

***Integrating Science Services for Observers:
Beginning a Dialog with the STUC***

October 2014

Janice C. Lee (Science Mission Office)

How can STScI

modernize

streamline

improve

user support and documentation
for JWST,
building on experience with
HST and other observatories?

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Outline

I. Motivation

II. Pathfinder project

III. Your feedback

A typical observer's workflow:

*ideation,
proposal/grant preparation,
proposal/grant review,
execution of observations,
data reduction and analysis,
reporting of results.*

*Develop an integrated environment of tools to
facilitate process, enable astronomers to spend more
time thinking about science, less time on mechanics.*

Particularly important for JWST

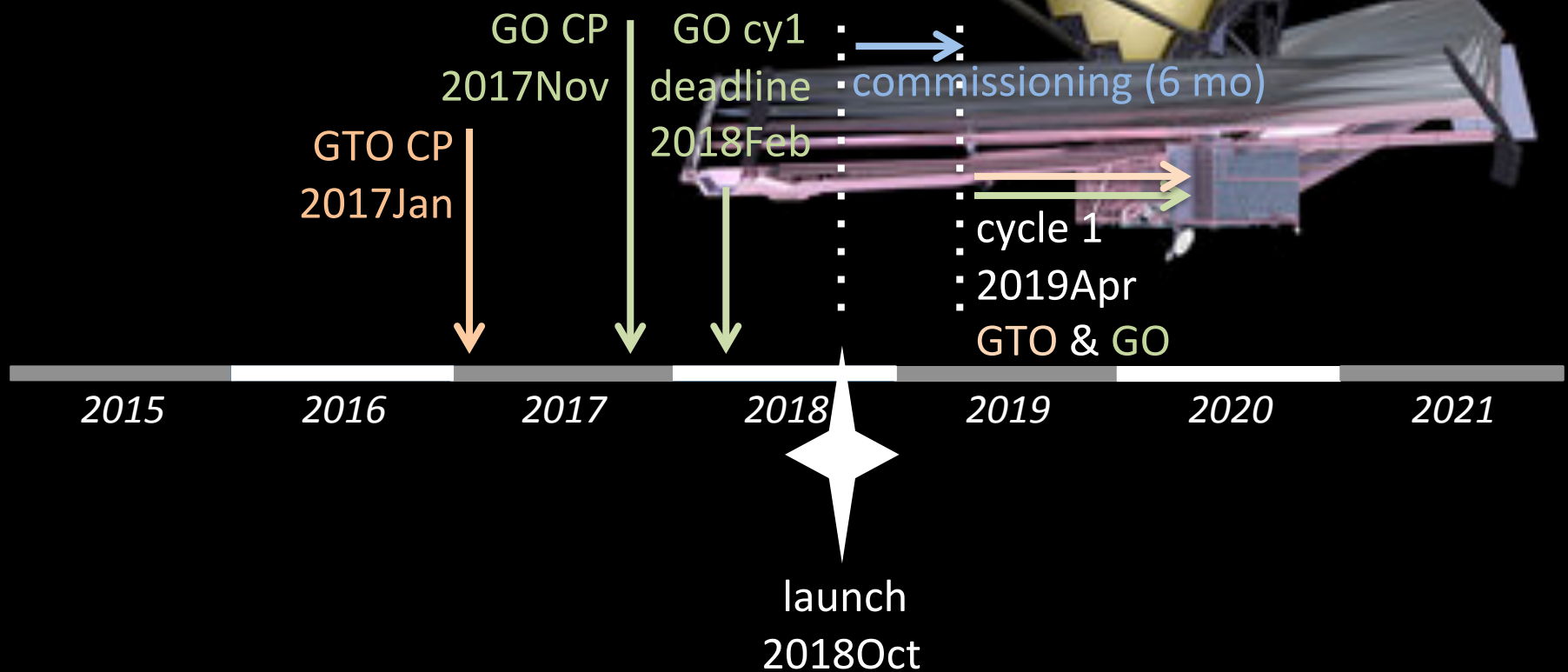
*5 year mission duration (required/minimum),
with goal of 10 years.*

*Shorten intellectual cycle -
help users rapidly understand/use JW capabilities,
to maximize scientific productivity over first 5 years.*



Particularly important for JWST

Time to start supporting JW users approaching quickly: examine and develop our support of HST users to improve our process.



Major Components of HST User Support Ecosystem

www.stsci.edu: Information gateway



SPACE TELESCOPE SCIENCE INSTITUTE

Search

STScI > HST

[Home](#)[About Us](#)[Current Missions](#)[Data Archives](#)[News and Education](#)[Future Missions and Initiatives Support](#)[Research](#)[Events](#)

Hubble Space Telescope

- ▶ HST Overview
- ▶ Phase I Proposing
- ▶ Phase II Proposing
- ▶ Scheduling
- ▶ Post-Observation
- Instruments
- Documents
- Astronomer's Proposal Tool
- DrizzlePac
- HST Science Year in Review
- Space Telescope Users Committee

NASA Telescopes Find Clear Skies and Water Vapor on Exo-Neptune



The weather forecast for a planet 120 light-years from Earth is clear skies and steamy water vapor. Finding clear skies on a gaseous world the size of Neptune is a good sign that even smaller, Earth-size planets might have similarly good visibility. This would allow earthbound astronomers to measure the underlying atmospheric composition of an exoplanet. Astronomers using the Hubble, Spitzer, and Kepler space telescopes were able to determine that the planet, cataloged HAT-P-11b, has water vapor in its atmosphere. The world is definitely steamy with temperatures over 1,000 degrees Fahrenheit. The planet is so hot because it orbits so close to its star, completing one orbit every five days.

