



STScI | SPACE TELESCOPE
SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

JWST Cycle 2 Call User Survey Results

Macarena Garcia Marin



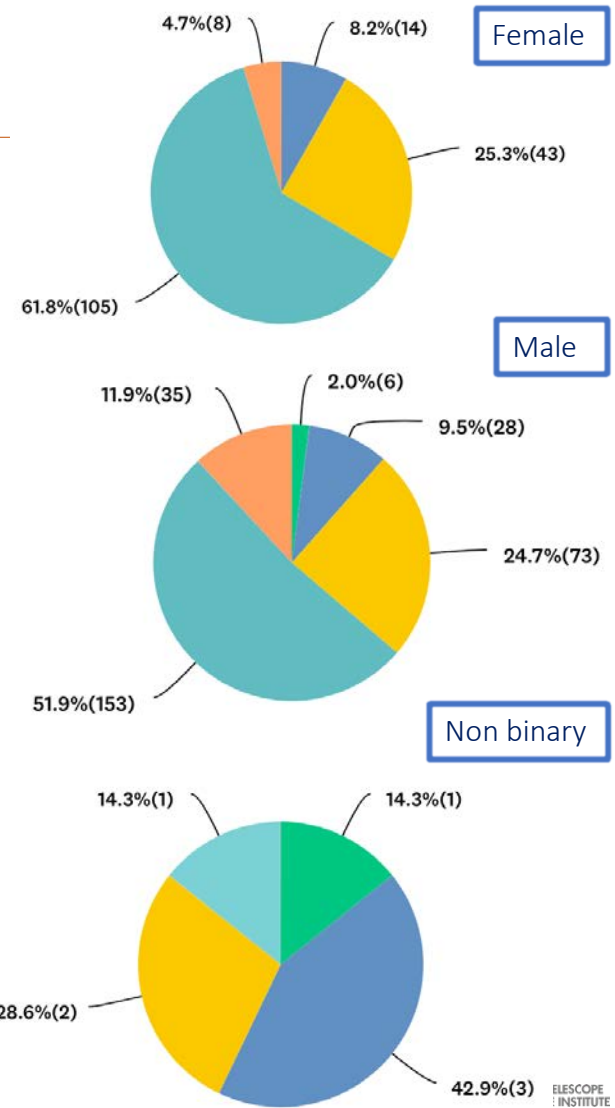
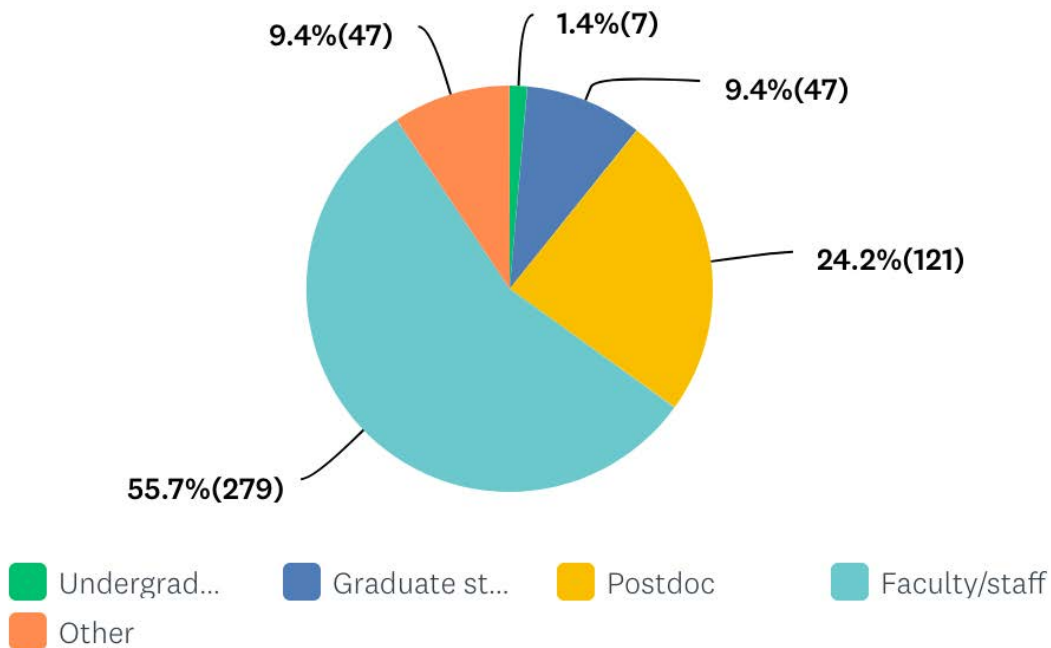
User Survey Overview

