STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

Panel Slides

MUG Jan 2018

HST Consolidated Pipeline – J. Hargis

HST Consolidated Pipeline Project

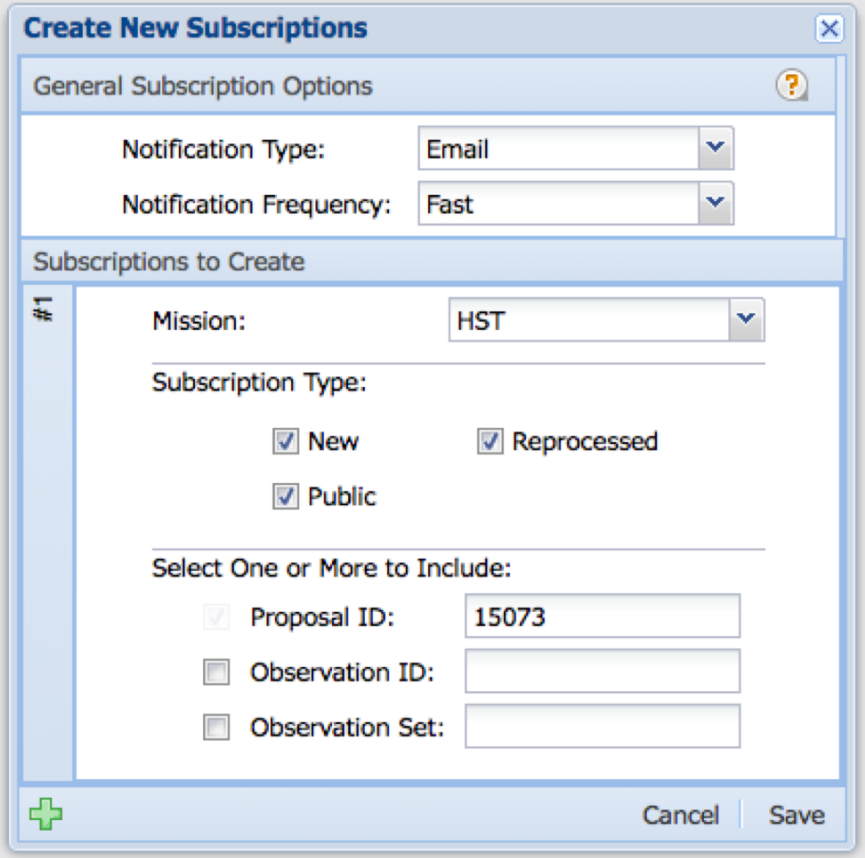
The HST Consolidated Pipeline project aims to eliminate concurrent data processing at the HST Archive Partner sites (at ESAC and CADC). All sites will store identical STScI pipeline products and associated metadata.

- Planned completion in late April 2018 (started early Fall 2017)
- Network speeds should support ~2 TB/day data transfer rates
- Two primary services developed by STScI:
  - Discovery and retrieval of observational metadata via RESTful web service
  - Transfer of files via HTTP
- STScI has completed majority of our work. Partners are now doing end-to-end testing.
- The adoption of a common database model (CAOM) has been critical.
- STScI staffing: 2-4 FTE of effort. Similar levels at CADC and ESAC.