[Read more...](#) | [NewsCenter](#) | [RSS Feed](#)

Program Status

Prop. ID:

HST Press Releases

Scientists please submit newsworthy items with the [news release form](#). Also see the [news release policy](#).

HST Daily Report

[Current](#)
[Previous](#)

HST Observations

A synopsis of programs scheduled for observation with HST.

Latest News

Major Components of HST User Support Ecosystem

Documentation: Call for Proposals, Instrument Handbooks, Data Reduction Cookbooks

HST Call For Proposals
January 2014

Hubble Space Telescope Call for Proposals for Cycle 22

Policies, Procedures &
Phase I Proposal Instructions



Space Telescope Science Institute
3700 San Martin Drive
Baltimore, Maryland 21218

January 2014

Hubble Space Telescope Primer for Cycle 22

*An Introduction to the HST
for Phase I Proposers*



Space Telescope Science Institute
3700 San Martin Drive
Baltimore, Maryland 21218
help@stsci.edu

Version 6.0
January 2014

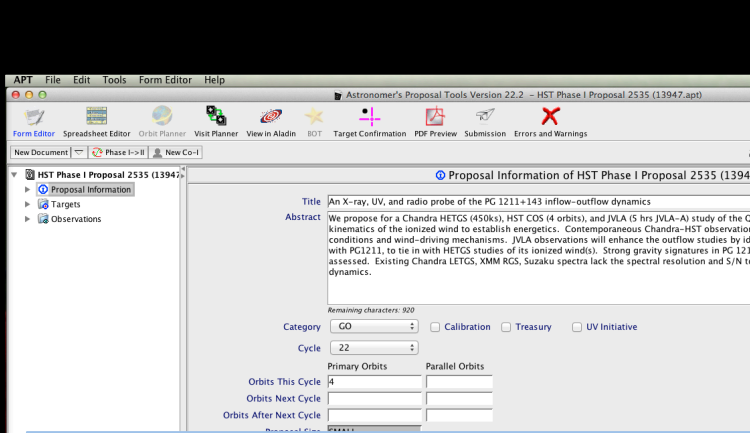
Wide Field Camera 3 Instrument Handbook for Cycle 22



Space Telescope Science Institute
3700 San Martin Drive
Baltimore, Maryland 21218
help@stsci.edu

Major Components of HST User Support Ecosystem

Software Tools: PRS, ETC, APT, GMS, MAST, STSDAS



APT File Edit Tools Form Editor Help

Astronomer's Proposal Tools Version 22.2 - HST Phase I Proposal 2535 (13947.apl)

Form Editor Spreadsheet Editor Orbit Planner Visit Planner View in Aladin BOT Target Confirmation PDF Preview Submission Errors and Warnings

New Document | Phase I->II | New Co-I

Proposal Information of HST Phase I Proposal 2535 (13947)

Title: An X-ray, UV, and radio probe of the PG 1211+143 inflow-outflow dynamics

Abstract: We propose for a Chandra HETGS (450ks), HST COS (4 orbits), and JPLA (5 hrs JPLA-A) study of the kinematics of the ionized wind to establish energetics. Contemporaneous Chandra-HST observations of the ionized wind will enhance the outflow studies by identifying the ionized wind-driving mechanisms. JPLA observations will enhance the outflow studies by identifying the ionized wind-driving mechanisms. JPLA observations will enhance the outflow studies by identifying the ionized wind-driving mechanisms. JPLA observations will enhance the outflow studies by identifying the ionized wind-driving mechanisms.