- 24 questions implemented in Survey Monkey
- Survey run time: February 13th through March 7th 2023
- Advertised on JWST Observer news, social media, email list
- 501 total responses, 25% increase w.r.t. Cycle 1 user survey
- Average questions completion rate: 73%
- Average completion time: 12 min
- 82% responded to an email; 18% responded via Observer News item or social media (Twitter/FaceBook)



Basic Demographics I

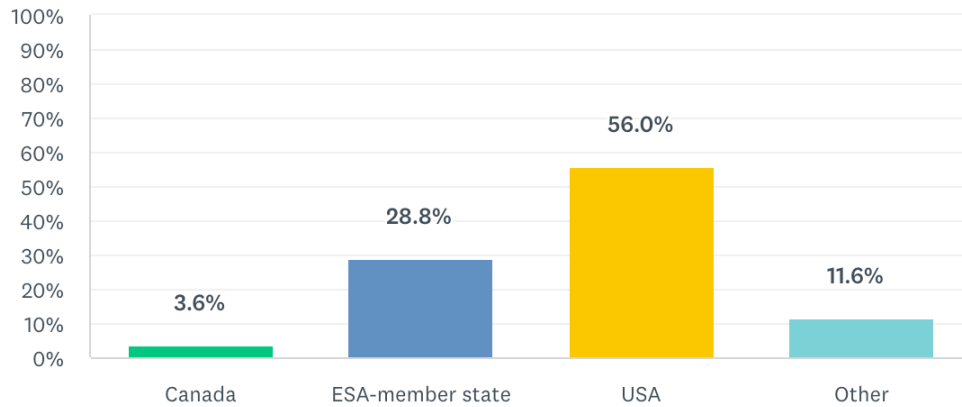
- As in previous surveys, there is a bias towards participation of senior staff (see backup slides)
- Slight uptick on the participation of graduate students