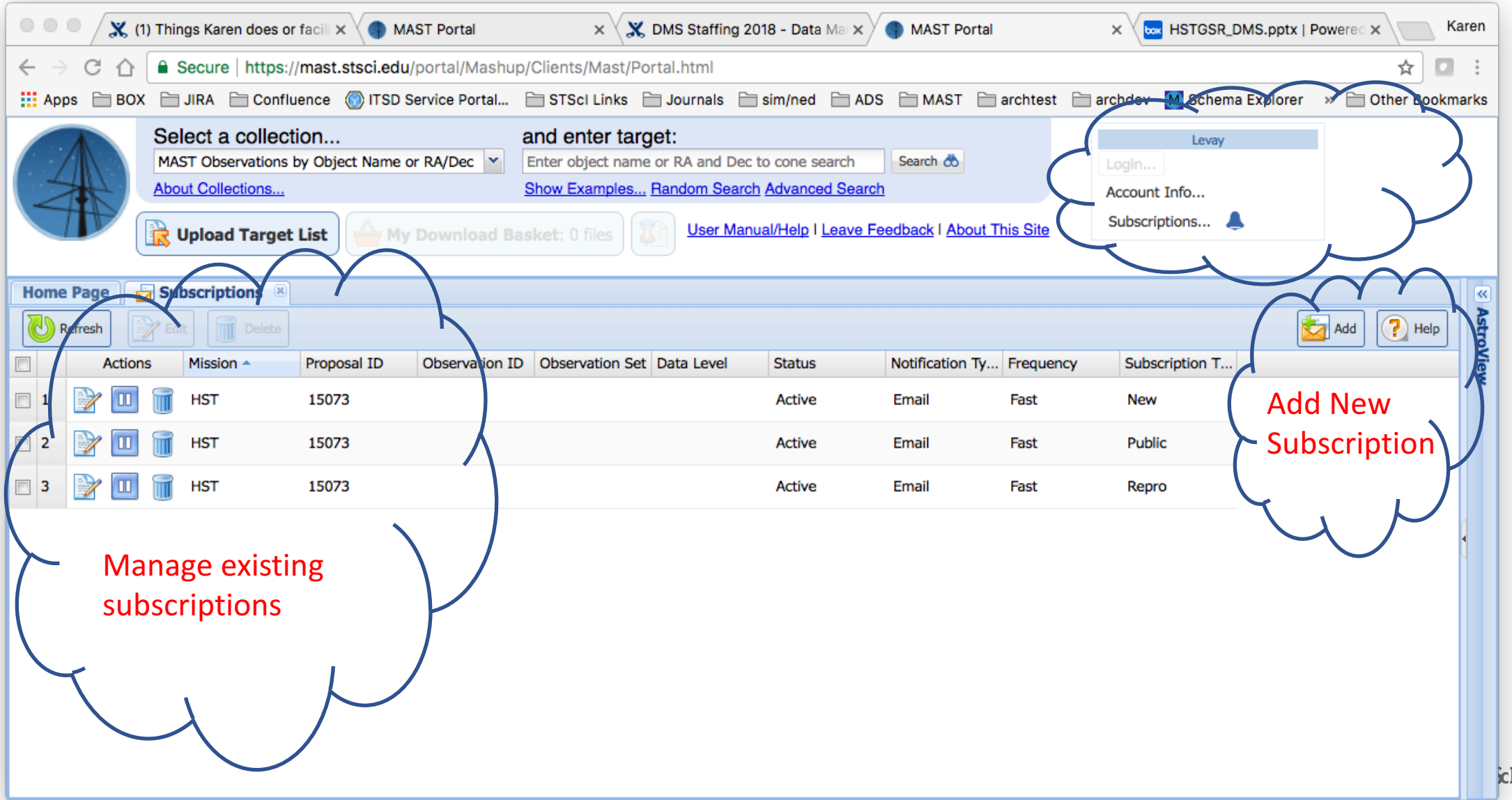
Subscription Service - O. Oberdorf

Subscription Service

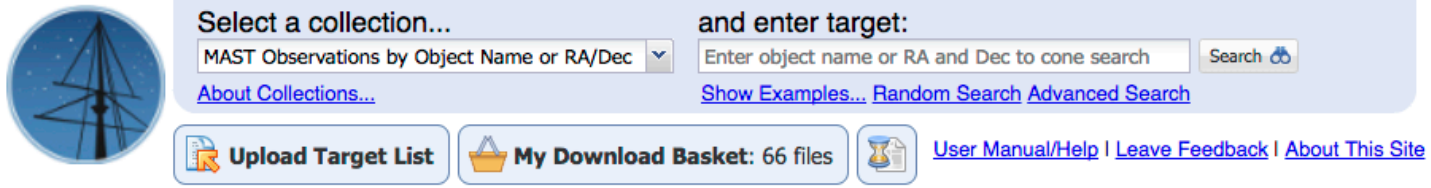
- Primary Investigators (PIs) are automatically subscribed for notification when data for their program is archived.
- Users can subscribe for notification of new data, reprocessed data and when data become public.
- Users can choose proposal and even specific observations
- Notification are sent via mail or can be viewed online at a preferred cadence.