Category: GO ☐ Calibration ☐ Treasury ☐ UV Initiative

Cycle: 22

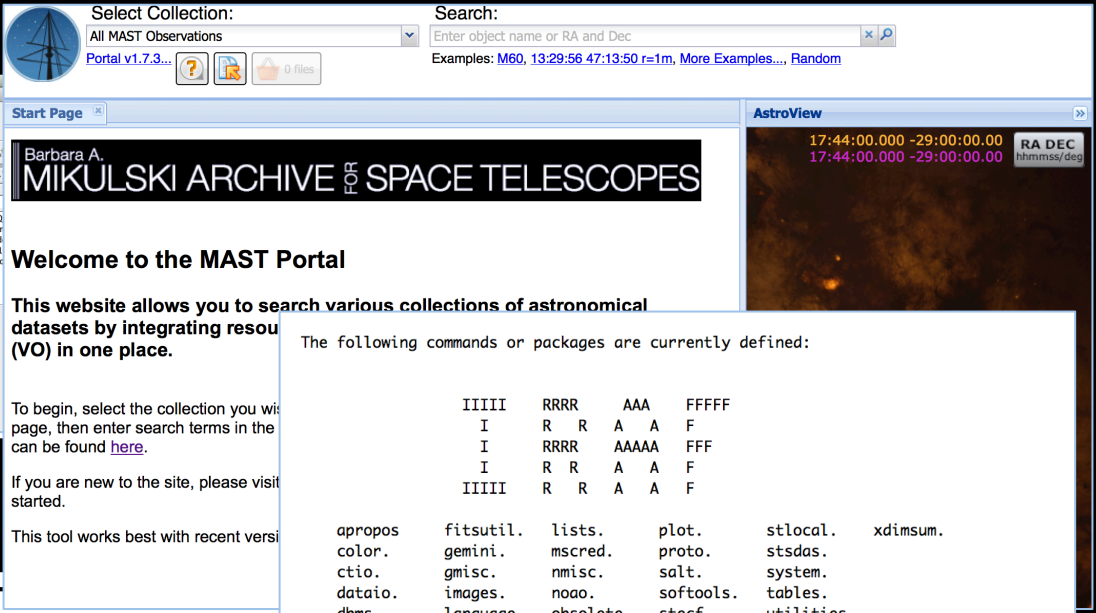
Primary Orbits: 4

Parallel Orbits: 4

Orbits This Cycle: 4

Orbits Next Cycle: 4

Orbits After Next Cycle: 4



Select Collection: All MAST Observations

Search: Enter object name or RA and Dec

Examples: M60, 13:29:56 47:13:50 r=1m, More Examples..., Random

Start Page

Barbara A. MIKULSKI ARCHIVE OF SPACE TELESCOPES

Welcome to the MAST Portal

This website allows you to search various collections of astronomical datasets by integrating resources (VO) in one place.

The following commands or packages are currently defined:

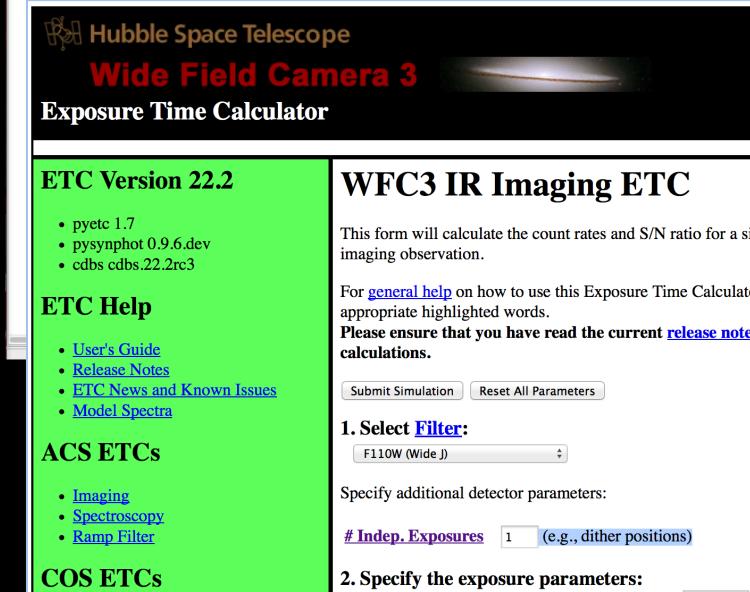
IIIII	RRRR	AAA	FFFF		
I	R R	A A	F		
I	RRRR	AAAA	FFF		
I	R R	A A	F		
IIIII	R R	A A	F		

To begin, select the collection you wish to search, then enter search terms in the search box. Search results can be found [here](#).

If you are new to the site, please visit the [Help](#) page.

This tool works best with recent versions of the following software:

apropos	fitsutil.	lists.	plot.	stlocal.	xdimsum.
color.	gemin.	mscred.	proto.	stsdas.	
ctio.	gmisc.	nmisc.	salt.	system.	
dataio.	images.	noao.	softools.	tables.	
dbms.	language.	obsolete.	stecf.	utilities.	



Hubble Space Telescope

Wide Field Camera 3

Exposure Time Calculator

ETC Version 22.2

- pyetc 1.7
- pysynphot 0.9.6.dev
- cdbs cdb22.2rc3

ETC Help

- User's Guide
- Release Notes
- ETC News and Known Issues
- Model Spectra

ACS ETCs

- Imaging
- Spectroscopy
- Ramp Filter

COS ETCs

WFC3 IR Imaging ETC

This form will calculate the count rates and S/N ratio for a simulated spectrum of ONE source in a wide field of view (WFOV) observation.

For [general help](#) on how to use this Exposure Time Calculator or for help on various topics, click on the appropriate highlighted words.

Please ensure that you have read the current [release notes](#) and [recent news](#) before submitting any calculations.

