



The FY 2015 Merit Review Report

National Science Board Meeting - 8/9/2016

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Office of Integrative Activities**



Report Overview

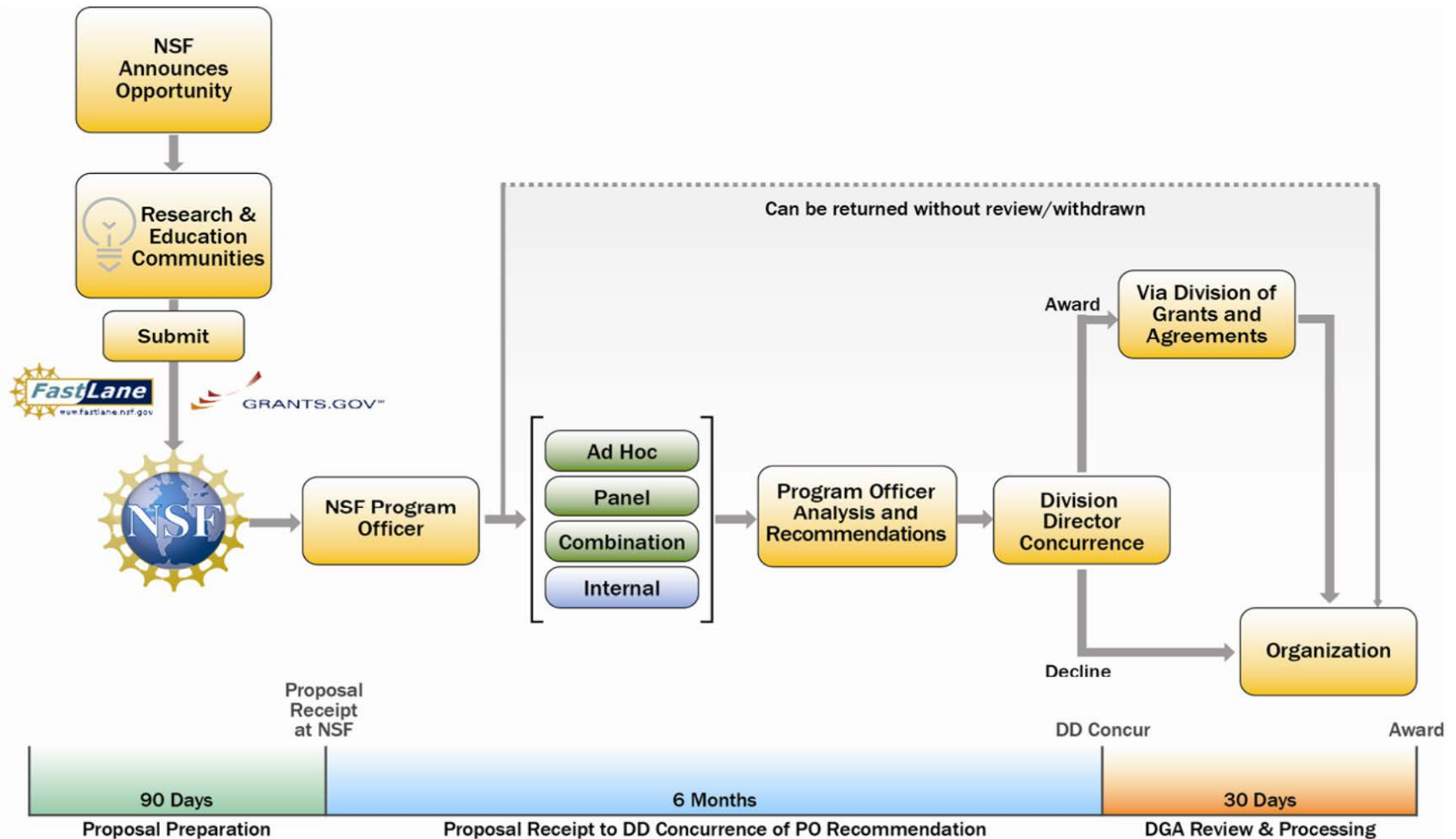
- Executive Summary
- Introduction
- **Proposal & Award Data**
- **Merit Review Process**
- Appendices