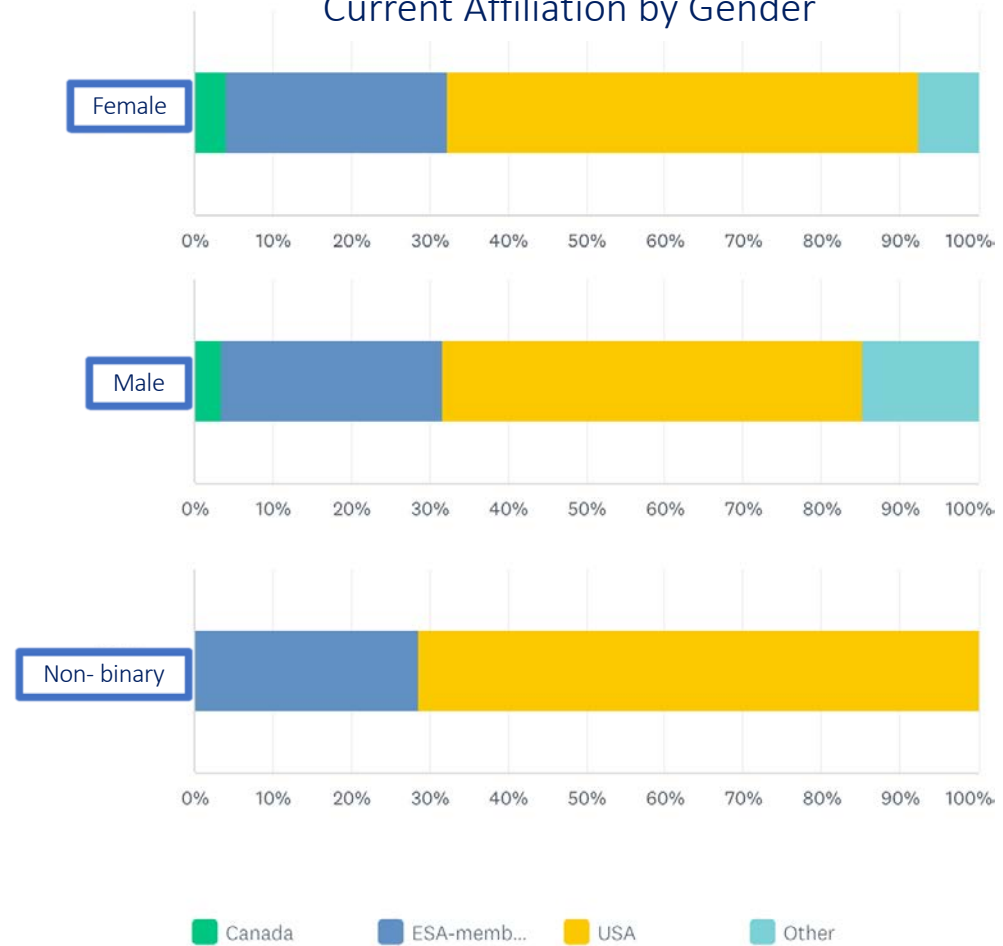


Basic Demographics II

Current Affiliation



Current Affiliation by Gender

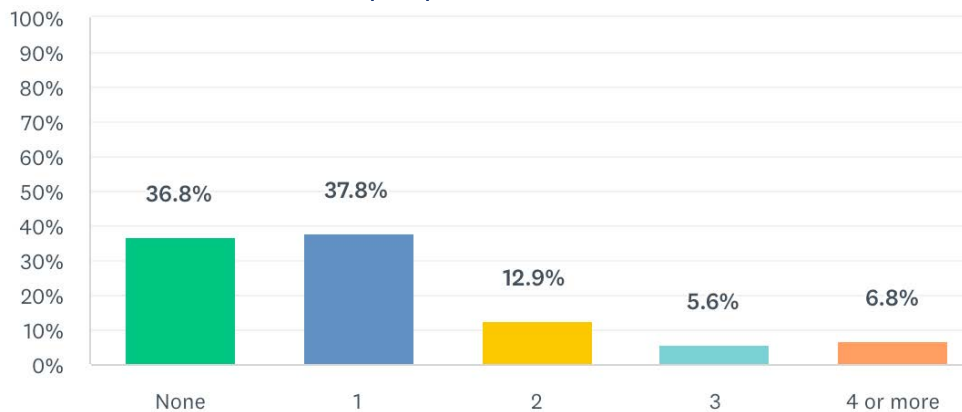




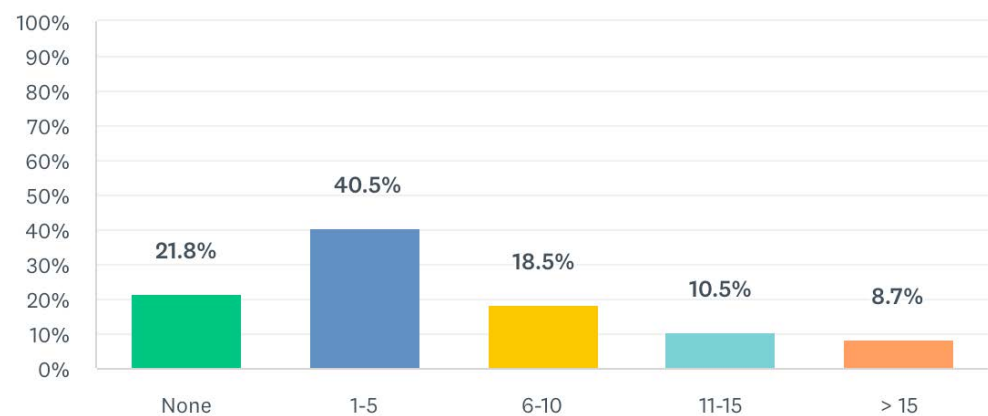
Basic Demographics III

- Most responders submitted 5 or less proposals, with a significant tail on both sides of the distribution.
- Reasons not to submit proposals
 - 22% proposal submission process was too complicated
 - 19% concerns about oversubscription
 - 13% JWST not relevant for their science
 - 33% investigator team did not have enough time