Submit Simulation Reset All Parameters

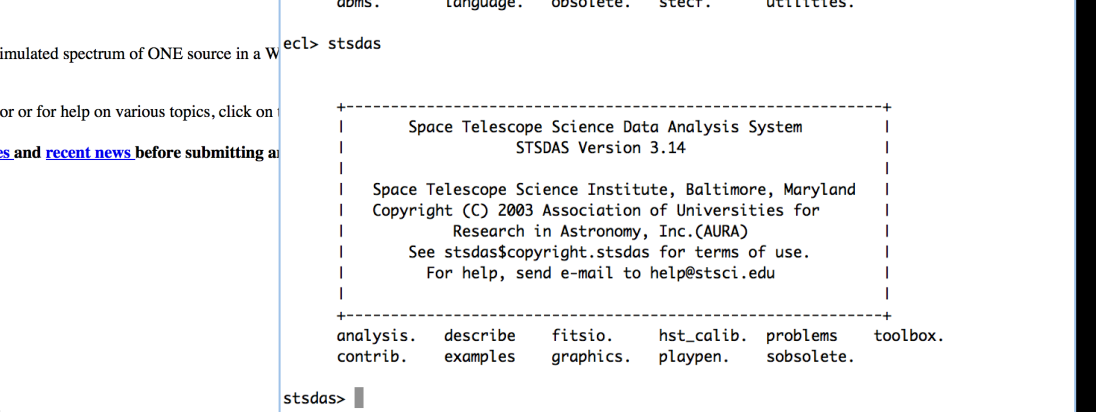
1. Select Filter:

F110W (Wide J)

Specify additional detector parameters:

Indep. Exposures 1 (e.g., dither positions)

2. Specify the exposure parameters:



ec> stsdas

Space Telescope Science Data Analysis System

STSDAS Version 3.14

Space Telescope Science Institute, Baltimore, Maryland

Copyright (C) 2003 Association of Universities for Research in Astronomy, Inc.(AURA)

See stsdas\$copyright.stsdas for terms of use.

For help, send e-mail to help@stsci.edu

analysis.	describe	fitsio.	hst_calib.	problems	toolbox.
contrib.	examples	graphics.	playpen.	sobolete.	

stsdas>

Major Components of HST User Support Ecosystem

www.stsci.edu
Documentation
Software Tools

ideation,
proposal/grant preparation,
proposal/grant review,
execution of observations,
data reduction and analysis,
reporting of results.

Are these individually organized to support an observer's workflow?

Can multiple points of access to information be integrated to increase workflow efficiency?

Is information easy to find (via navigation or search engine)?

*Can components be knit together
in a customized user portal organized
according to observer's workflow?*

Pathfinder Project: Integrating Proposal Review Workflows

First step: find reviewers! Create tool to assist in identifying qualified proposal reviewers for recruitment.

How does this relate to the integration of science services for observers through the idea of a customized user portal?

Both require information on user background and/or interests.

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

Who to invite for committee work? Process of identification varies, but can use/cross-correlate various lists:

- successful proposers in previous cycles
- astronomers who have served as reviewers in previous cycles
- generated by literature searches in ADS
- recommendations from other astronomers
- personal knowledge

Balance representation desired:

- Expertise within field
- Gender
- Institutional and geographic diversity
- Previous experience on HST panels
- Career stage
- Collaboration groups/networks

Pathfinder Project: Integrating Proposal Review Workflows

Scale of HST Proposal Selection Process Enterprise

- >1000 proposals, with 1 in 6 success rate
- Recruit ~150 reviewers for 14 panels in 5 broad subject area
- Success rate is <50%. Invitations to 300 reviewers. Invite others as declines are received (or as reviewers drop out) ensuring that demographic balance is maintained. (reference: ~1600 AAS full members in US)

Process would benefit from searchable database of user attributes.

Pathfinder Project: Integrating Proposal Review Workflows

Benefits of user database tool to help identify qualified reviewers:

- Makes the reviewer selection process more efficient – in 2017+ we may need to run proposal reviews for both HST and JWST.
- Helps democratize the panel selection process by enabling sample selection of potential reviewers in a more objective manner.
- Maximizes the size of the candidate pool from which reviewers are drawn.
- Helps ensure that number of informed scientific viewpoints represented is as diverse as possible.
- Facilitates the analysis of demographic trends.

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

Benefits of database development for panelist selection as a pathfinder for customized user portal? Provides specific use case for:

- development of a profile interface for ST users
- unification of several user attribute collection points at stsci.edu under new profile interface
- development of back-end database to hold attributes.

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows


Benefits of database development for panelist selection as a pathfinder for customized user portal? Provides specific use case for:

- development of a profile interface for ST users (**operational**)
- unification of several user attribute collection points at stsci.edu under new profile interface (**integration of two points completed**)
- development of back-end database to hold attributes. (**database + search tool in beta testing for Cycle 23**)

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

Unification of attribute collection points:

 **Proposal Science Review Panelist Information Request**

To participate as a proposal review panelist, please complete and submit the form below.

Proposal Assignment Keywords
Initial assignment of reviewers to proposals is made by software that attempts to match the keywords in a given proposal to keywords describing the expertise of each reviewer. These assignments are then reviewed by ISPO Staff. In order to get the best match between reviewers and proposals, please identify ten (10) keywords that best match your research experience and expertise. Rank these keywords in order from most to least experience; also, if possible please select exactly ten keywords.