NSB 77-150 & 84-114

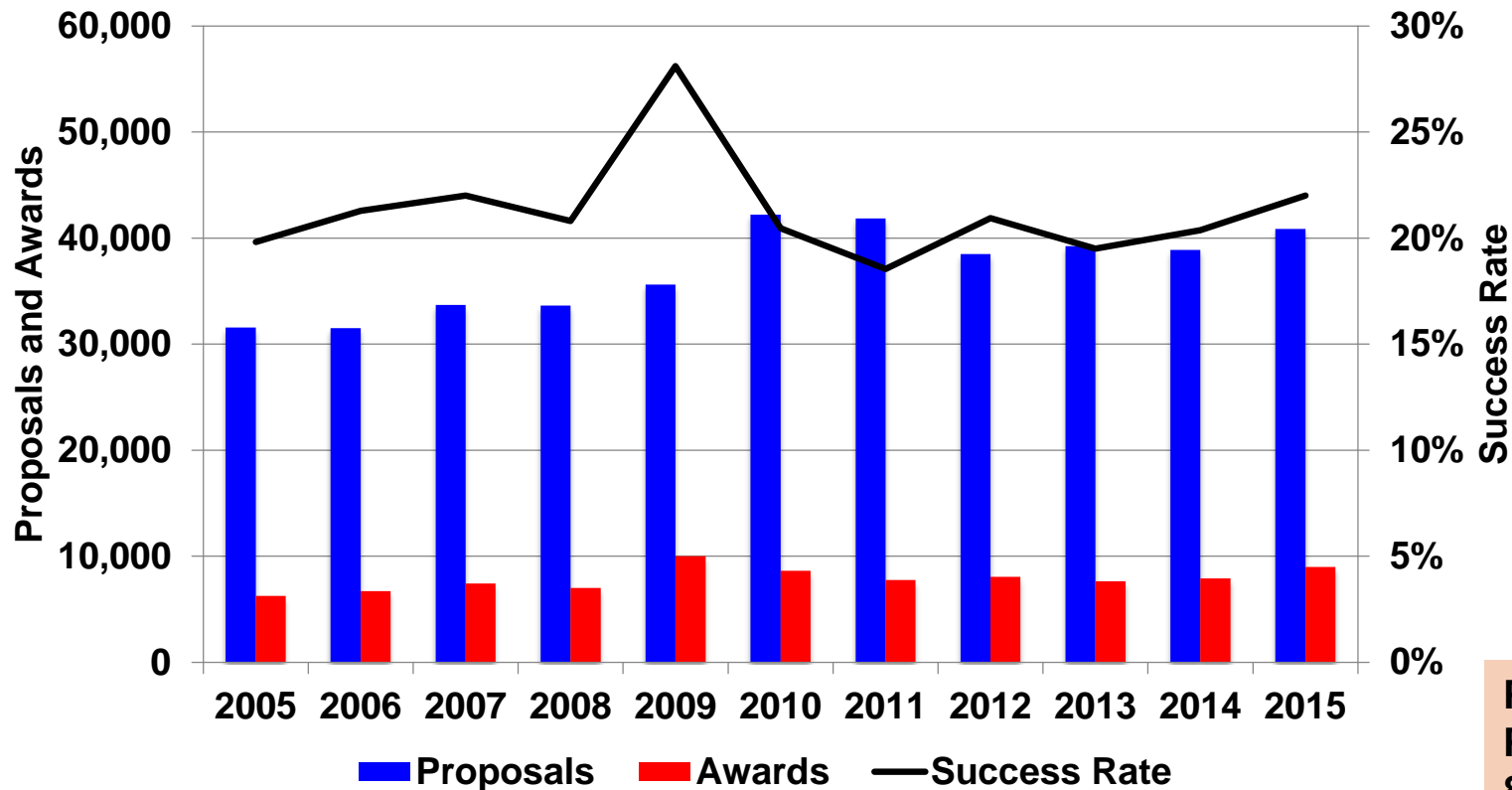
Notable elements

- Merit Review Pilots
- Summary of 2015 Merit Review Survey

NSF Merit Review Process



Research Proposals, Awards and Success Rate, by Fiscal Year

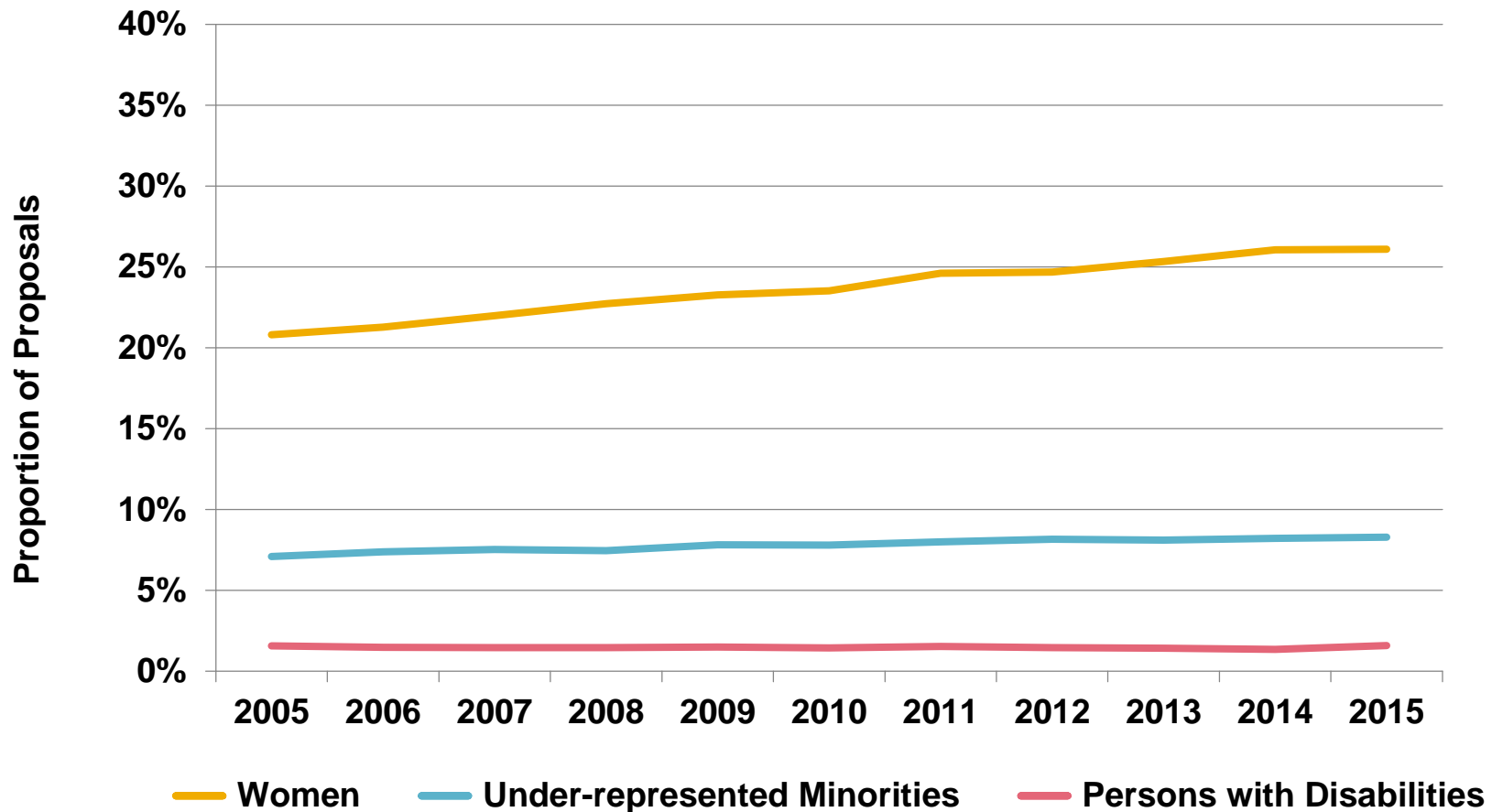


Preliminary
Proposals: 4200
80% IOS & DEB

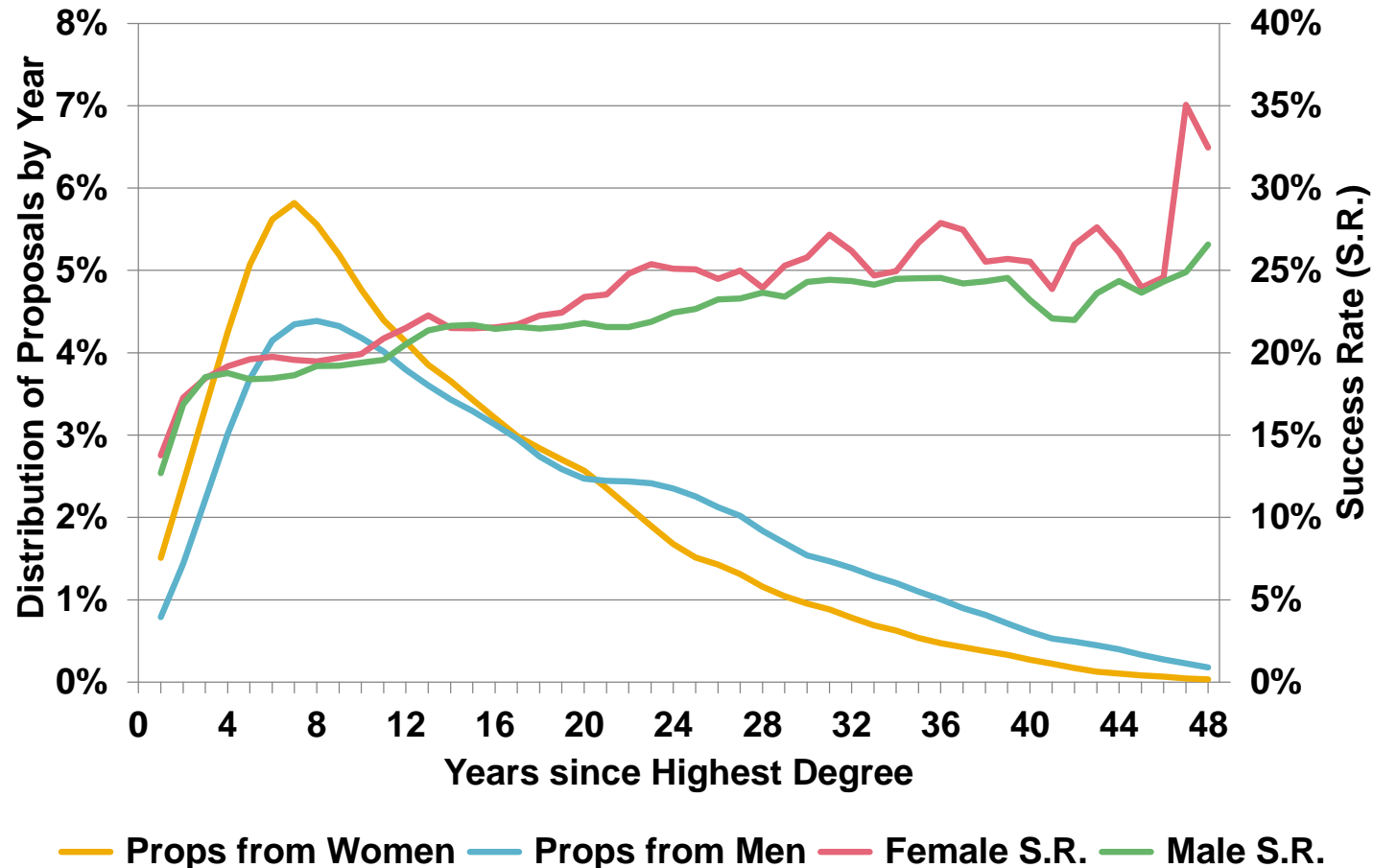
Research proposals and awards. (Excludes: centers and facilities, equipment and instrumentation grants, conferences and symposia, Small Business Innovation Research grants, Small Grants for Exploratory Research (through FY 2009), and education and training grants)

* FY 2009 and FY 2010 include American Recovery and Reinvestment Act awards.

