STScI | SPACE TELESCOPE SCIENCE INSTITUTE

EXPANDING THE FRONTIERS OF SPACE ASTRONOMY

JWST GO1 Data Analysis Survey

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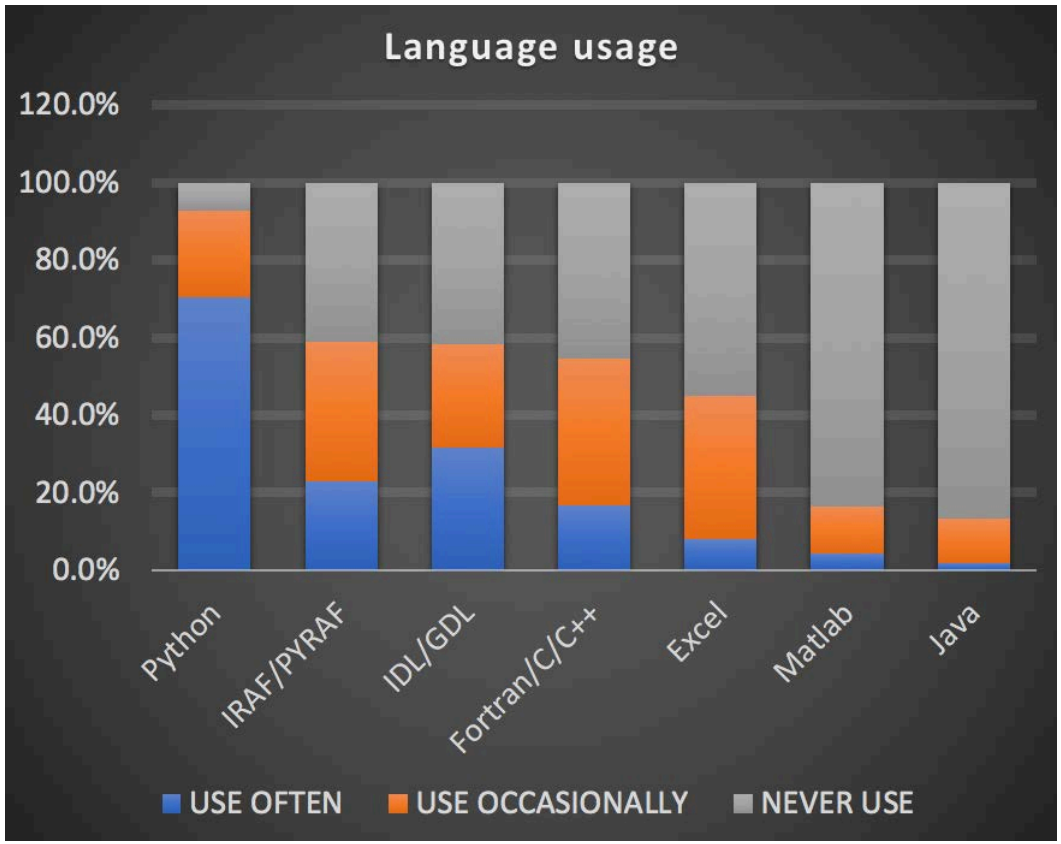
JSTUC - September 9, 2019

Basic statistics

- Survey run time: June 7, 2019 → August 2, 2019
- 504 total responses
- Average question completion: 82%
- Demographics:
  - 3 undergrads (<1%)
  - 58 grads (14%)
  - 95 postdocs (23%)
  - 242 faculty/staff (59%)
  - 13 other (3%)
- 85% of respondents are primary JWST data analysts (others rely on team members). 3% do not plan to analyze JWST at all…
- 88% responded to an email; 12% responded via social media (Twitter/FaceBook).
- Median time spent: 5m 2s.

Programming language usage

- Python most often used – only 8% never use it.
- But >50% use IRAF/IDL/Fortran+C. Even Excel is used occasionally by >40% of respondents.
- Comments mention R and Mathematica often.
- Also to a lesser degree Julia, SuperMongo, GILDAS/CASA/MIRIAD, Perl, Igor, …
- Clear generational evolution – low numbers of students+postdocs rely on IRAF (10%) or IDL (20%).



