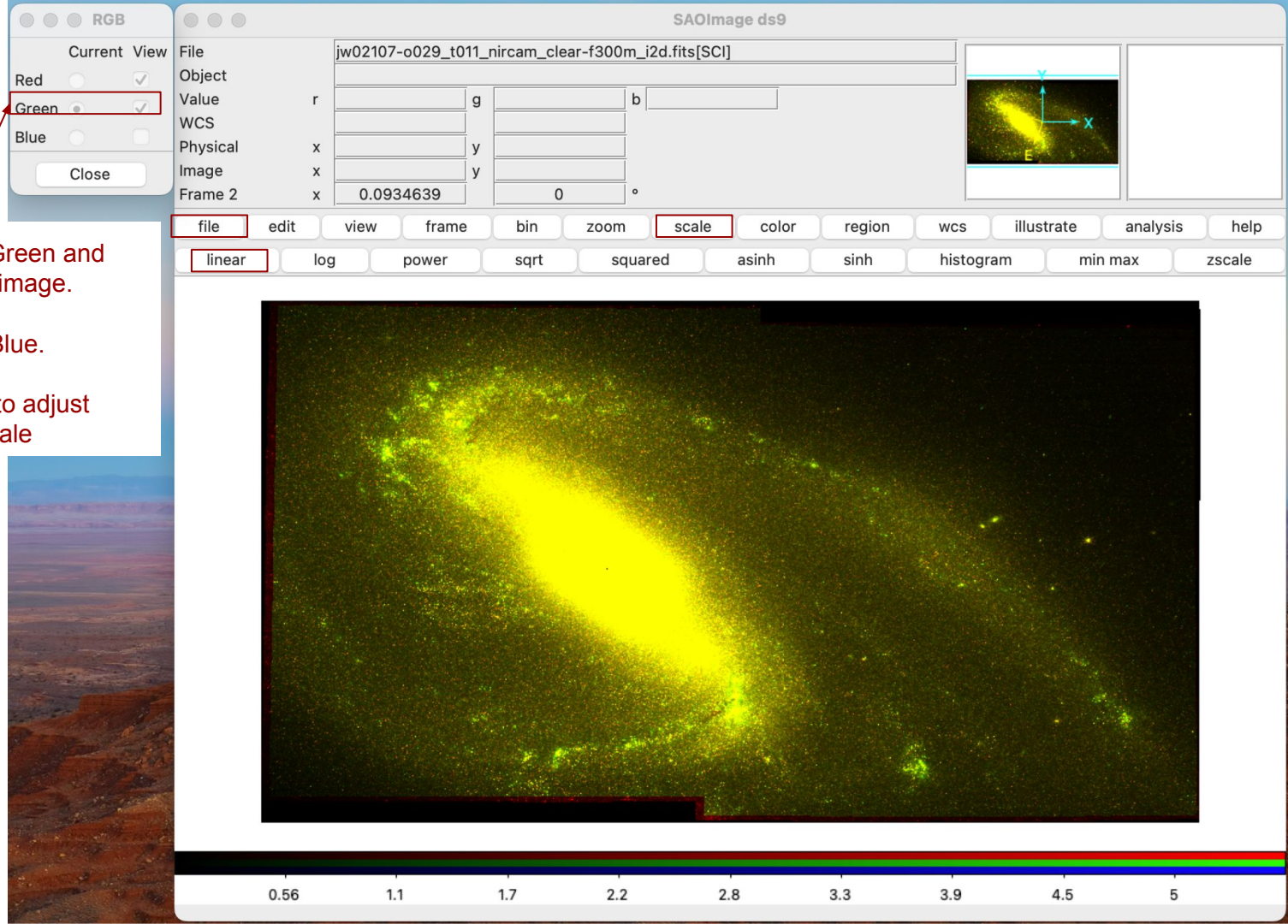
Select all your images and click download!