Proportions of Proposals from various Demographic Groups

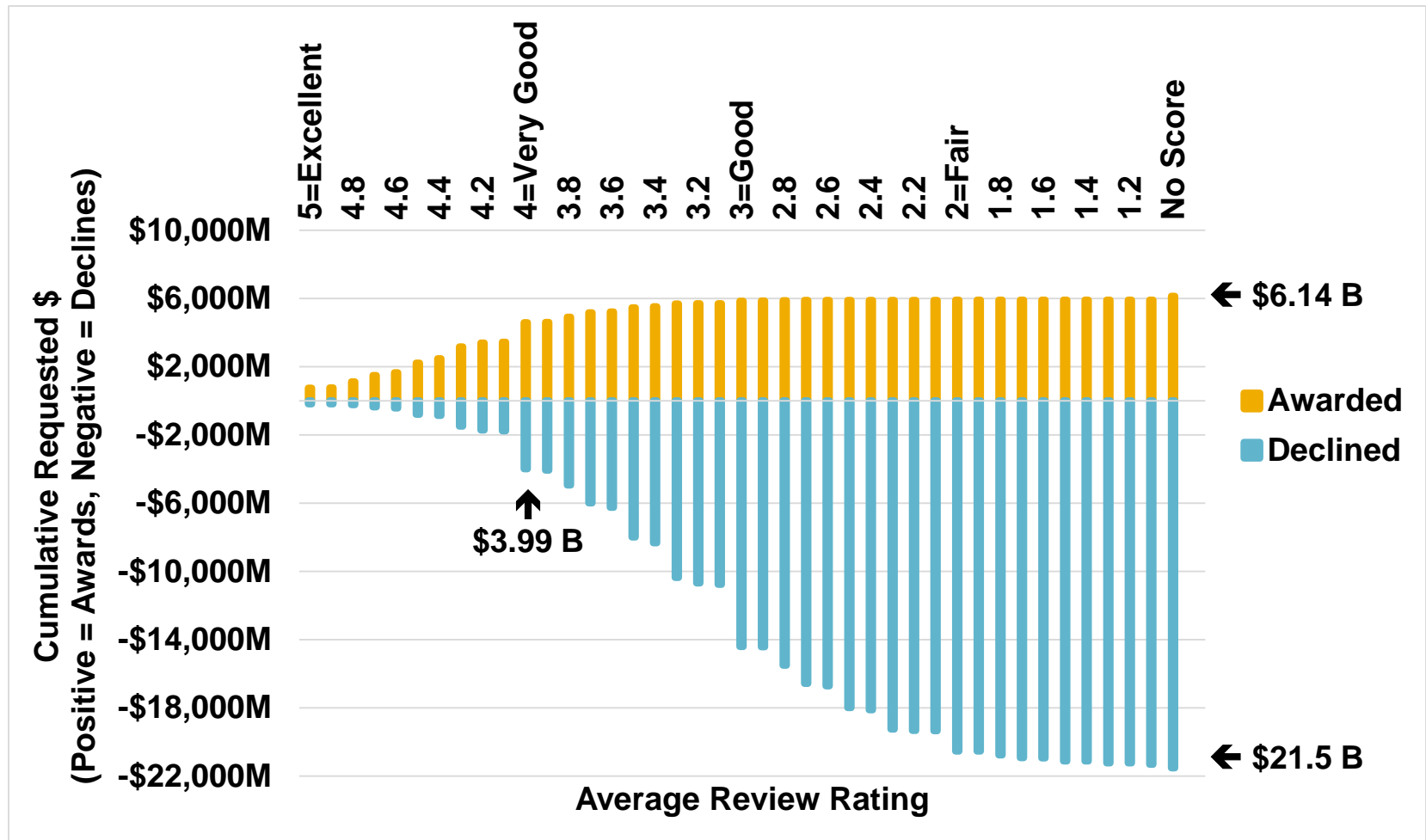


Research Proposals and Success Rates, FY 2012 – FY 2015, by Years Since Highest Degree and by Gender



Proportion of full-time faculty positions occupied by women STEM PhDs in 2013:
Junior: 44.9%; Senior: 29.5% [Source: Science and Engineering Indicators 2016]

Cumulative Requested Amounts for Awarded and Declined Proposals by Average Reviewer Rating, FY2015



Merit Review Pilot:

Impact of Eliminating Program Deadlines

Proposals received by EAR/IF before and after transition to no deadlines

Fiscal Year	2007	2008	2009	2010	2011	2013	2014	2015
Proposals	177	198	176	192	187	87	67	66

Proposals received by four EAR programs before and after transition to no deadlines in Spring 2015

	2013	2014	4/9/2015 to 4/9/2016
Geobiology & Geochemistry	203	214	83
Sed. Geol. & Paleobiology	214	217	119
Geomorphology	157	137	68
Hydrologic Sciences	261	237	97

Merit Review Pilot: College of Reviewers (COR)

Membership: ~100

Process:

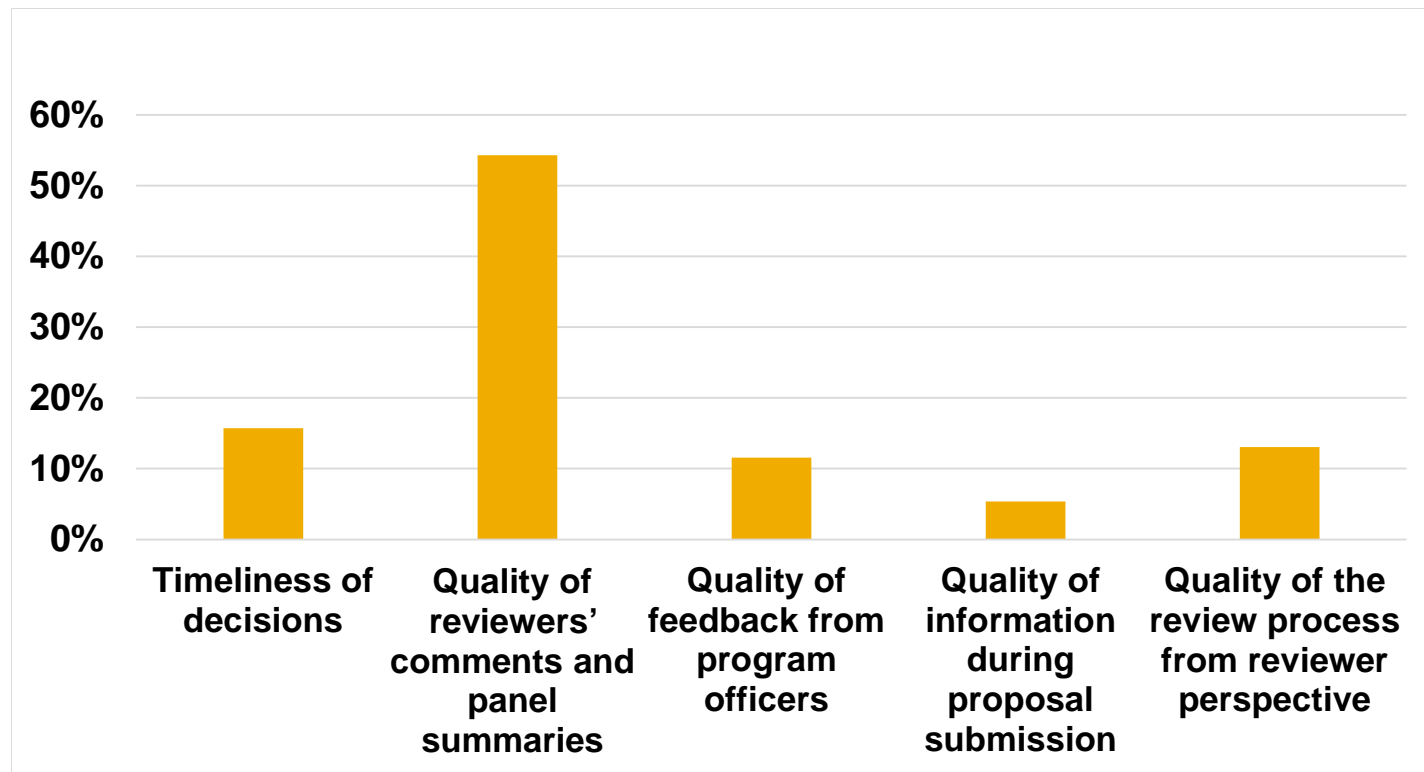
- Semi-annual review cycle
- 3 ad hoc reviews per proposal – COR enhances return rate
- Decline those without at least one E or 2 VGs
- Panel review for the remainder – better discussions

Assessment:

- **Panelists:** better discussions, better review quality
- **COR members:** all but one willing to continue
- **COV:** “seemed to provide a means of calibration for evaluating the proposals and therefore increased level of consistency in the reviews across proposals,” “should be continued “

Merit Review Survey (Fall 2015)

Q: Improving which **one** of the following factors in the merit review process will have the most significant effect in fostering the progress of science?