Subscription Service



Subscription Service



Notifications Alerted

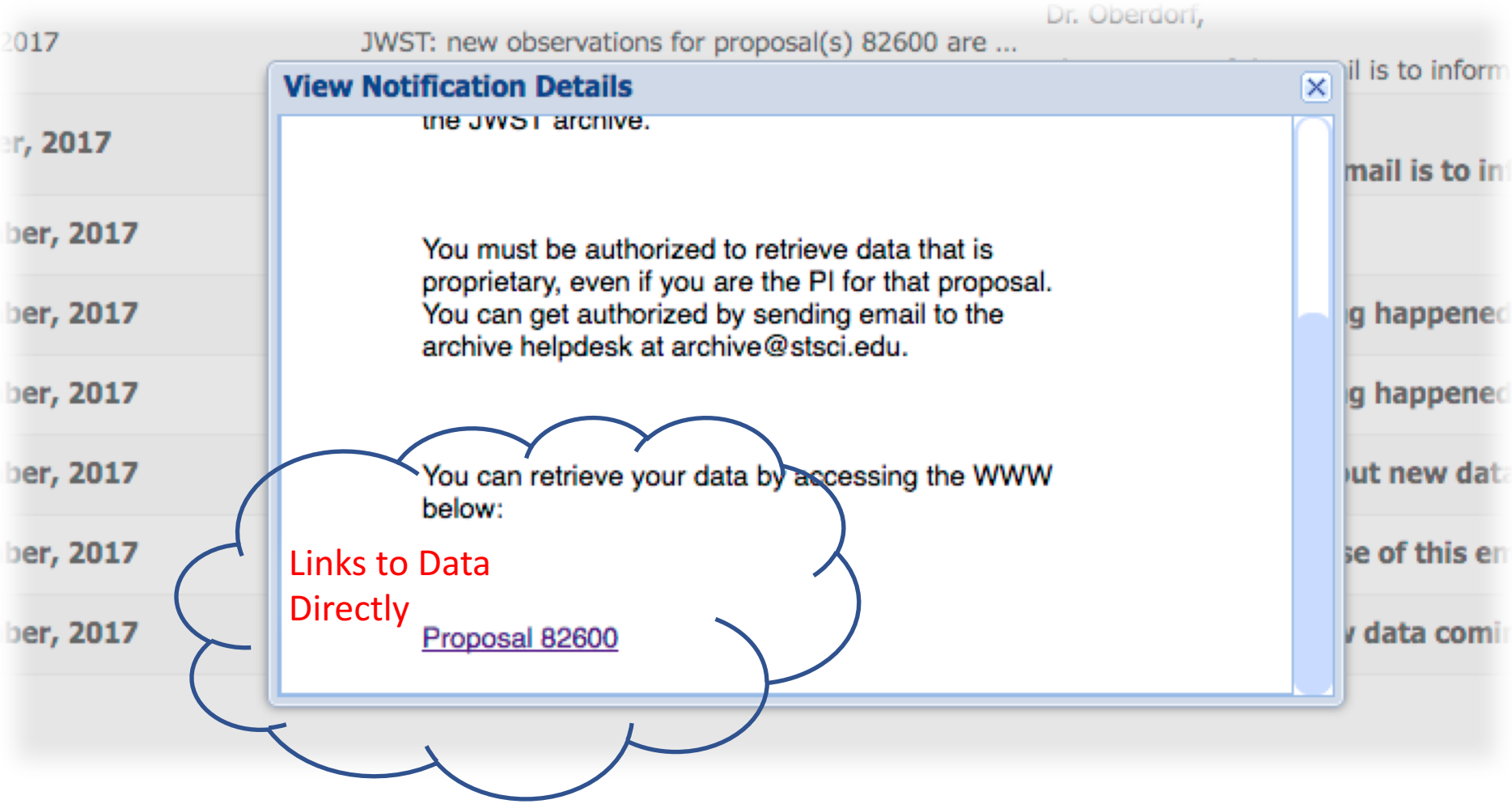
Home Page | Notifications

Refresh | Read | Unread | Delete

	Actions	Date	Subject	Body
1		6:06 PM Tue, 24 October, 2017	JWST: new observations for proposal(s) 82600 are ...	Dr. Oberdorf, The purpose of this email is to inform you that new observations for propos...
2		**5:05 PM Tue, 24 October, 2017**	**JWST: new observations for proposal(s) 826...**	**Dr. Oberdorf, The purpose of this email is to inform you that new observations for propos...**
3		**1:01 PM Fri, 01 September, 2017**	**Subject**	**This is the Body**
4		**1:01 PM Fri, 01 September, 2017**	**Reprocessing Complete**	**Blah blah reprocessing happened on this thing that you subscribed to**
5		**1:01 PM Fri, 01 September, 2017**	**Reprocessing Complete**	**Blah blah reprocessing happened on this thing that you subscribed to**
6		**1:01 PM Fri, 01 September, 2017**	**New Data**	**Another message about new data coming in on a subscribed observation**
7		**1:01 PM Fri, 01 September, 2017**	**Observations for proposal(s) P1 P2 P3 are ar...**	**Dr. Tyson, The purpose of this email is to inform you that all observations for the following P...**
8		**1:01 PM Fri, 01 September, 2017**	**New Data**	**Something about new data coming in on some observation**

Notification Web Interface built right into MAST

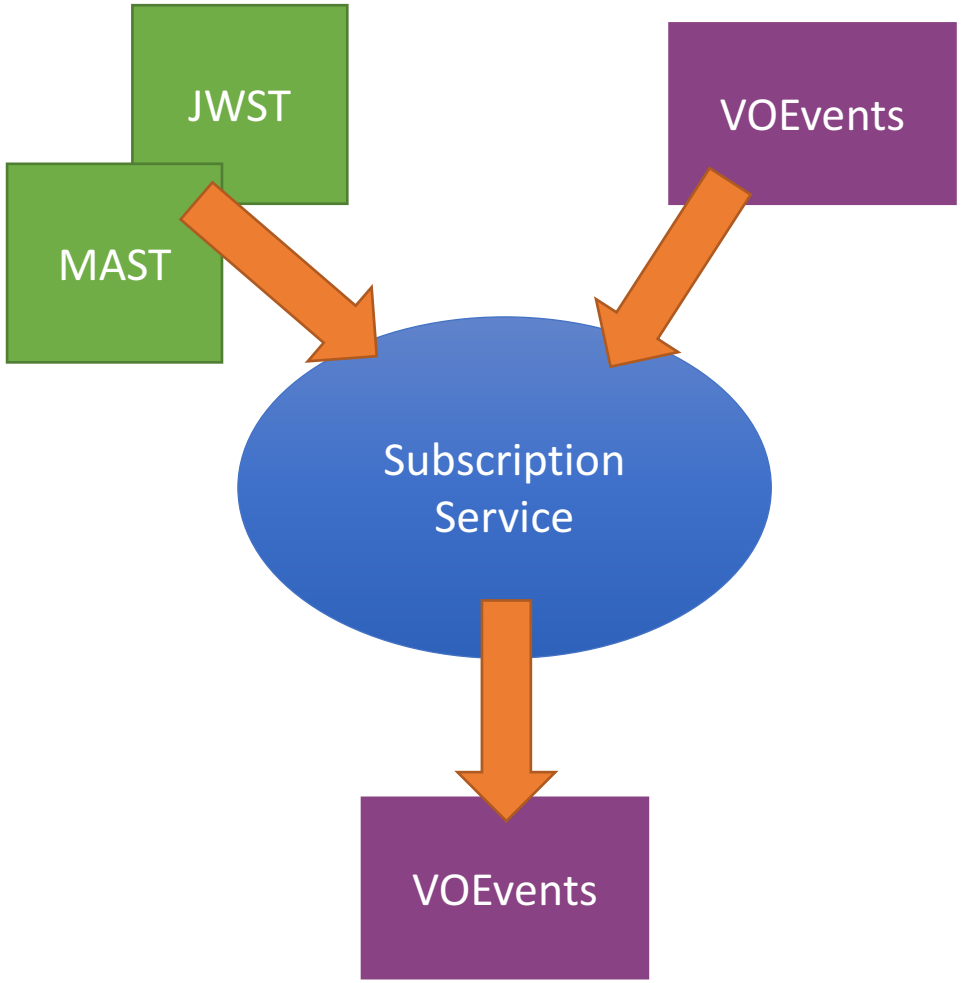
Subscription Service



Subscription Service

Future Ideas

- Download or Send to Basket directly from Notifications
- Support non-ST Missions (using VOEvents)
- Grid-like Notifications (columns for proposal id, etc)
- RSS feed delivery (3rd Notification Type)
- VOEvent Output
- Notify when data are published