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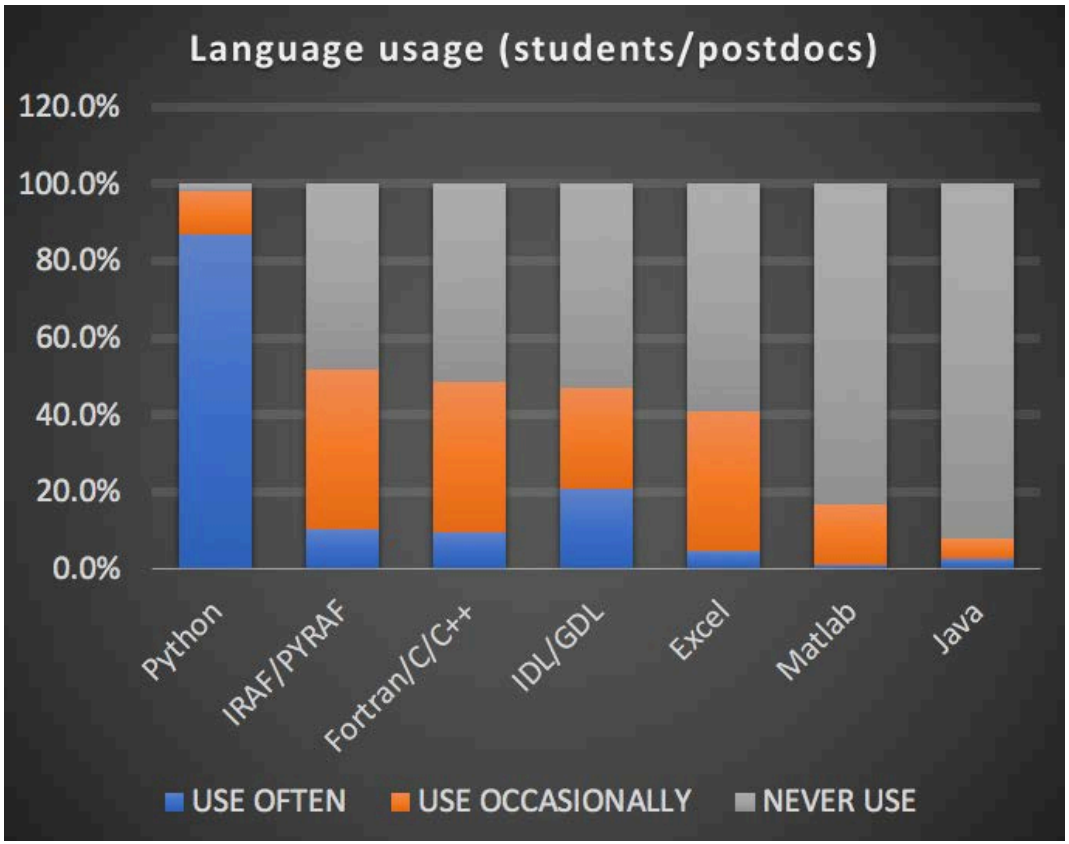
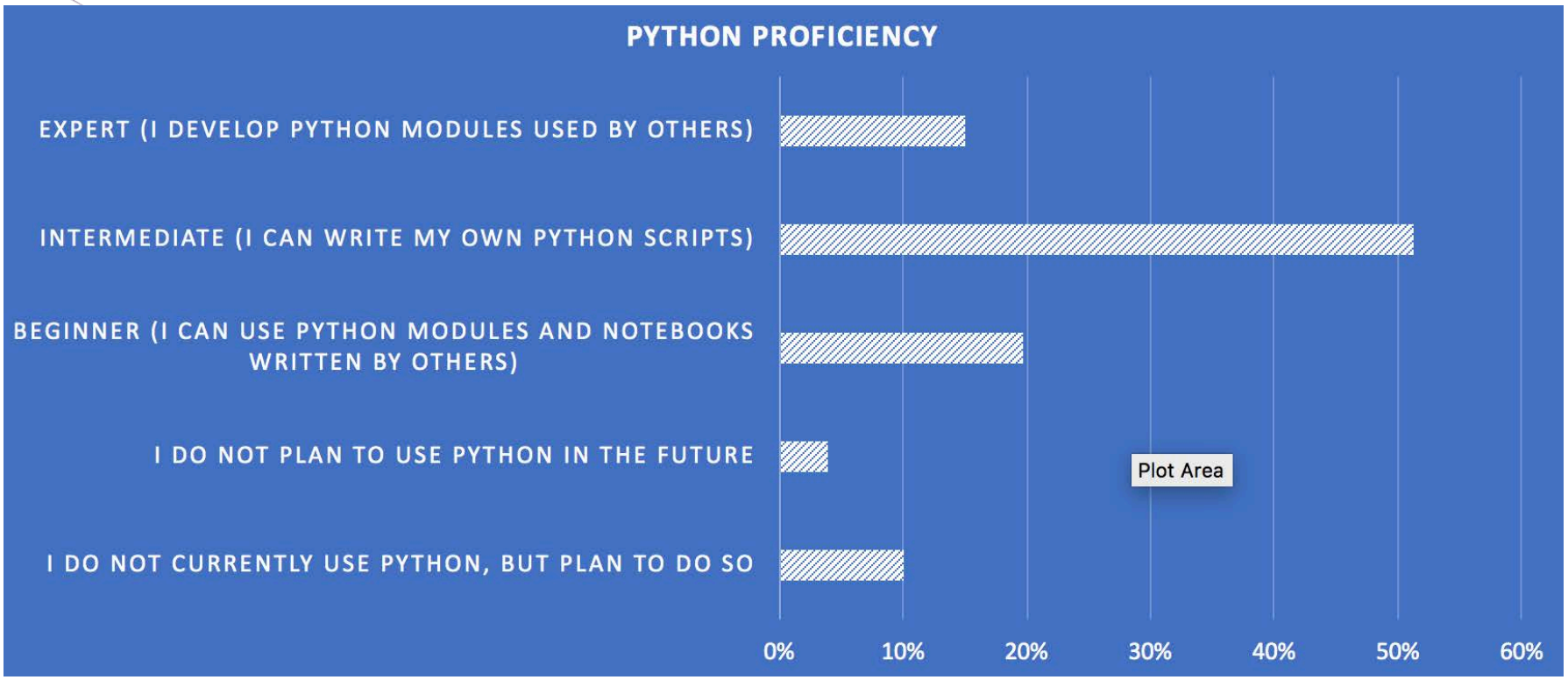
