# STIX preview image archive and online tools

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Flare image processing pipeline

- The pipeline uses stix imaging software in SSWIDL
- BP, BP CLEAN, EM and forward-fit algorithms used
- FITS files created by the pipeline can be plotted with sunpy.map
- Web tools for interactive image reconstruction and for developed

https://datacenter.stix.i4ds.net/pub/misc/stix_imaging/

Automated selection of time and energy ranges for image reconstruction
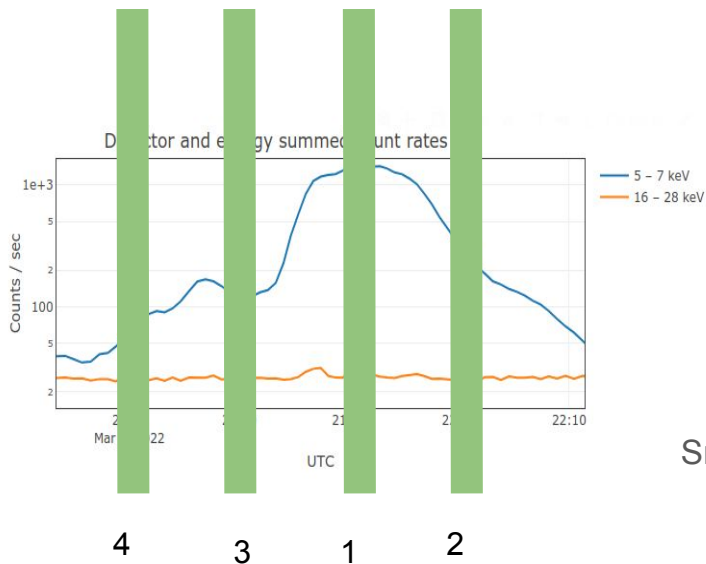

Big flares

- An image with an integration time of 60 sec every 10 minutes
- Starting from the peak time, left and right
- Two energy bands 4 - 10 and 16 - 28 keV
- No image created if total counts < LIMIT (adjustable ~ 10000)

Small flares or signal-time-bin science (not BKG) data

- One image integrated over the whole flaring time
- Two energy bands 4 - 10 and 16 - 28 keV
- No image created if total counts < LIMIT (adjustable ~ 10000)

- Data for imaging selected automatically for new received science data
- Selected time and energy ranges are stored in the NoSQL database

Interactive image reconstruction using STIX data center web tools

https://datacenter.stix.i4ds.net/view/list/bsd/id/9925
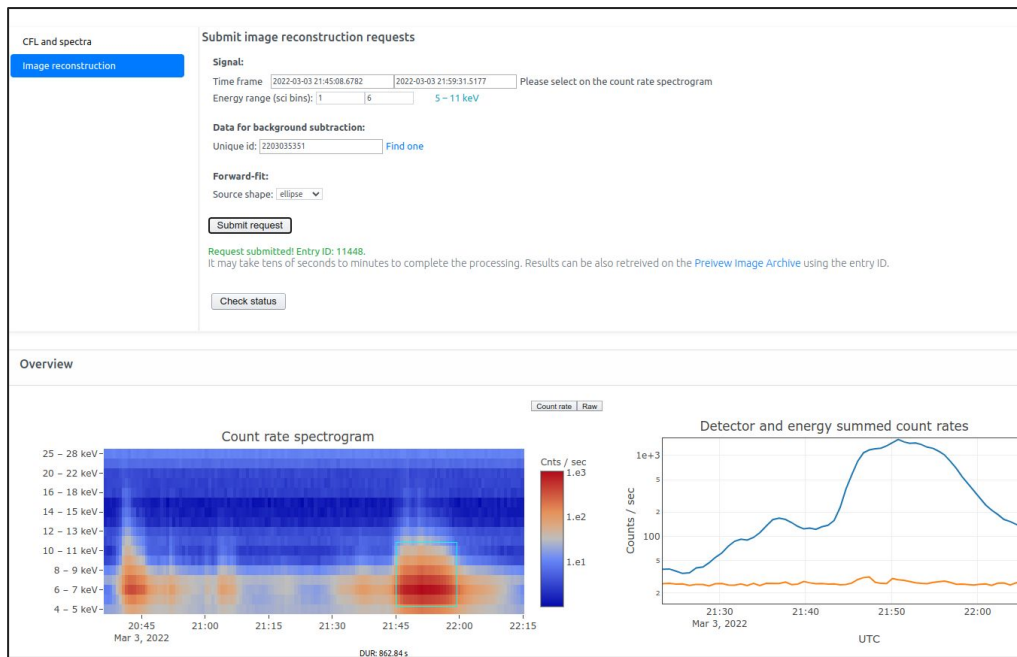
On the science data browser

1. Select a science data file
2. Click the button "**interactive analysis**" then "**image reconstruction**"
3. Select time and energy ranges, and background data
4. Click "Submit"
5. After about 30 sec, click the button "check status"
6. Images will be displayed at the bottom of the page if success

Only register users are allowed to submit processing requests!