A: Improving the quality of reviews and panel summaries
(54% of just under 31,000 responses)

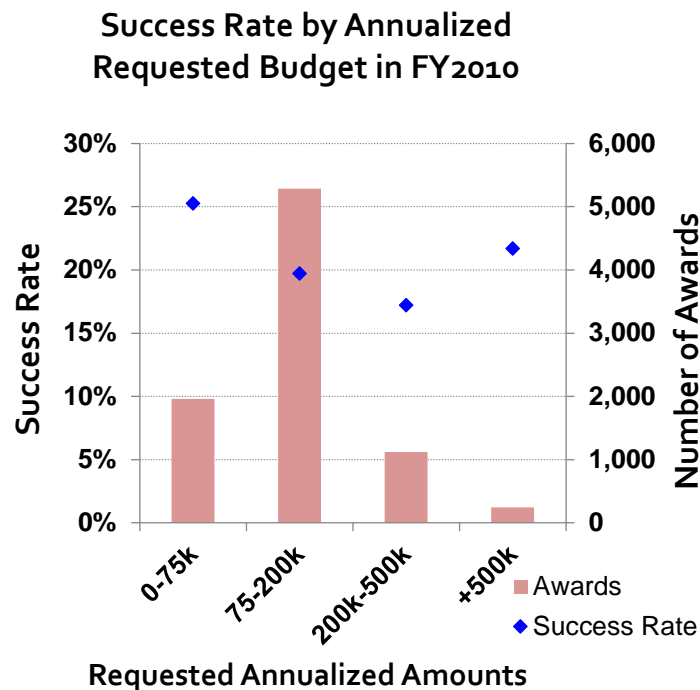
Acknowledgements

Beth Ann Velo and Tahir Rana, BFA/BD
Patrick Southern, OIA
Insight Policy Research

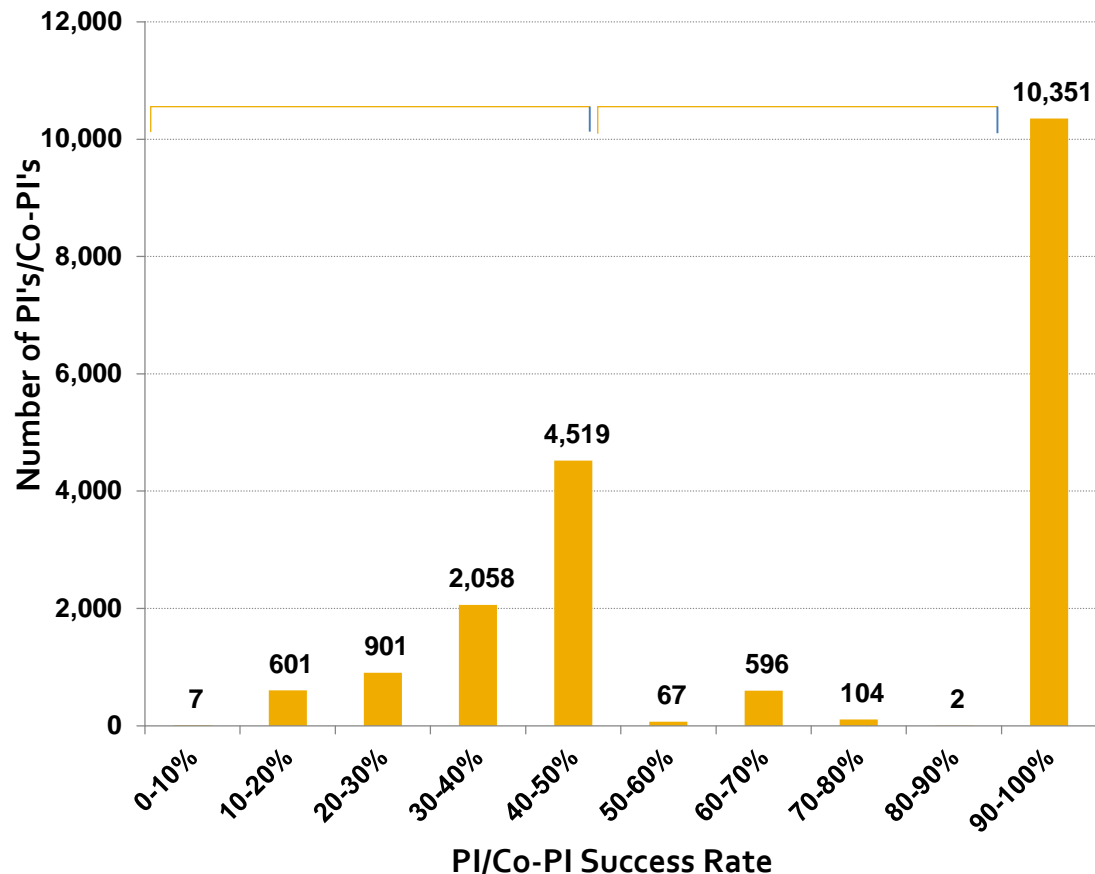
With thanks also to HRM, OD and the various programs involved in merit review pilots for additional data.