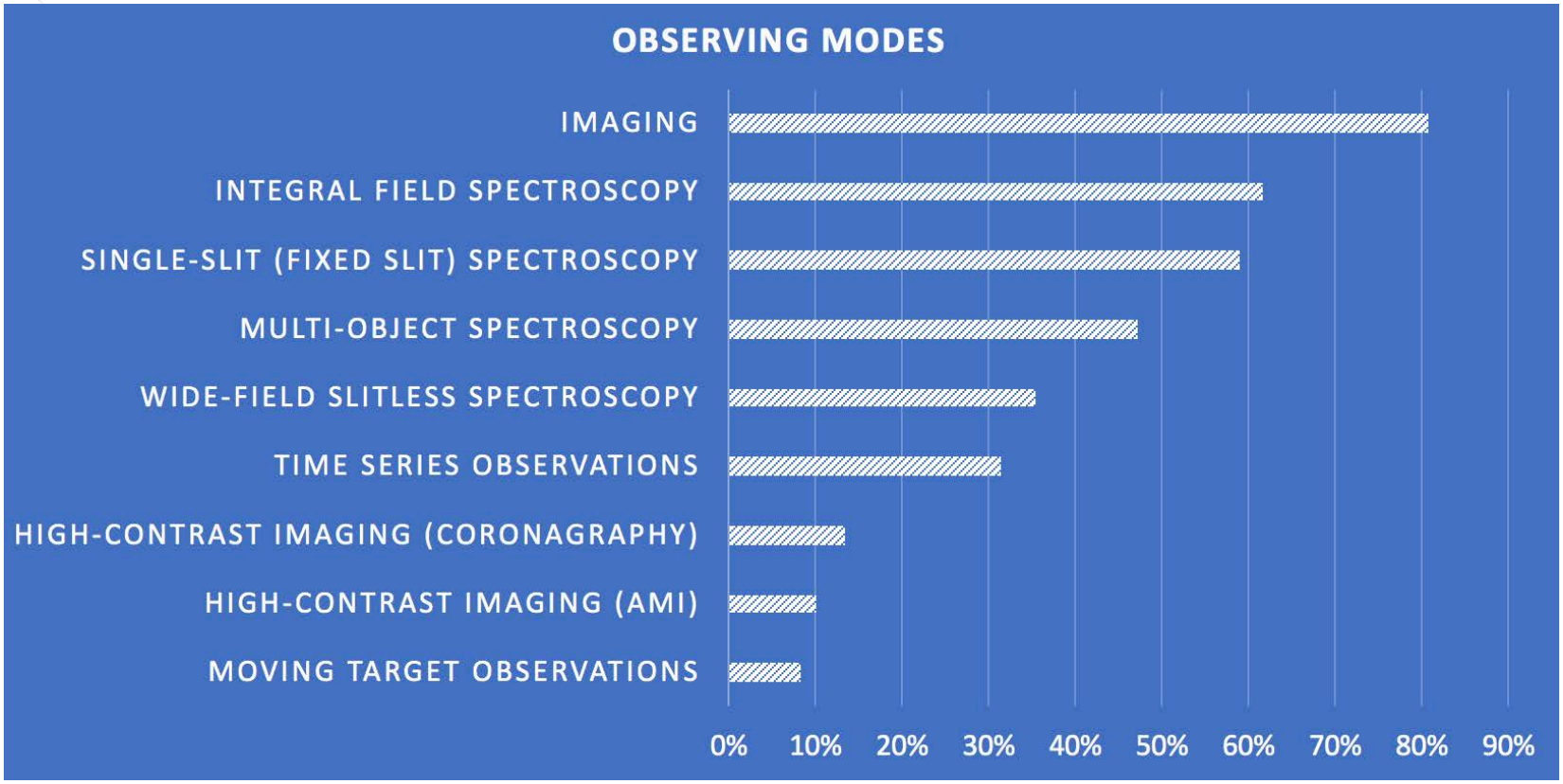