STIX preview image archive

https://datacenter.stix.i4ds.net/view/image-archive

Browse preview images on the science data browser
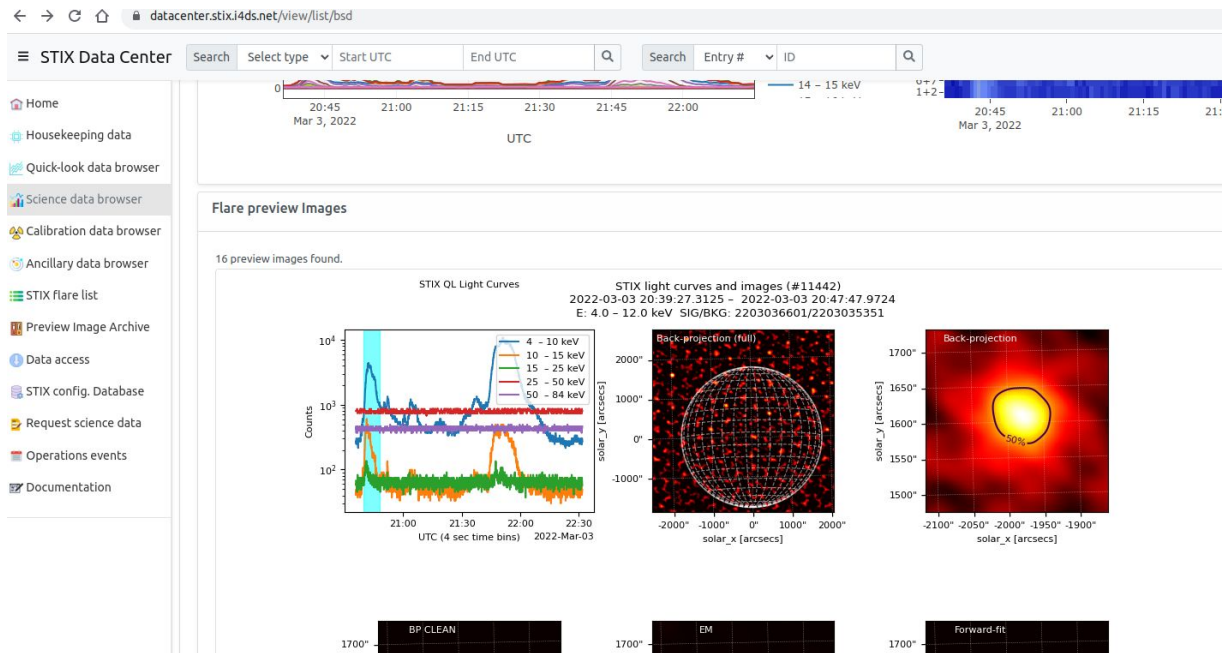
Available preview images for the current loaded science data are also displayed at the bottom of the "preview" tab on the science data browser