Backup Slides

Types of Success Rate - FY 2010



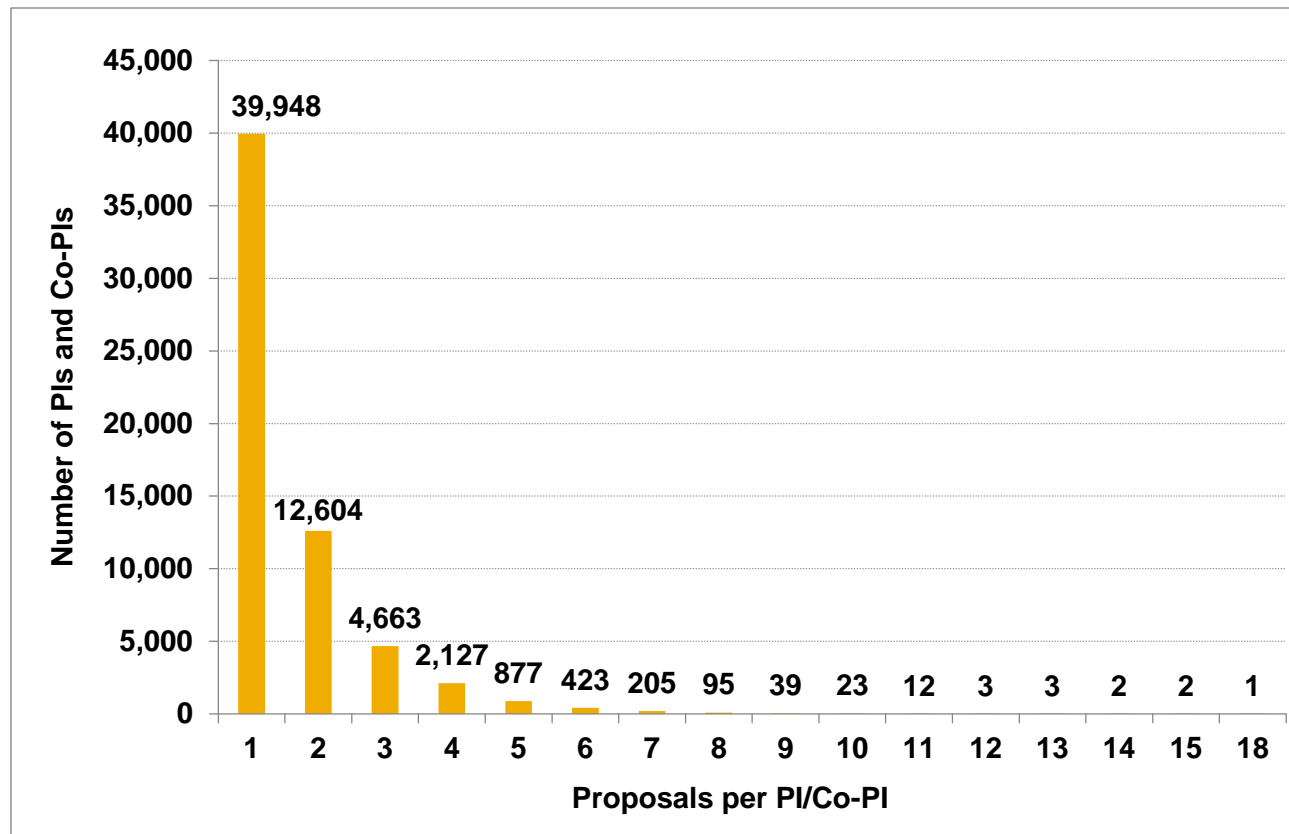
Success Rates of Successful PIs & Co-PIs in FY 2010



(The 41,822 investigators who did not receive an award are not shown.)