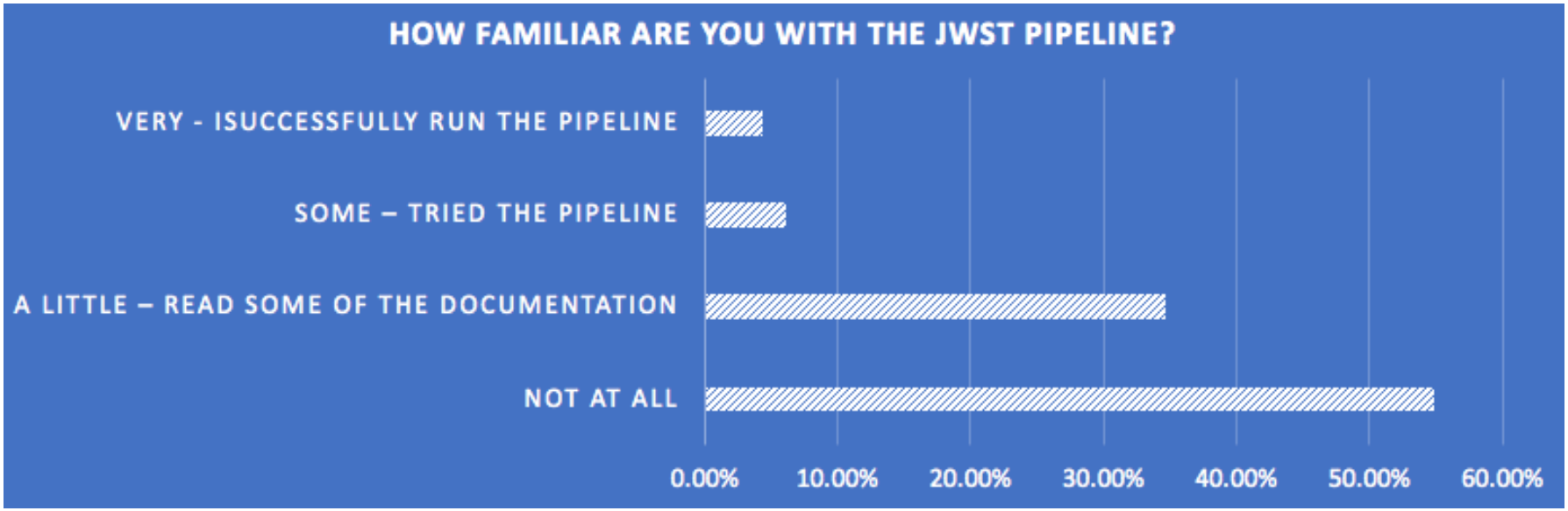
Python proficiency of respondents



Respondents' observing modes

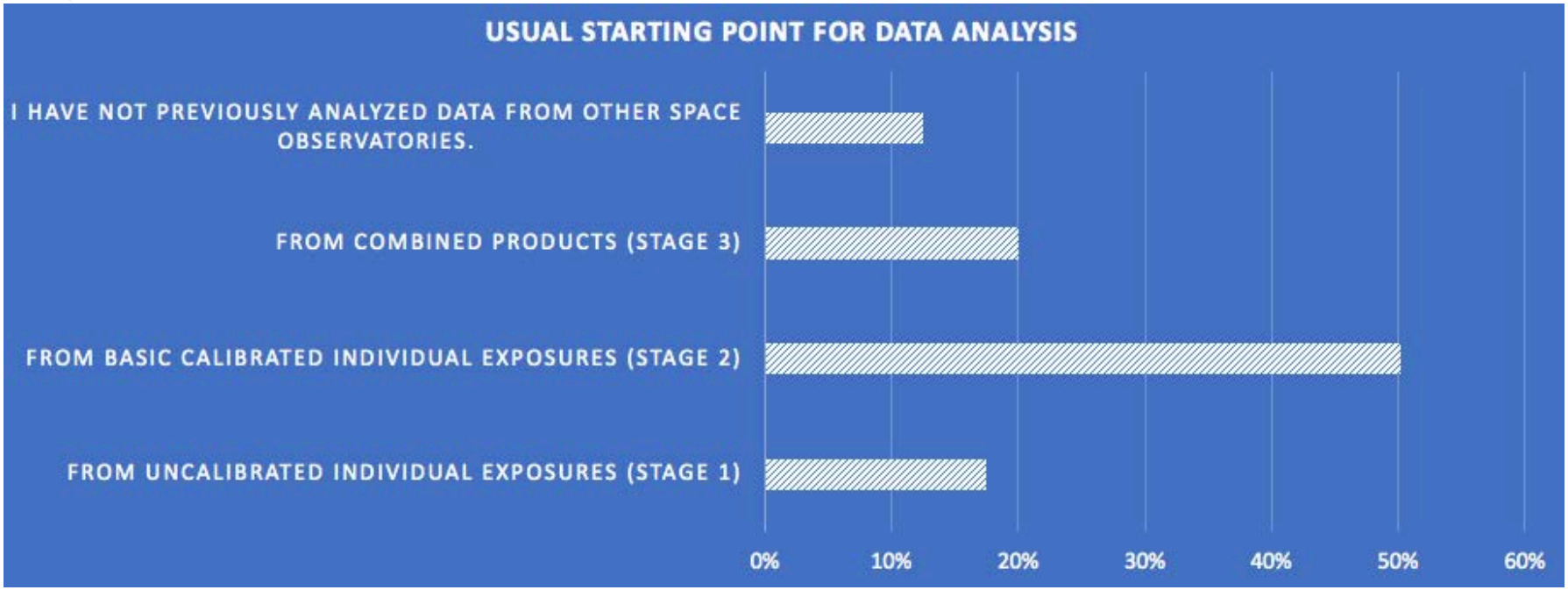