Browse preview images on QL light curve page

Preview images for the current time frame will be loaded after clicking the button "**IMG**" on the top
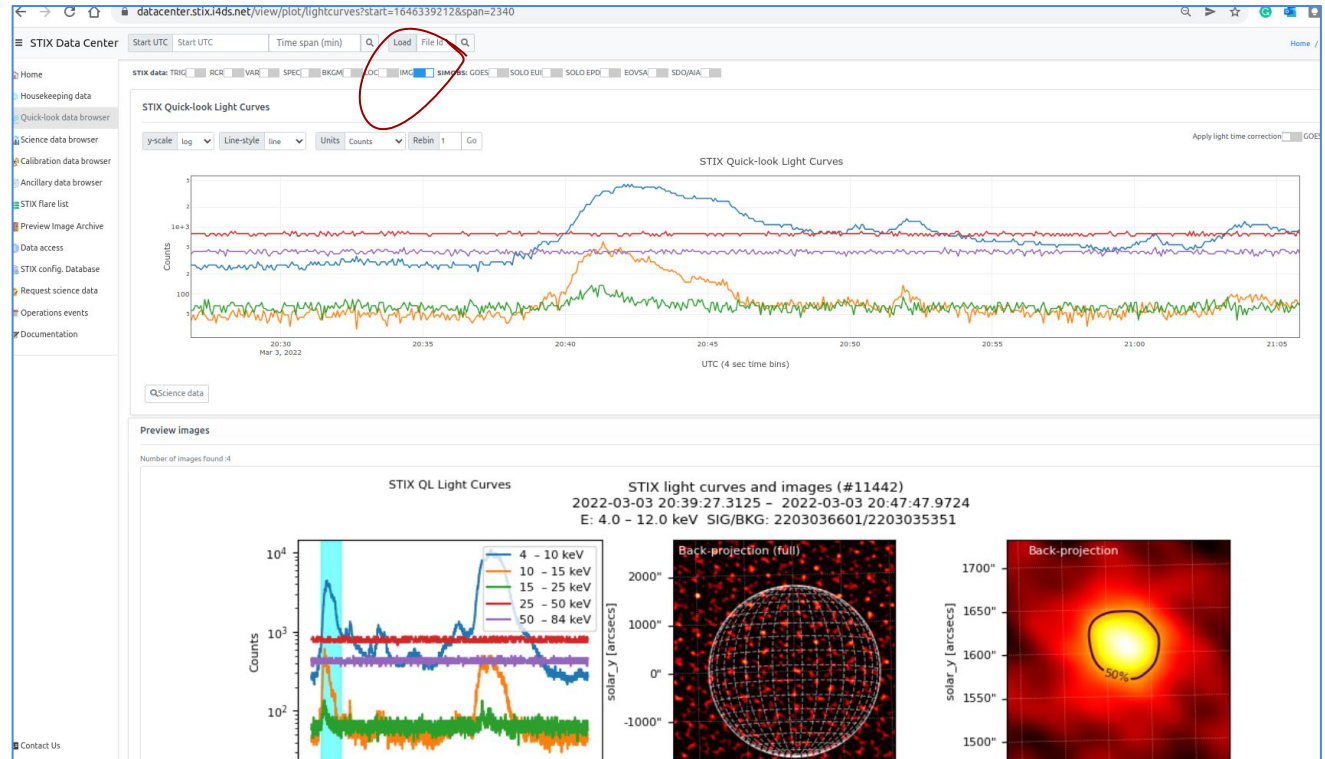
Reproduce STIX preview images

- Download image FITS files and plot the images
- Download signal & background science data, then reconstruction images using stix sw in sswidl

IDL and python scripts can be created using the helper tools
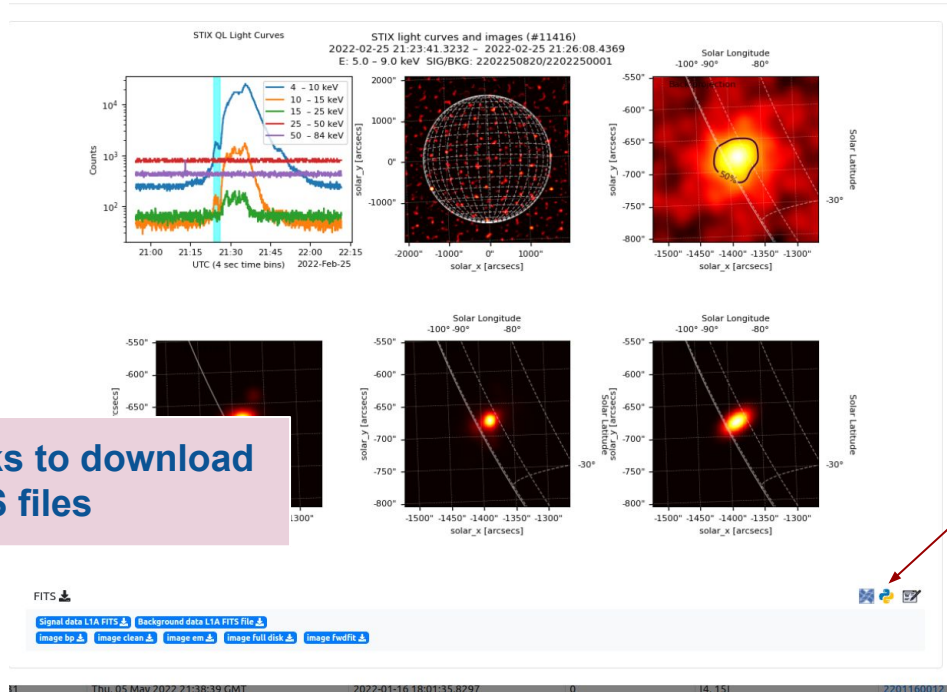
Links to download FITS files

Flare image animation

https://datacenter.stix.i4ds.net/view/image-archive

On flare image archive page

- Select images in the table
- Click the button " create animation …"
- Save the python template to you local disk
- Run the script