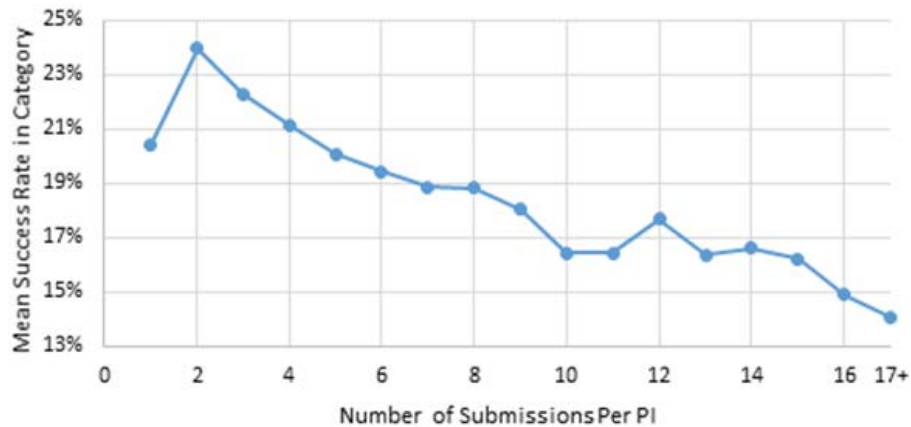
Proposals per PI/Co-PI - FY 2010

Numbers of PIs or Co-PIs who appeared on
1, 2, 3, ... proposals in FY 2010

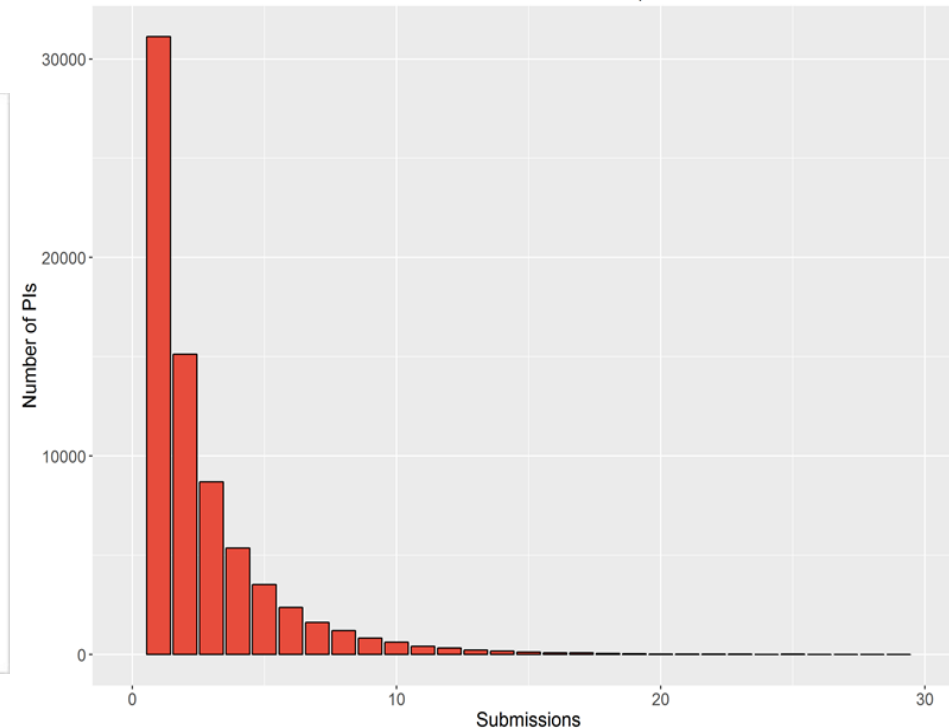


PI Success Rates - FY 2011-FY 2015

Mean Success Rate for PIs by Number of Research Grant Submissions, FY2011-2015

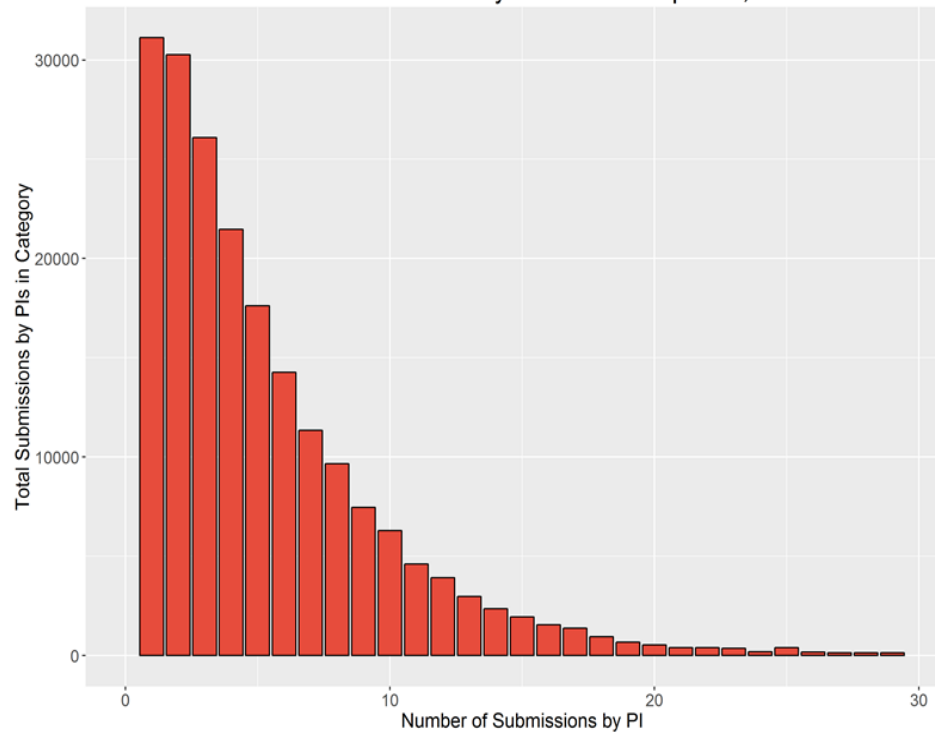


Research Grant Submissions Per PI, FY2011-FY2015

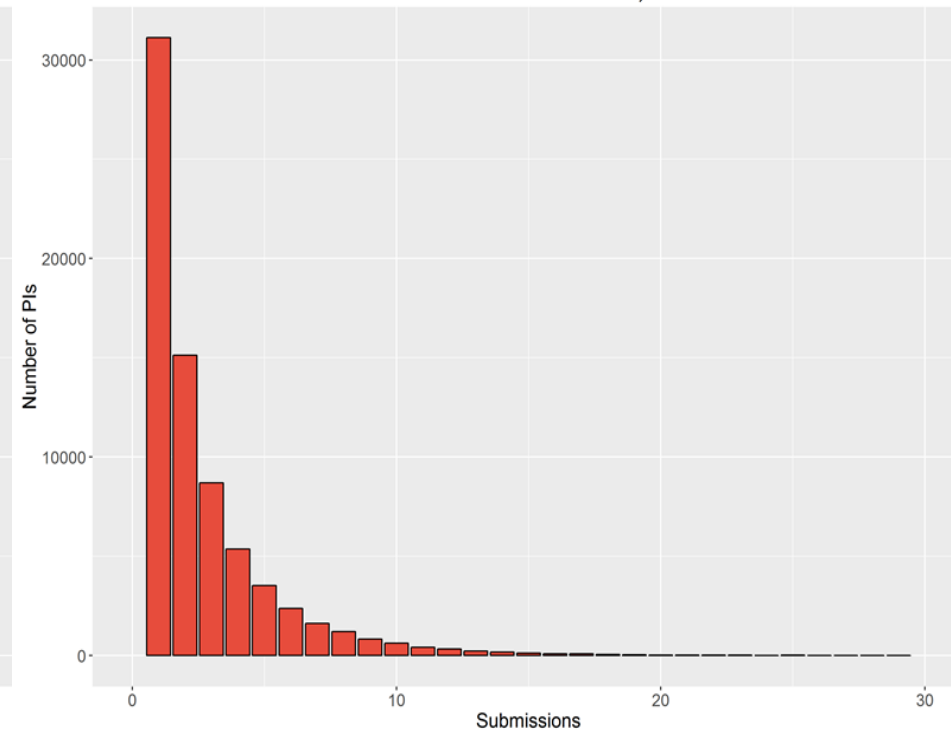


Proposals per PI - FY 2011-FY 2015

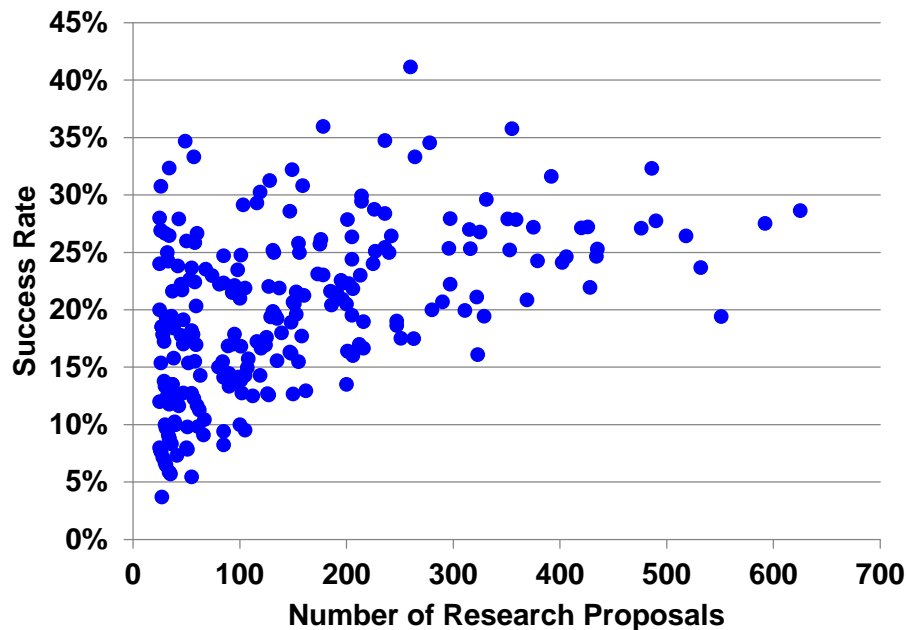
Research Grant Submissions by Submissions per PI, FY2011-2015



Research Grant Submissions Per PI, FY2011-FY2015



Institutional Success Rates