JWST Builds- L. Quick

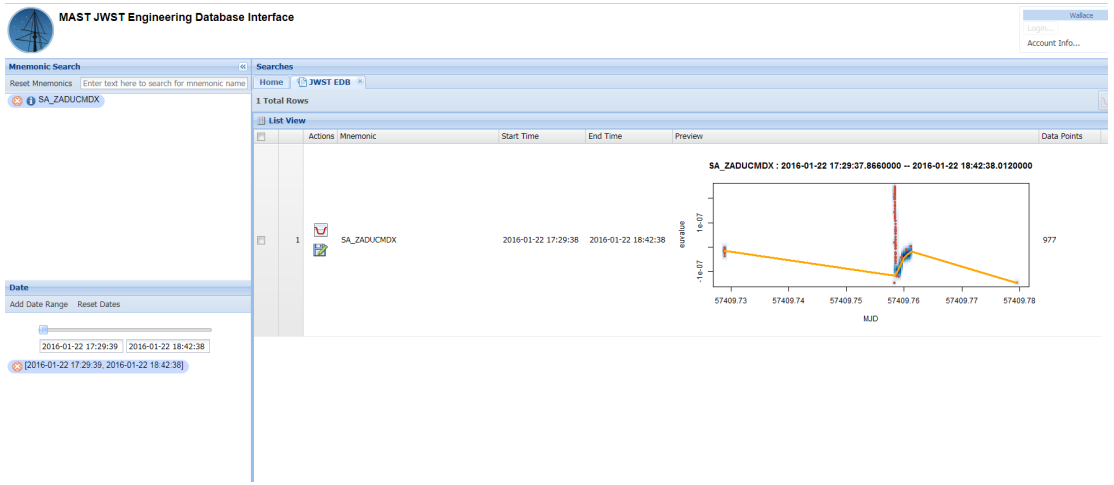
JWST Build 7.1

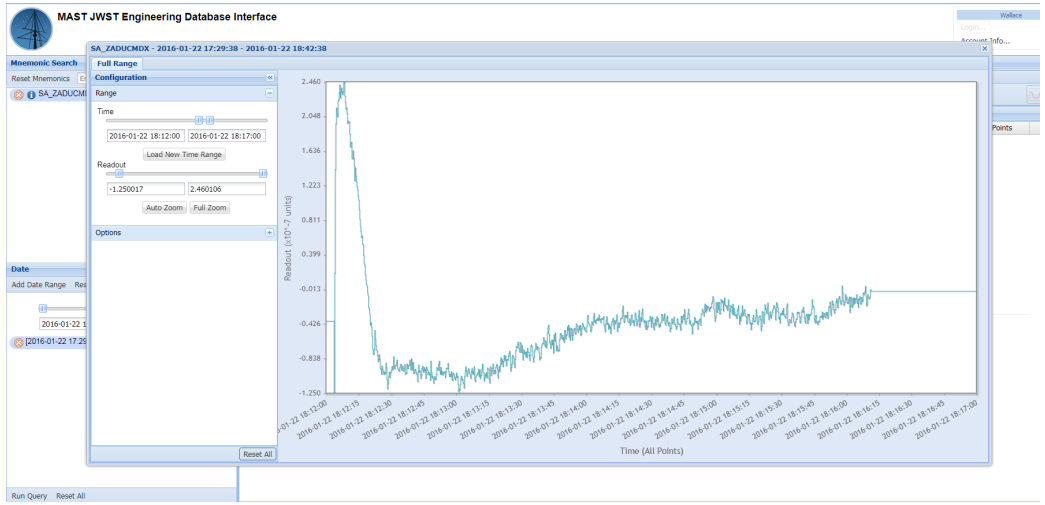
- Archive User Interface
  - Subscription Service Interface
    - This new feature allows the user to create, modify and view the details of a subscription to a program, observation or dataset. Users can receive information about a subscription by email and interface status.
  - WSS (Wavefront Sensing Software) Interface
    - This interface allows users to access WSS OPD (Optical Path Difference) files through the AUI.
  - AUI has the capability to identify parallel science observations
  - Community contributed High Level Science Products (Level 4) data are available through the AUI

JWST Build 7.1

JWST Build 7.1

- Archive User Interface
  - Engineering Data Interface
    - DMS has a database of spacecraft engineering parameters with data points collected over time.
    - Data are searchable via mnemonic of interest and a time range.