Number of proposals submitted as PI or co-PI

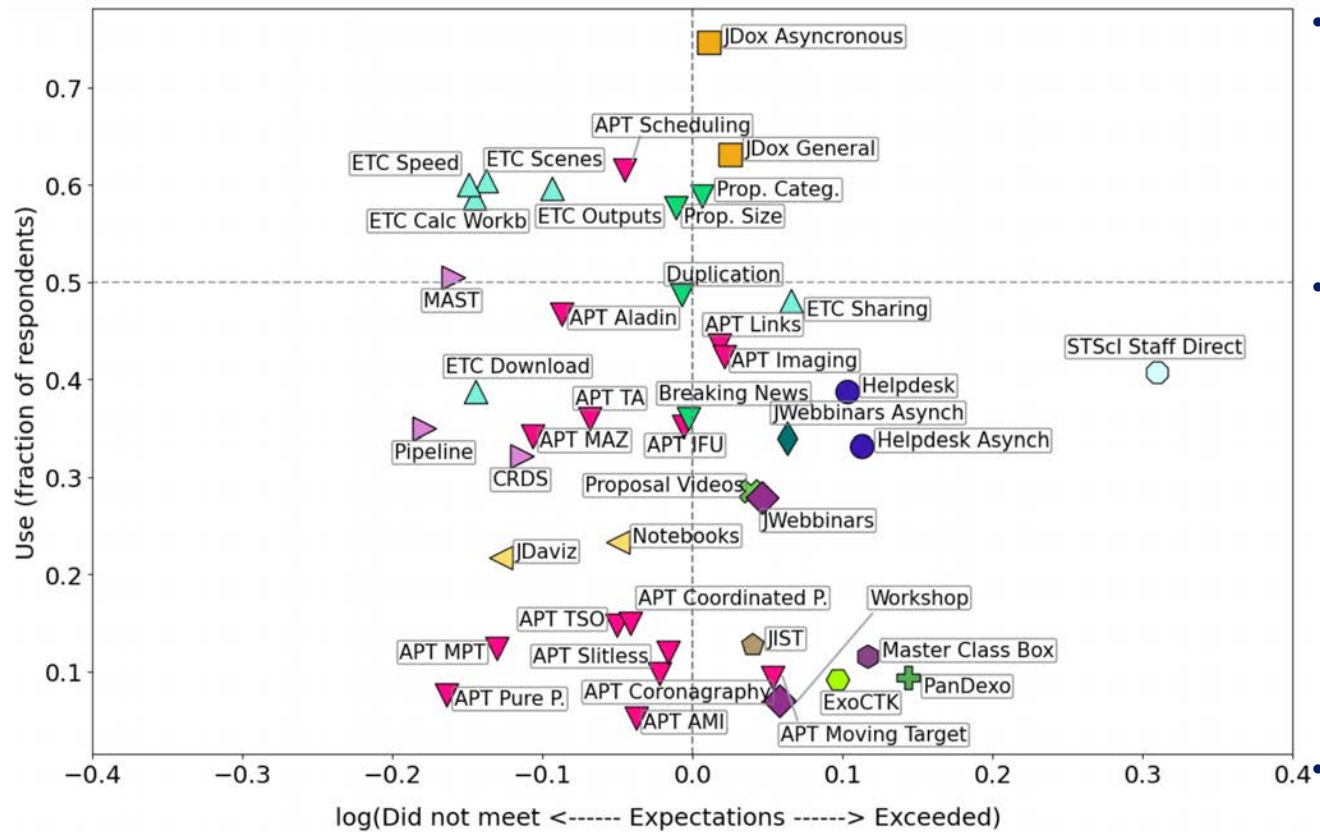


Number of proposals submitted as co-I





Proposal Tools and Features I



Usage vs. rating diagram

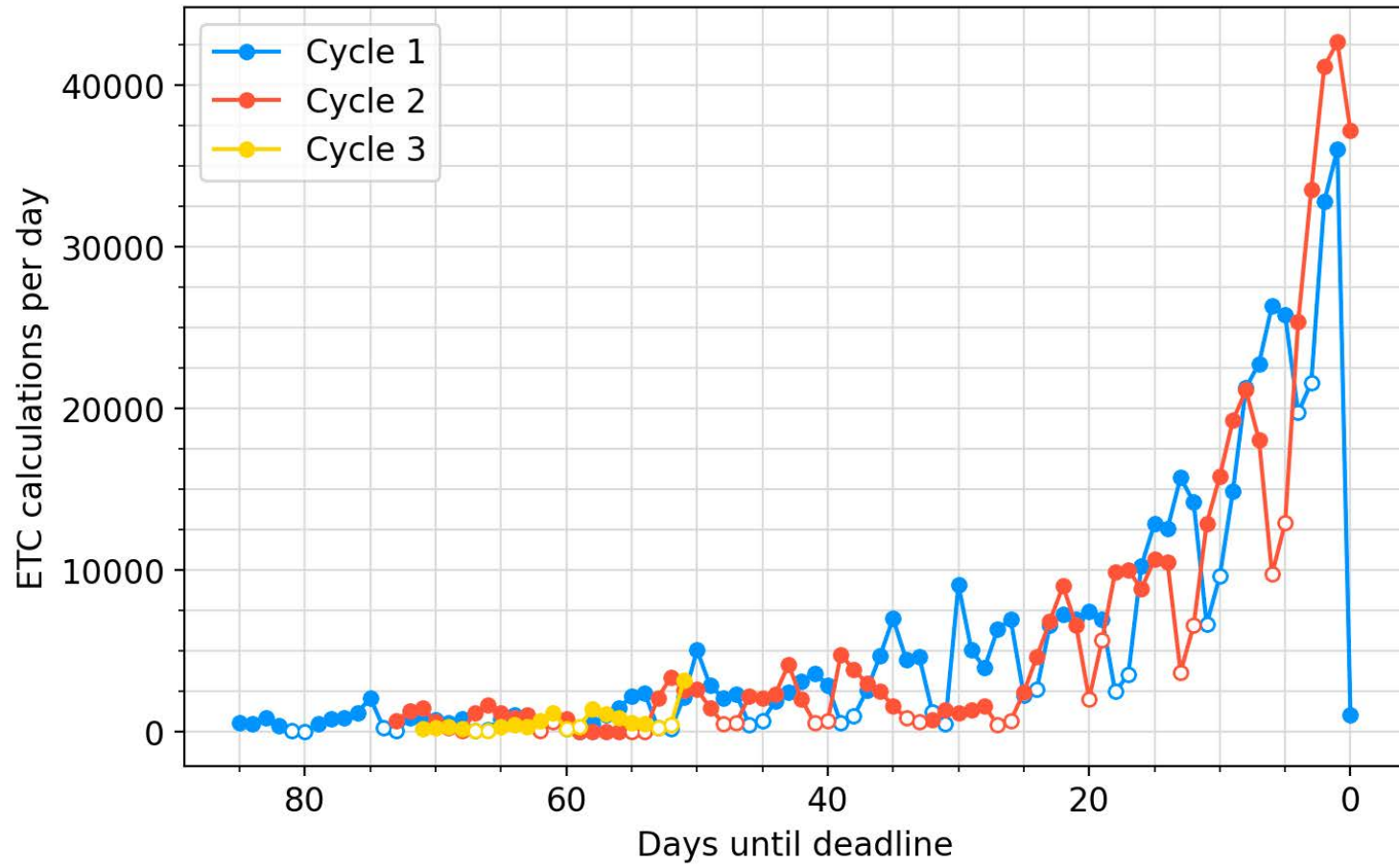
- High marks received by:
 - STScI Staff
 - Helpdesk
 - JWebinars
 - Master Class
 - Pandexo, ExoCTK
- Areas in need of attention
 - Some users find issues with the ETC:
 - ETC-related speed/responsiveness, outputs format and downloads
 - Pipeline (see D2P presentation by Jeff)
 - Some areas of APT/proposals definitions:
 - Pure parallels, MPT, Aladin, visit planner can be slow, especially for moving targets
 - Some features of MAST (e.g. ease of use, duplication checking)
- Some tools/features have a small user base:
 - E.g. JIST, PanDexo, APT Pure parallels, Coronagraphy