← Organizations with 25 or more research proposals in FY 2015

Average review scores for FY 2015 research proposals from 8 organizations →



Women at AAU Institutions



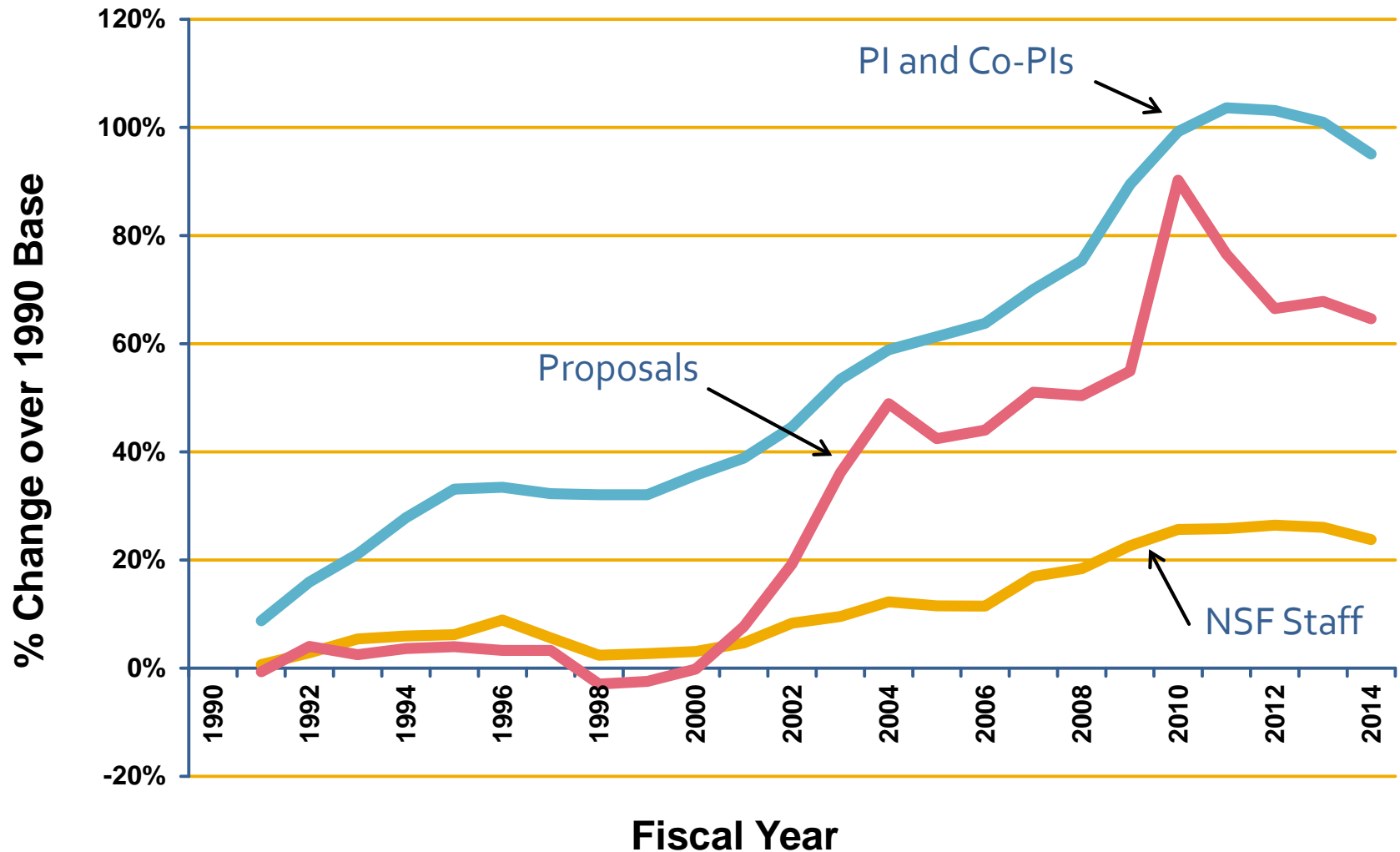
STELL and Non-STEM disciplines

Figure 9. Gender distribution of tenure-line professional faculty at select AAU institutions in STELL and Non-STEM disciplines

	% of Tenure-line Faculty who are Women (2101-2012)
Assistant Professor	31.1%
Associate Professor	22.3%
Professor	13.3%

“Women in the Academic Pipeline for Science, Technology, Engineering and Math”, AAUDE, 2013.

Relative Changes in Competitive Proposals, PIs/Co-PIs, and Staff since 1990



PI Success Rates - FY 2011-FY 2015