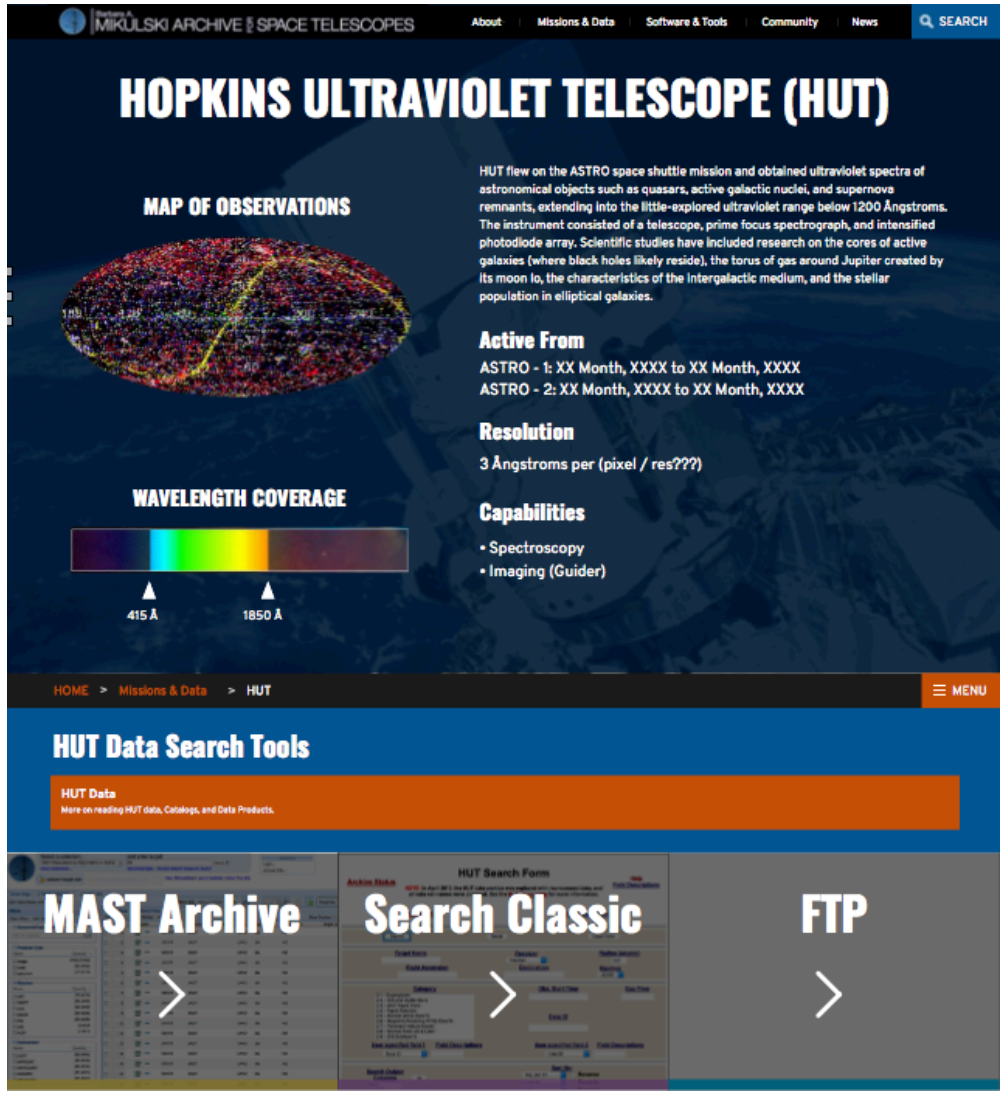


Website Redesign – K. Levay

Website Redesign

- MAST website redesign is linked with total STScI webdesign project. Using the same content management system (Jahia) and the same modules and feature types.
- Progress slowed because we were using the same consulting group and MAST work given a lower priority and there have been schedule slips
- MAST hired a UX/UI staff member hired Dec 2017, so we now have dedicated design staff for the project
- Developers on parental leave, so final development push will begin this spring
- Content to migrated being identified and rewritten as needed during the next three months
- Question: Some content documents the mission but not the data. Mission content exists no where else. Inclined to save it archivally but not at highest priority. Agree?