Recent Improvements addressing users needs (I)

The following improvements have been implemented to support the call for proposals

- [ETC 3.0](#)
 - Improvements to the IFU background strategies and addition of the IFU aperture photometry strategy.
 - Sensitivity based on most recent in-flight performance
 - Several other usability improvements and instrument-specific updates
 - Ongoing effort on the code; developers always looking into the possibility of refactoring code to improve speed.
 - Changes to the Process Scaling Manager will make any recurrence of the runaway and subsequent slowdown that happened during the run up to the Cycle 2 deadline extremely unlikely.





Recent Improvements addressing users needs (II)

APT

- NIRSpec MSA Planning Tool:
 - Faster for large catalogs
 - Enabled masking of nominal-range wavelength cutoffs
 - Fixed a problem with large weights in the MOS source catalogs. Previously they only go up to ~1 million or and they were treated using integer format, which didn't have enough dynamic work with the values properly. The weights of sources are summed for all sources in a plan, and the math was also being done in integer. Now using long format.
 - Add checkbox for Fixed Slit + MOS, which makes it easier to plan the Fixed Slit target in a selected slit
 - Allow multiple primary candidates to occupy the same shutter, which MPT would try to prevent in earlier versions
- The Proposal Constraint Generator (PCG) is more robust; it now has doubled the number of processors to support the APT Visit Planner thus improving the APT visit planer processing time
 - A caching mechanism has been implemented, so that PCG can skip many of the schedulability calculations when the input is unchanged
- The Moving Object Support System (MOSS) server process within PCG for moving targets can't really be sped up, so the process will still take time. There should be less slowdown due to PCG being used by other APT users
- Aladin workarounds for loading an image for a second target and how to view target groups, are documented in a [knowledge database article](#). Aladin is an external interface which makes it hard to fix some of the reported issues.



Recent and Ongoing Improvements addressing users needs

JDox

- Additional pages have been updated with on-orbit information and most recent best practices
- Improved documentation for Pure Parallels, in consultation with Pure Parallels PIs
- Ongoing effort to update the Example Science programs

JWebinars

- They are well rated events that can be followed live or asynchronously
- The [new series](#) starts in September, with the first 3 JWebinars focusing on MAST usage, APT and ETC

Archive

- The new JWST-specific search form expected to be rolled out early October
- Scott Fleming gave a demo during the last JSTUC meeting
- Once it goes live, none of the other ways of accessing JWST data are going away.
- Upon release and until more features added this new JWST form will be an option for users
- If there is no desire to switch to the new form, observers can continue relying on existing workflows and scripts.
- A test version will be used on the first September JWebinar to start training the community



Improvements under consideration

STScI is considering the following improvements (to be prioritized within available resources informed by community needs)

- APT as a web interface
- Improve the MAST JWST duplication checking interface/workflow
- ETC
 - A “lighter” version of the ETC/upgrades to JIST (e.g. multiple exposures and line sensitivities).
 - Further improve stability, speed, and responsiveness of the ETC
 - Further improve the ETC output files
- Improve visibility of ancillary tools
- Further improve JDOx navigation, search and discoverability