Institutional Conflicts
For the purposes of conflict checking please provide your exact institutional affiliation (usually the institution that pays your salary). If you have multiple affiliations, are on sabbatical, or are in the process of changing jobs, please list all relevant details in the comments field at the bottom of the form. Please note that panelists will be recused from voting on proposals for which they have an institutional conflict, but will still participate in discussion of those proposals (per recommendation of the external TAC review committee). We will not assign any primary or secondary reviewers to any proposal that represents an institutional conflict.

Mailing Address
In the event proposal materials must be sent via express mail (usually FedEx), please also provide your complete mailing address, which includes your telephone and fax number. Packages can not be delivered to post office boxes.

Your Information

Salutation
Select one ▾

Name*

Email*

Organization/Institution*

☐ ESA Affiliation

Address*

City*

State/Province*

Country*
Select a country ▾

Postal Code*

Phone* Fax

Meal Preference
Standard meal ▾

☐ I have a food allergy An STScI representative will contact you for details

Special Requirements

* = required field

[Submit Your Information](#)


Review Cycle

Select A Review Cycle*
Select cycle ▾

Experience
Please select 10 keywords that best match your experience (first keyword = best match, second keyword = second best match, and so on).

- 1 Select an experience keyword ▾
- 2 Select an experience keyword ▾
- 3 Select an experience keyword ▾
- 4 Select an experience keyword ▾
- 5 Select an experience keyword ▾
- 6 Select an experience keyword ▾
- 7 Select an experience keyword ▾
- 8 Select an experience keyword ▾
- 9 Select an experience keyword ▾
- 10 Select an experience keyword ▾

Comments, Questions, or Concerns

 **Proposal/Person Application**

[Edit Person Profile](#) ?

Enter information about this profile. If you are doing this for somebody else, please enter a comment in the field provided.

An email message with information about the profile will be sent to the person after clicking on 'Save'.

Required fields are shown in **this style**.

Profile Details **Message Subscriptions**

Honorific: Dr. ▾

First Name: Janice

Middle Name: C.

Last Name: Lee

Suffix: ▾

Email: jlee@stsci.edu

Institution: Space Telescope Science Institute

Phone: 626-395-8097

Country: United States ▾

State/Province: MD ▾

Comment:

Number of characters remaining: 255

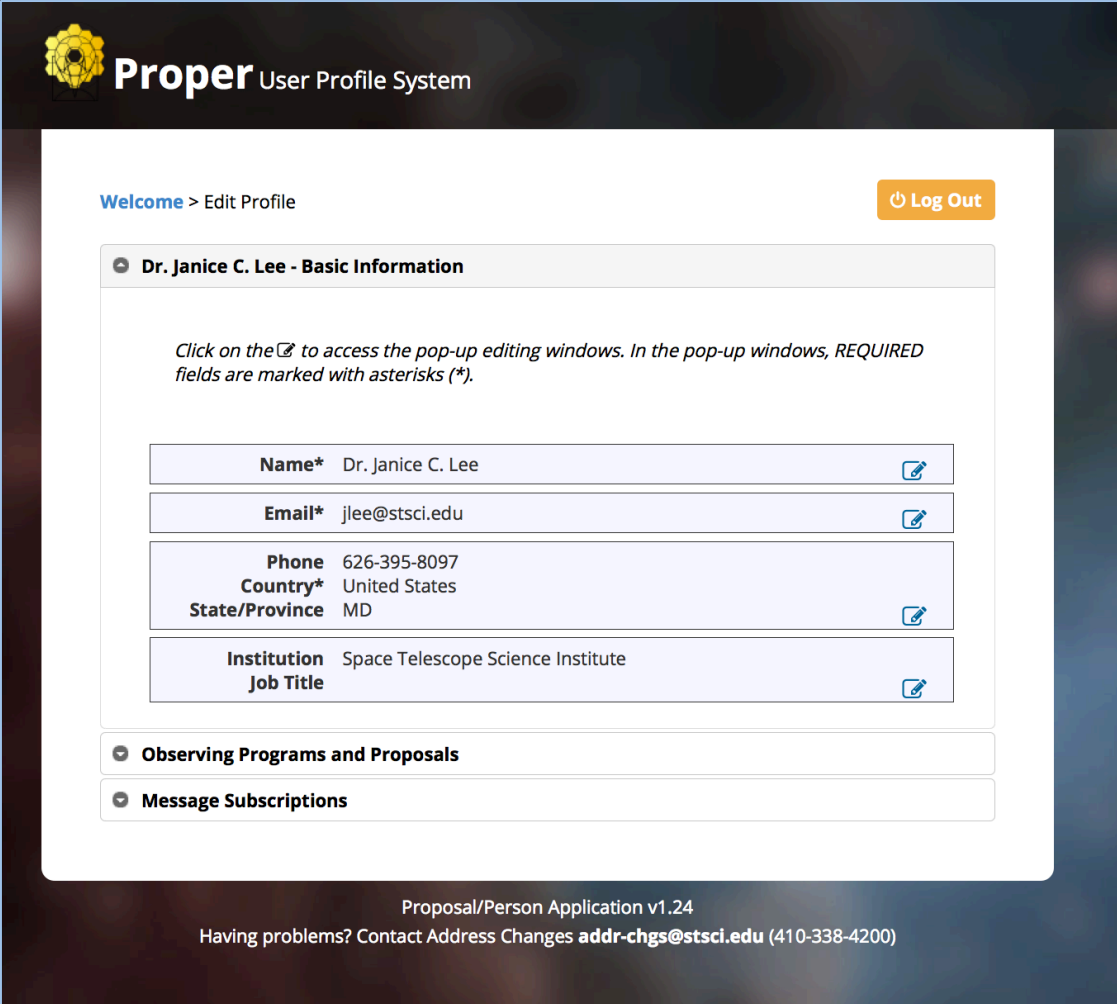
[Cancel Profile Request](#) [Save](#) [Reset](#)


SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

Unification of attribute collection points:

live at <https://profile.stsci.edu>








The screenshot displays the 'Proper User Profile System' interface. At the top left is a yellow gear icon and the text 'Proper User Profile System'. Below this, a navigation bar shows 'Welcome > Edit Profile' and a 'Log Out' button. The main content area is titled 'Dr. Janice C. Lee - Basic Information'. It contains a paragraph: 'Click on the  to access the pop-up editing windows. In the pop-up windows, REQUIRED fields are marked with asterisks (*).' Below this are several form fields: 'Name*' with value 'Dr. Janice C. Lee', 'Email*' with value 'jlee@stsci.edu', 'Phone' with value '626-395-8097', 'Country*' with value 'United States', 'State/Province' with value 'MD', 'Institution' with value 'Space Telescope Science Institute', and 'Job Title'. Each field has a pencil icon for editing. At the bottom of the form are two sections: 'Observing Programs and Proposals' and 'Message Subscriptions'. The footer contains the text 'Proposal/Person Application v1.24' and 'Having problems? Contact Address Changes addr-chgs@stsci.edu (410-338-4200)'.

Proper User Profile System

Welcome > Edit Profile [Log Out](#)

Dr. Janice C. Lee - Basic Information

Click on the  to access the pop-up editing windows. In the pop-up windows, REQUIRED fields are marked with asterisks (*).

Name*	Dr. Janice C. Lee	
Email*	jlee@stsci.edu	
Phone	626-395-8097	
Country*	United States	
State/Province	MD	
Institution	Space Telescope Science Institute	
Job Title		

Observing Programs and Proposals

Message Subscriptions

Proposal/Person Application v1.24
Having problems? Contact Address Changes addr-chgs@stsci.edu (410-338-4200)

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

Unification of attribute collection points:

<https://profile.stsci.edu>

Additional sections in Jan 2015 for HST reviewers

The screenshot displays a web interface for editing a profile. At the top, there is an 'Edit' section with several input fields. Below this, there is a list of sections, each with a dropdown arrow and a title. The sections are: Observing Programs and Proposals, Confidential Information (Need better section heading.), Institutions/Employment, STScI Service Activities (Under Construction), Education, Scientific Expertise (Under Construction), Conflicts of Interest (Under Construction), and Message Subscriptions.

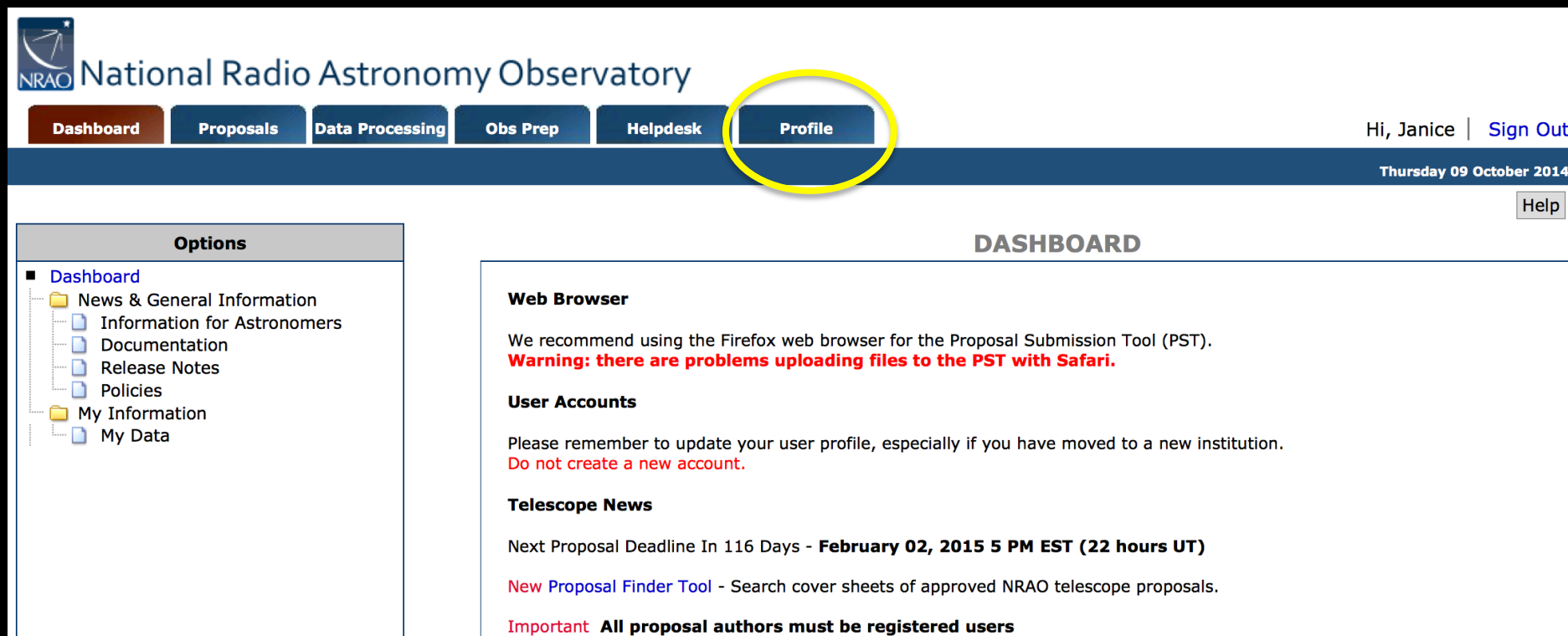
Edit	
Name*	Dr. Janice C. Lee
Email*	jlee@stsci.edu
Phone	626-395-8097
Country*	United States
State/Province	MD