Familiarity with the JWST pipeline

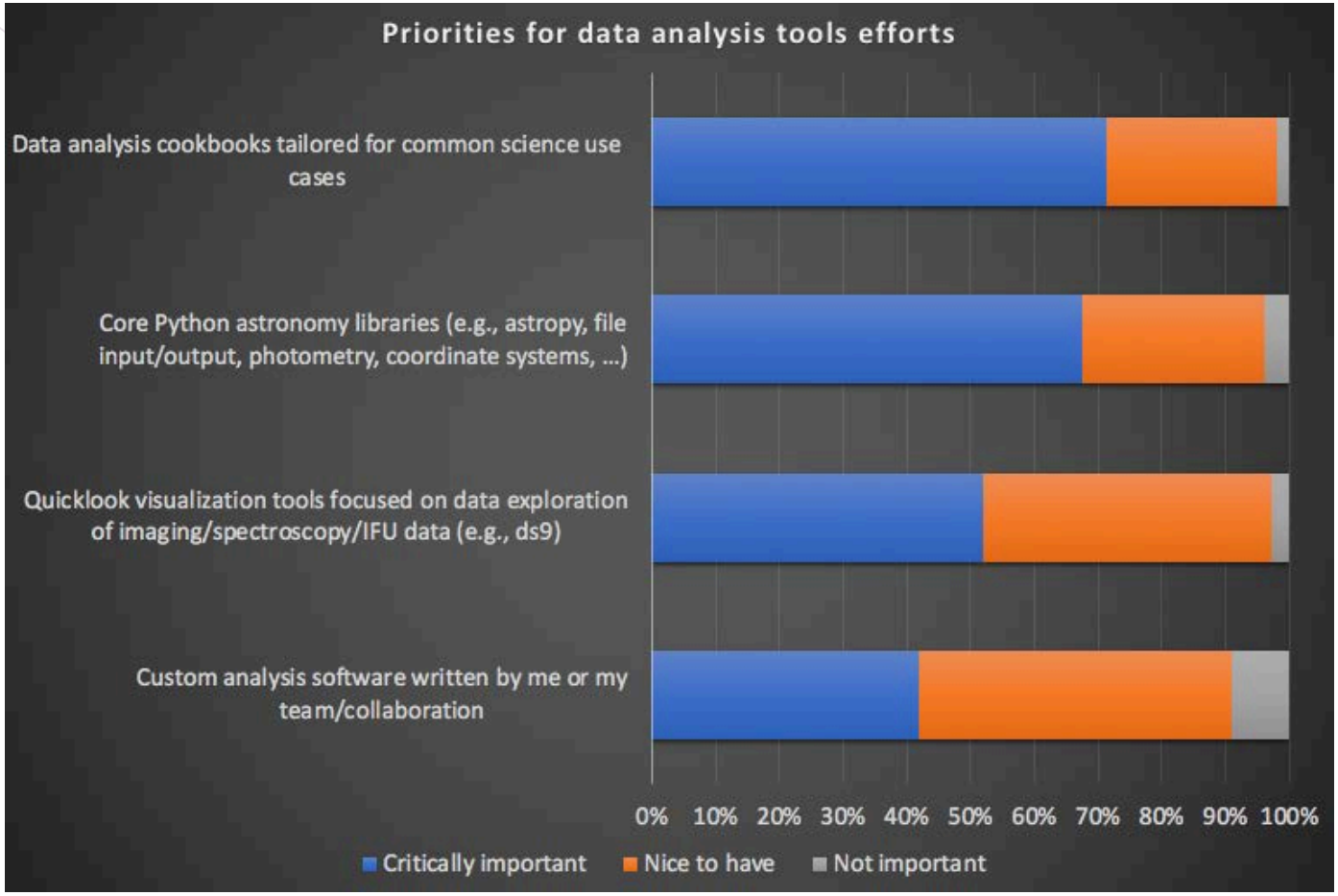


How to use training in JWST data analysis