A new User Survey will go out after the Cycle 3 call for proposals



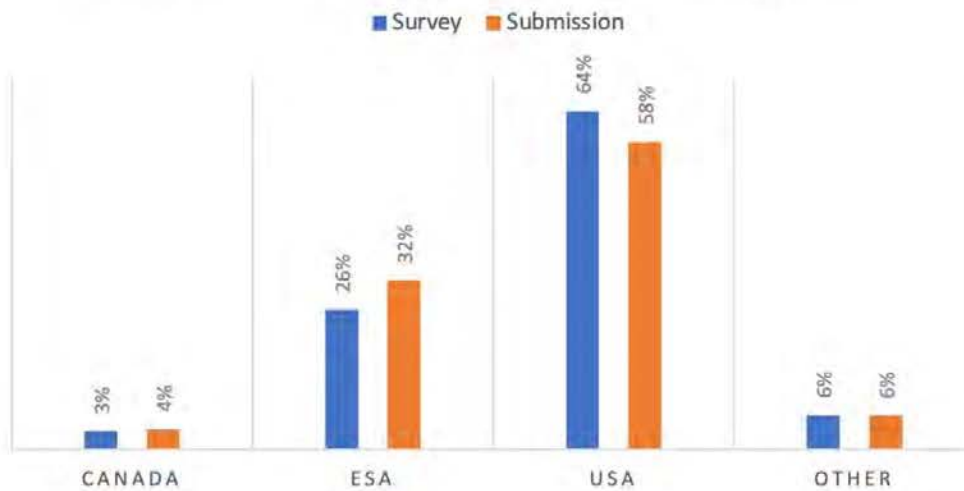
Backup Slides

Demographics from the Previous User Survey

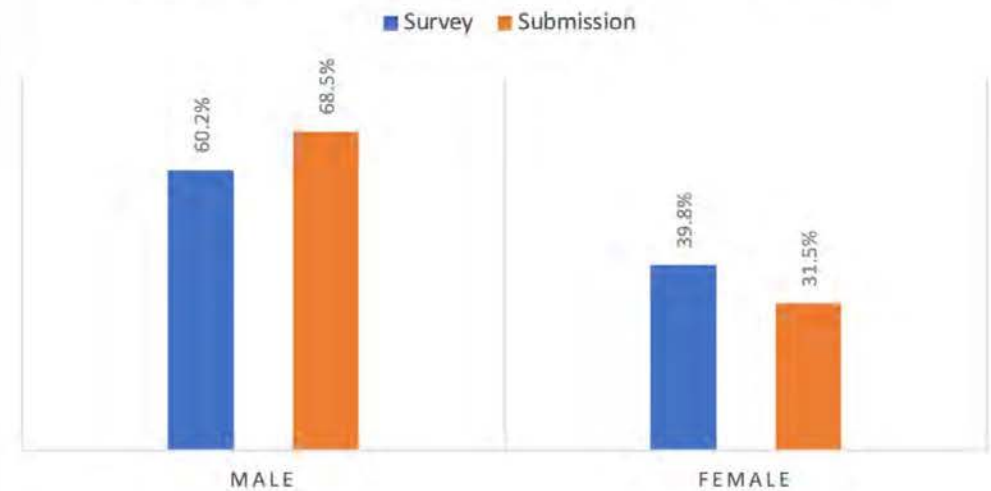


Basic demographics I

SURVEY VS. PROPOSALS / COUNTRY



SURVEY VS. PROPOSALS / GENDER



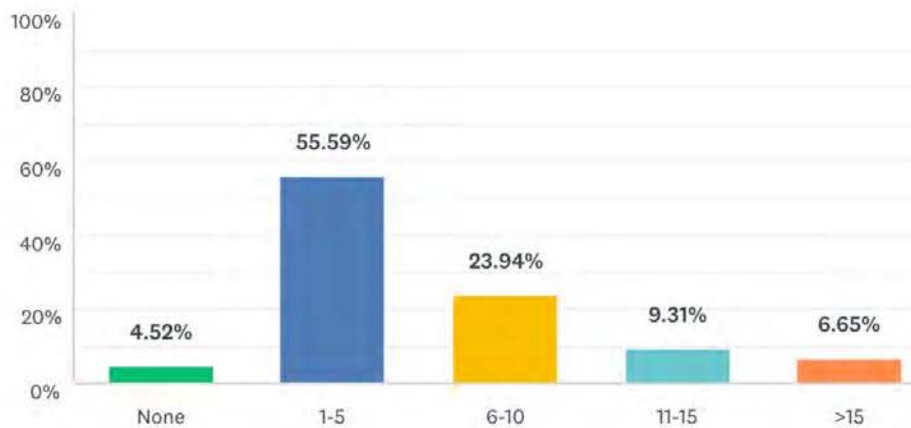
Does the survey sample the submission pool? True for country of residence, maybe a small increase of women respondents in the survey.



Basic demographics II

- Most respondents submitted less than 6 proposals, but with a significant tail.
- The survey is biased toward senior staff (roughly consistent with previous surveys).

number of proposals submitted as PI or CoI



respondents by career stage