- Observing Programs and Proposals
- Confidential Information (Need better section heading.)
- Institutions/Employment
- STScI Service Activities (Under Construction)
- Education
- Scientific Expertise (Under Construction)
- Conflicts of Interest (Under Construction)
- Message Subscriptions

SMO: Lee, Blacker OED: Richon, Bertch, Comer OPO: Lussier, Godfrey

Pathfinder Project: Integrating Proposal Review Workflows

<https://profile.stsci.edu> can provide foundation for customized portal similar to my.nrao.edu.



 National Radio Astronomy Observatory

Dashboard Proposals Data Processing Obs Prep Helpdesk **Profile**

Hi, Janice | [Sign Out](#)

Thursday 09 October 2014

Help

Options

- [Dashboard](#)
- News & General Information
 - Information for Astronomers
 - Documentation
 - Release Notes
 - Policies
- My Information
 - My Data

DASHBOARD

Web Browser

We recommend using the Firefox web browser for the Proposal Submission Tool (PST).
Warning: there are problems uploading files to the PST with Safari.

User Accounts

Please remember to update your user profile, especially if you have moved to a new institution.
Do not create a new account.

Telescope News

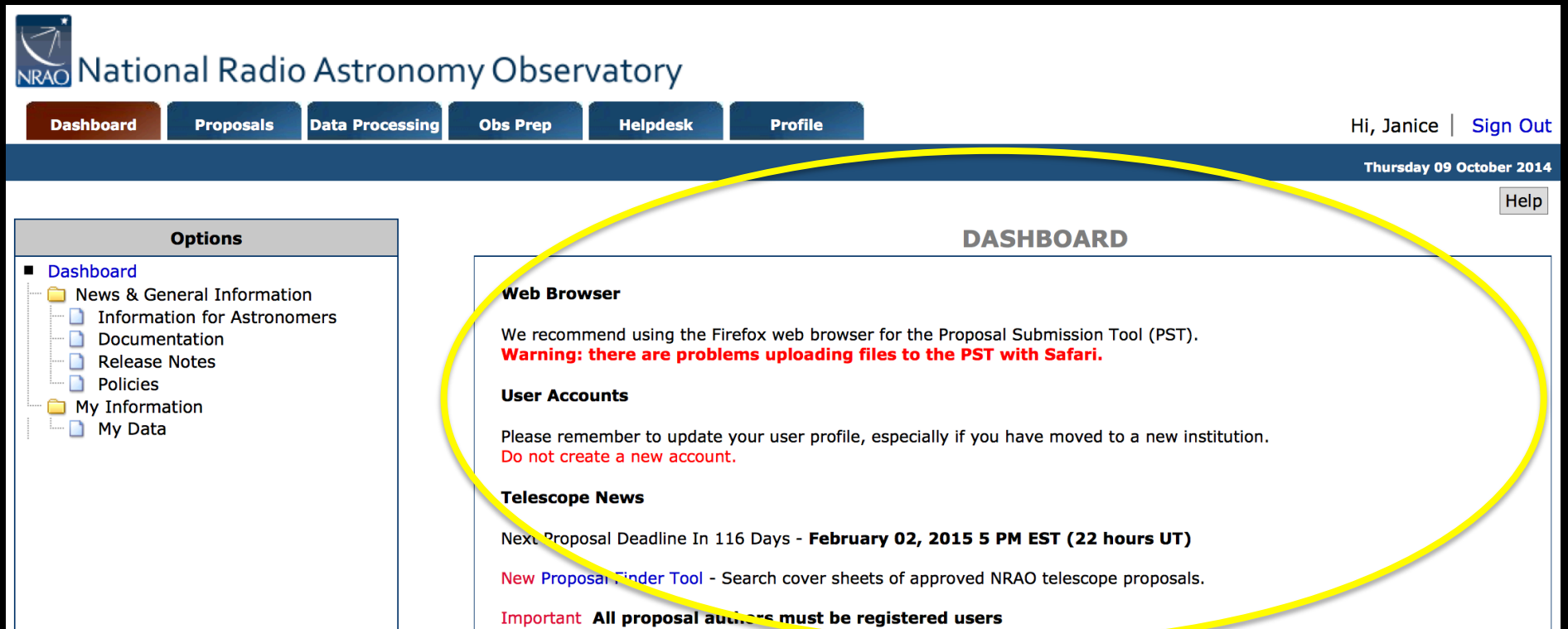
Next Proposal Deadline In 116 Days - **February 02, 2015 5 PM EST (22 hours UT)**