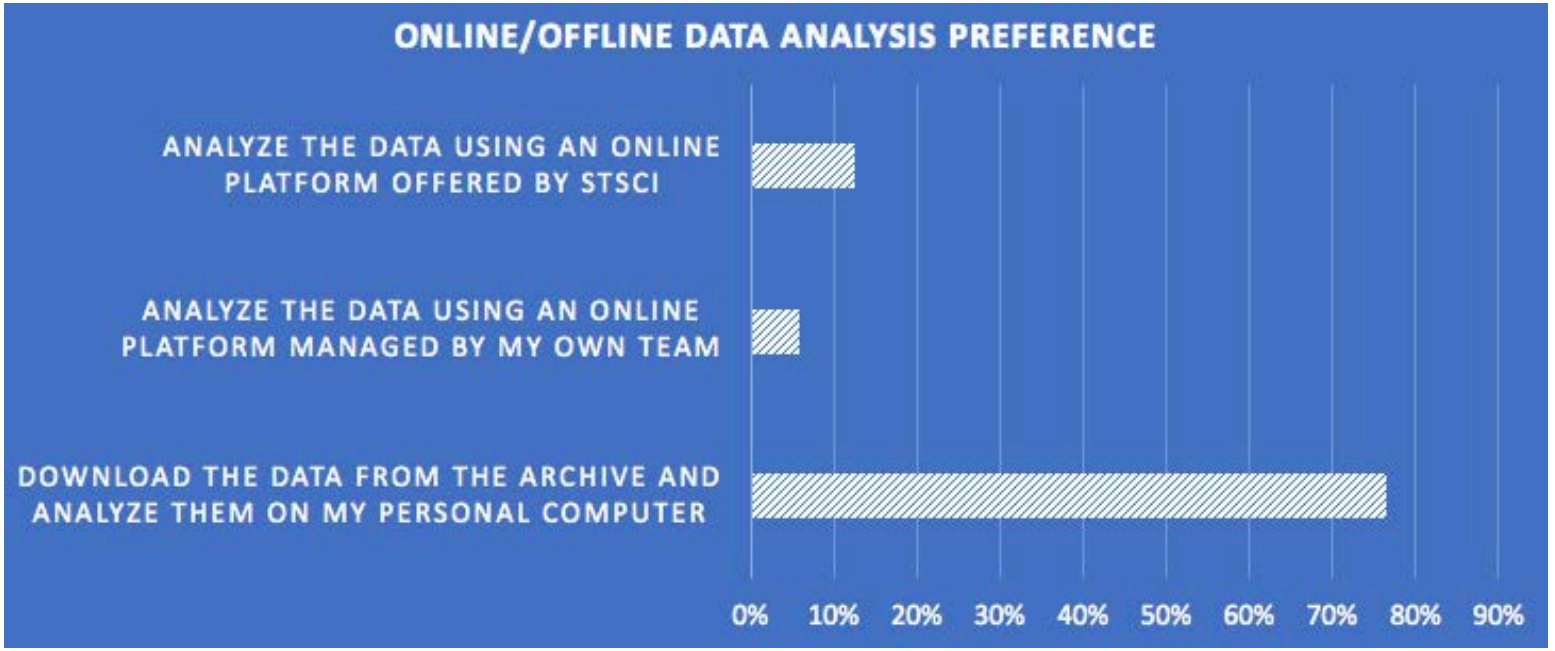
Expectations for highly processed data



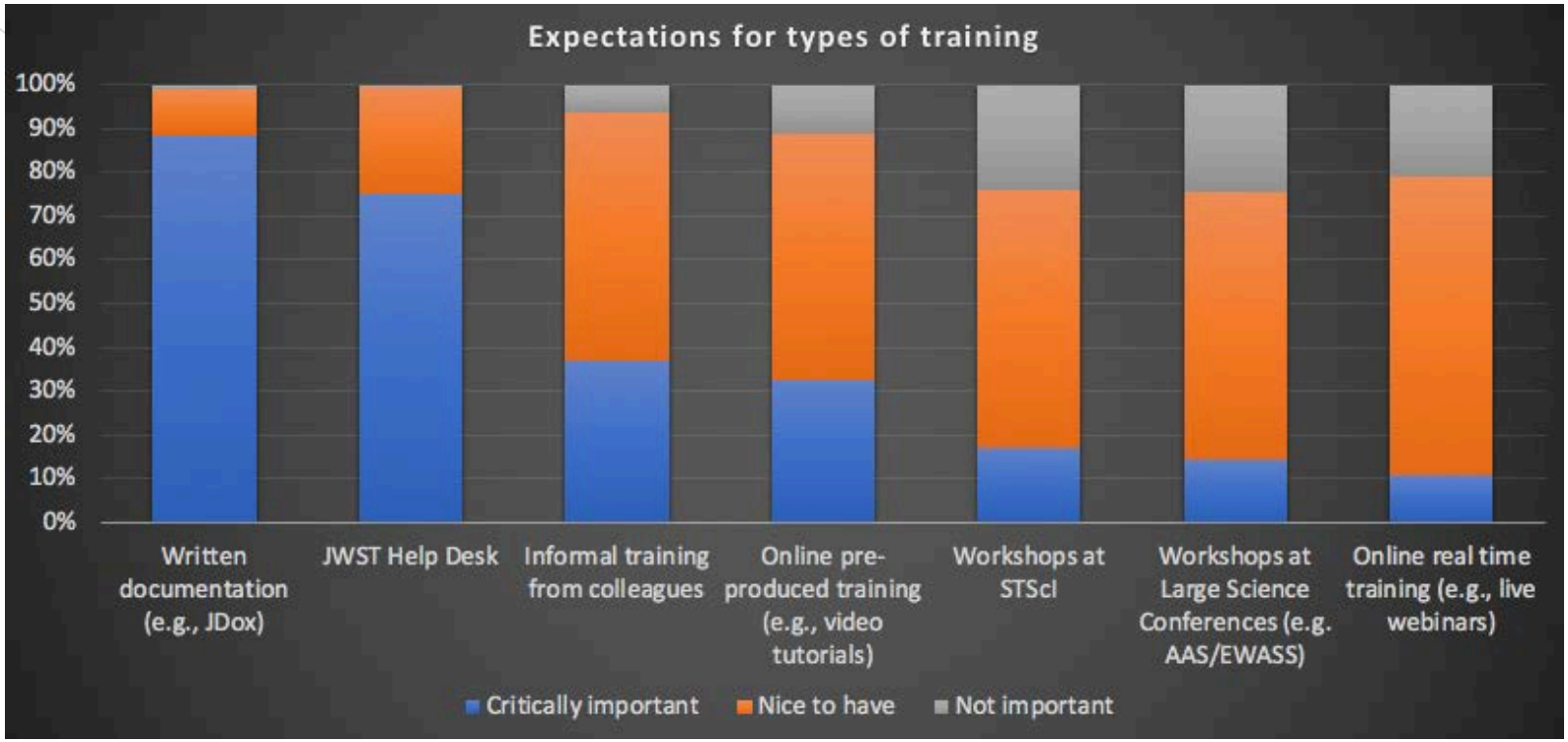
Priorities for data analysis tools development



Expectations for online analysis



Types of training



Preferred timing for data analysis training