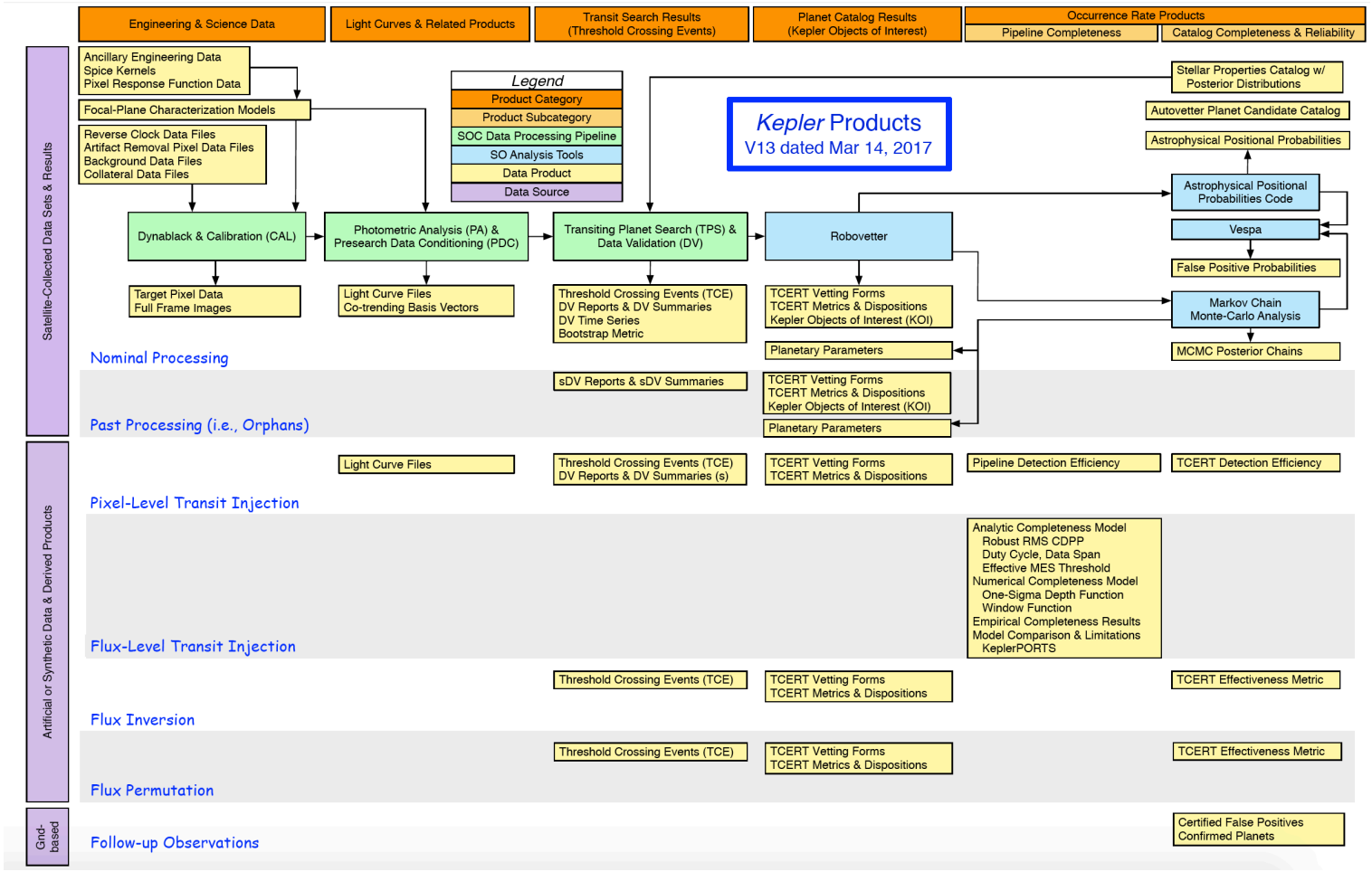
Website Redesign – Mission landing page



- Brief description of mission and data
- Direct links to various search options
- Lower pages will have information about data products, documentation etc

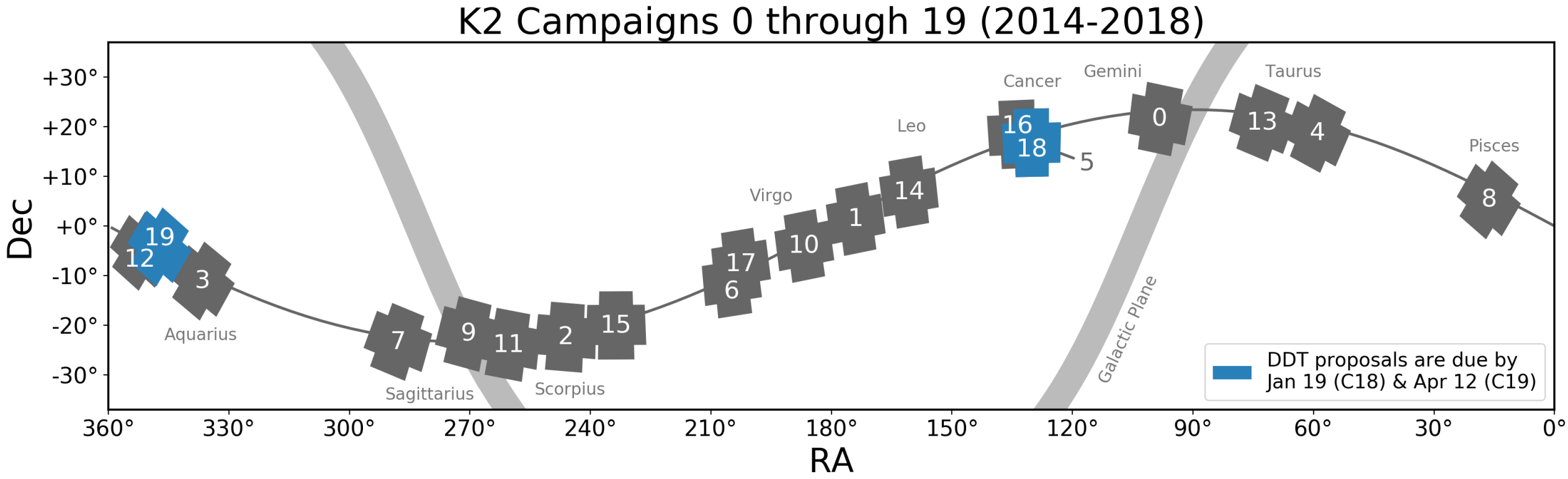
Kepler/K2 Closeout – S. Fleming

Kepler Closeout



- Kepler close out basically done
- Few last pieces of documentation from the mission team: not essential, will be informative
  - Example: Data Product Roadmap (left)
- Potentially a few esoteric engineering files, JIRA tickets, etc. that could be archived
- Latest update was getting DV files from NExScI and including in Portal, using them to plan for TESS DV file interaction