[New Proposal Finder Tool](#) - Search cover sheets of approved NRAO telescope proposals.

Important All proposal authors must be registered users

Pathfinder Project: Integrating Proposal Review Workflows

<https://profile.stsci.edu> can provide foundation for customized portal similar to my.nrao.edu.



The screenshot shows the NRAO National Radio Astronomy Observatory user interface. At the top, the NRAO logo and name are displayed. Below this is a navigation bar with tabs for Dashboard, Proposals, Data Processing, Obs Prep, Helpdesk, and Profile. The user is logged in as Janice, with a 'Sign Out' link. The date is Thursday 09 October 2014. A 'Help' button is in the top right corner. On the left, an 'Options' sidebar lists links for Dashboard, News & General Information, Information for Astronomers, Documentation, Release Notes, Policies, My Information, and My Data. The main content area, titled 'DASHBOARD', contains several sections: 'Web Browser' with a recommendation for Firefox and a warning about Safari; 'User Accounts' with a reminder to update the profile; 'Telescope News' with a proposal deadline notice and a link to the New Proposal Finder Tool; and an important note that all proposal authors must be registered users.

NRAO National Radio Astronomy Observatory

Dashboard Proposals Data Processing Obs Prep Helpdesk Profile

Hi, Janice | [Sign Out](#)

Thursday 09 October 2014

Help

Options

- Dashboard
- News & General Information
 - Information for Astronomers
 - Documentation
 - Release Notes
 - Policies
- My Information
 - My Data

DASHBOARD

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Telescope News

Next Proposal Deadline In 116 Days - **February 02, 2015 5 PM EST (22 hours UT)**

[New Proposal Finder Tool](#) - Search cover sheets of approved NRAO telescope proposals.

Important All proposal authors must be registered users

Next: Try basic customized dashboard/newsfeed based on user attributes to streamline communications with panelists and panelist workflow.

We invite:

General feedback on HST user support.

Discussion of the portal concept.

Features of other portals that might be appropriated should we develop an ST user portal.

*Integrating Science Services for Observers:
Beginning a **Dialog** with the STUC*

October 2014

Janice C. Lee (Science Mission Office)

Extra slides

Pathfinder Project: Integrating Proposal Review Workflows

TAC Panelist Section Tool v1.0 (beta) for Cycle 23 Testing

Person Search Builder

The person search builder allows for the creation of multiple search filters that can be saved and reused when creating new searches later.

Available Search Filters

AGN (366)

California (1241)

ESA (3185)

PI Cycle >19 (2671)

planets (493)

Database Search Tool

Panelist
Management
Tool

TAC Panel **TEST**

HST 22 Phase I Details

TAC Panel List— 1 of 17 selected [New Panel](#)

Name	A/I/D	Chair	SMO Manager (SPG)	Ad
<input type="checkbox"/> Executive Committee				
<input checked="" type="checkbox"/> AGN/QSO1	7/0/0	Prochaska, Jason X.		
<input type="checkbox"/> AGN/QSO2	6/0/0	Weinberg, David		
<input type="checkbox"/> Cosmology1	9/0/0	Forster Schreiber, N. M.		
<input type="checkbox"/> Cosmology2	7/0/0	Pope, Alexandra		

TAC Panel Members — Showing 8 of 142

[Add One](#) [Add Multiple](#) [Refresh List](#) [Show Filter](#)

Panel	Person	Institution	PhD Year	Gender	Funding Agency	Sci Cat	Status	Role	C
<input type="checkbox"/> AGN/QSO1	Prochaska, Jason X.	UC Santa Cruz					Accepted Chair		A
<input type="checkbox"/> AGN/QSO1	Di Matteo, Tiziana	Carnegie Mellon Univ.					Accepted Member		
<input type="checkbox"/> AGN/QSO1	Gezari, Suvi	Univ. of Maryland					Accepted Member		
<input type="checkbox"/> AGN/QSO1	Kulkarni, Varsha	U of South Carolina Res F					Accepted Member		

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