File → open
Select your image

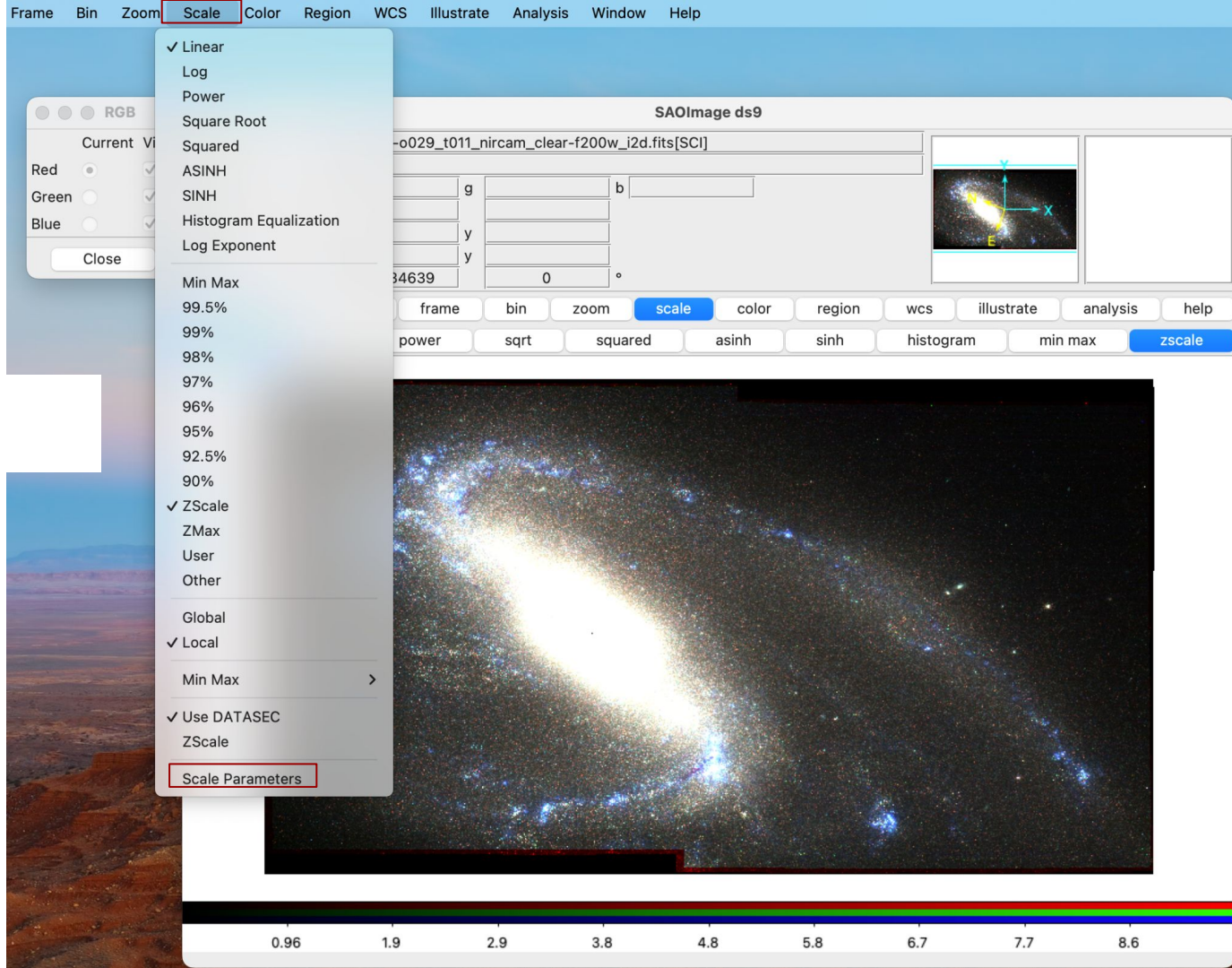
Then, scale→zscale



Change to Green and open green image.

Repeat for Blue.

Remember to adjust scale → zscale



Scale → Scale
Parameters

Adjust high (green line) and low (red line) until the image looks beautiful :)

Green and red lines
(hard to see)