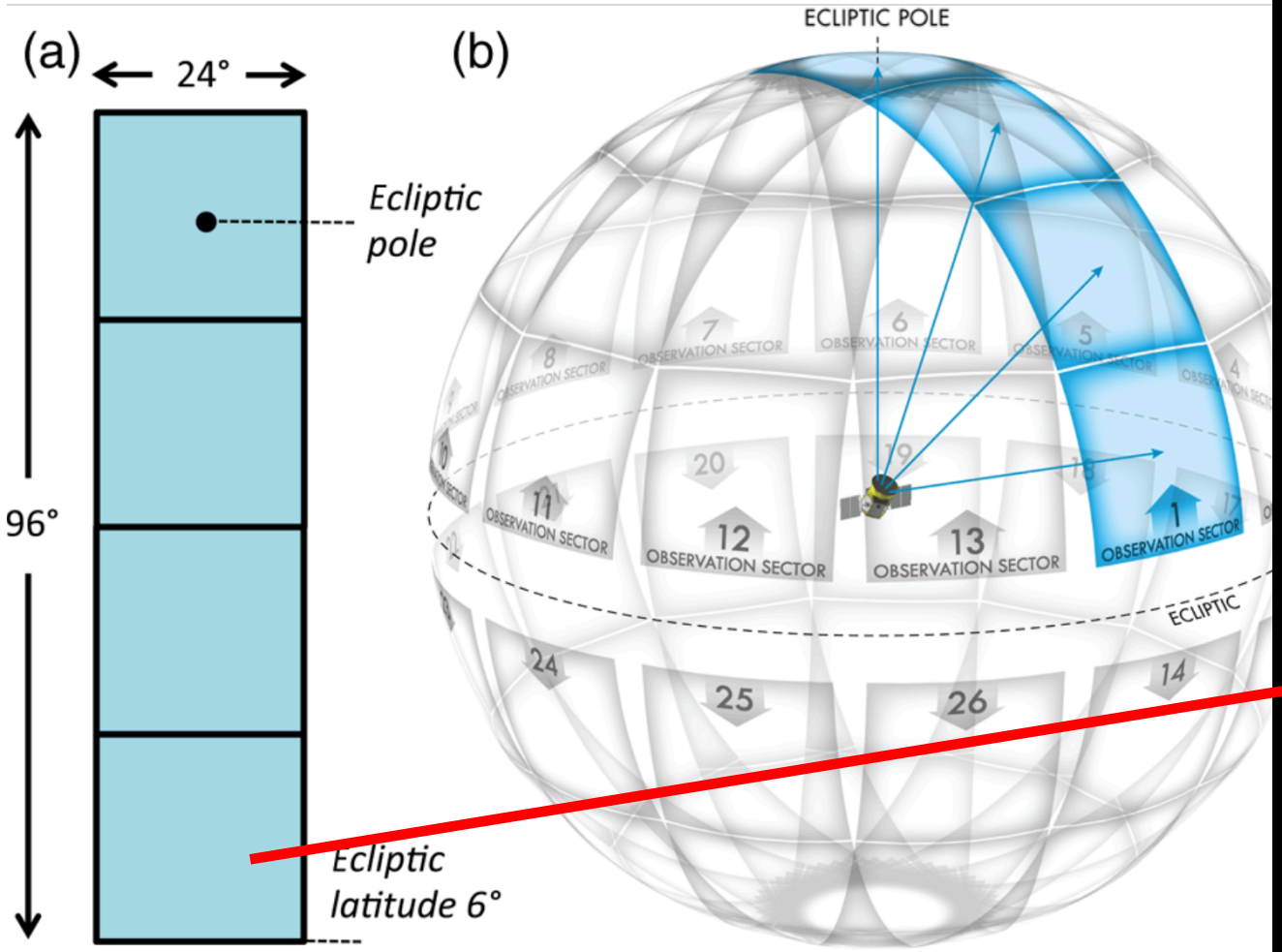
K2 Operations

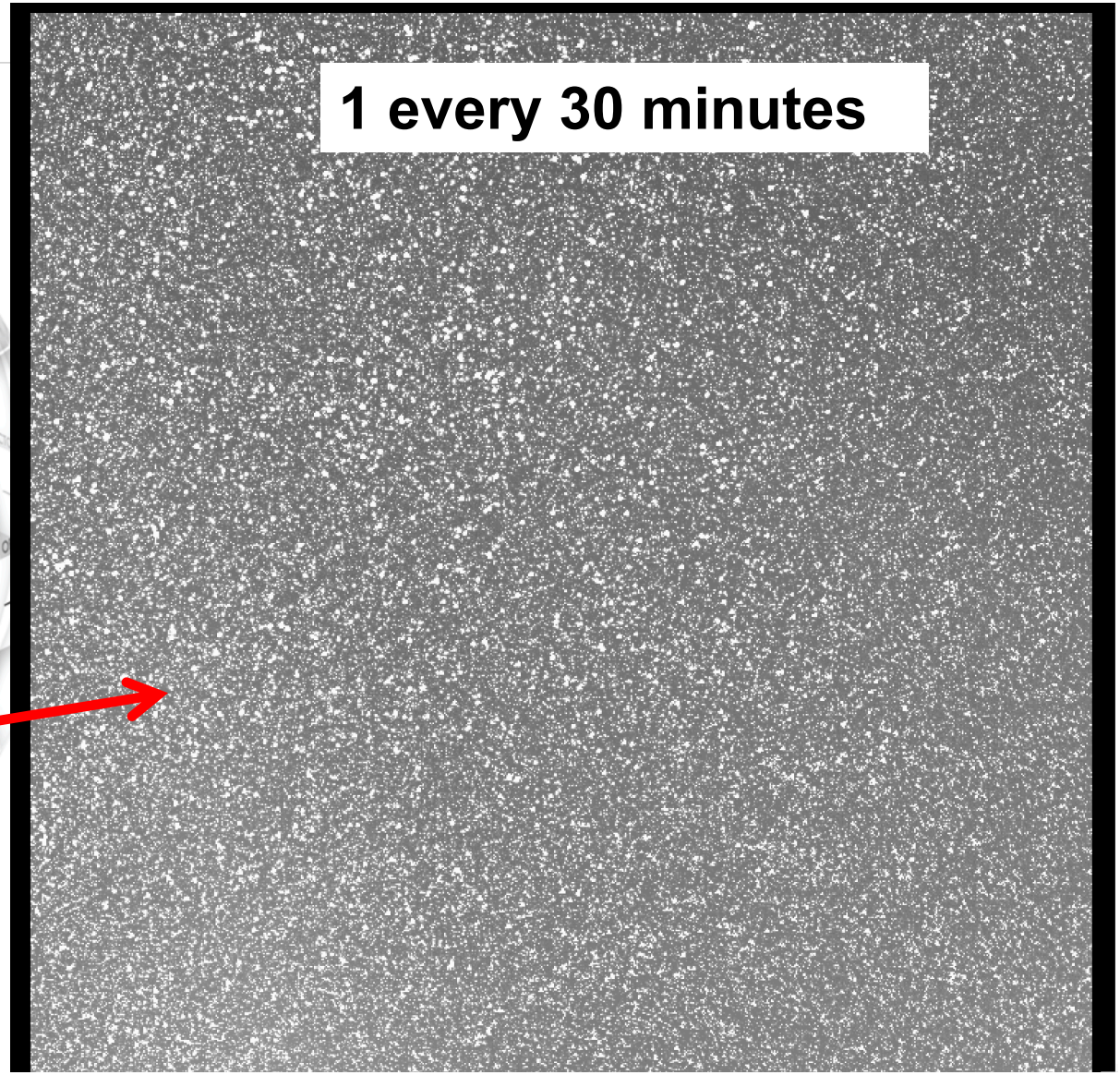


- Campaign 15 Raw Cadence Data is public
- Campaign 14 Processed Data is public
- HLSPs remain popular: continuing to solicit more K2 HLSPs from the community
- Spacecraft will likely finish Campaign 16, anything beyond that is “bonus” (fuel is running out)

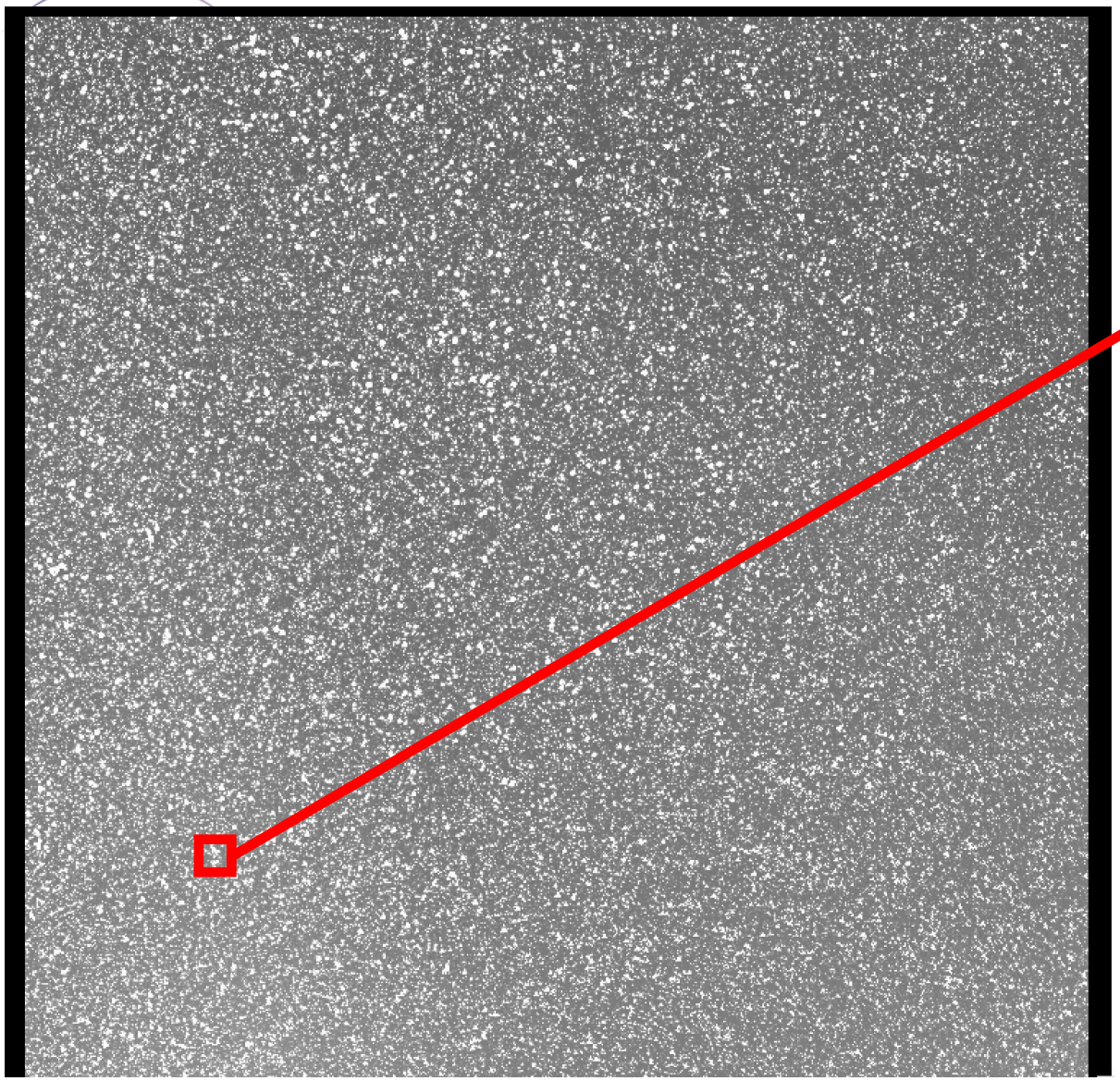
TESS PLanning– S. Fleming

TESS Planning: Data Overview





TESS Planning: Data Overview



A few hundred thousand targets get 2-minute cadence data: target pixel files, light curves, data validation files, etc.

BUT: a lot of science will be done using the Full Frame Images, both for exoplanets and numerous other science topics.

TESS Planning: Active Work Area

- TIC v6 (out this week) – last version before launch
- Ground Segment Test #3 finished, ingest process well-developed and flexed with all the data products expected from the mission
- Prepare Archive Manual and Data Products documentation (will use Confluence)
- We (MAST) will be making a TESS FFI cutout tool: command-line tool to cut-out small pieces of the FFI's and download target-pixel-file-like FITS to your computer
  - Since TPF like, community can use tools they already have for TPF's, ideally supplying HLSPs back to MAST
- NExScI-MAST TESS Follow-Up Coordination
  - TESS-funded Follow-Up Data Flow
  - Avenue for teams to take follow-up data at NExScI and convert them to MAST HLSP when papers are published
    - Follow-Up data at NExScI uploade fast, little/no requirements and standardization, is designed to be dynamic in the "here and now"
    - HLSP data at MAST follows standards, is designed to be permanent archive at the "end stage"

DOI – Josh Peek

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