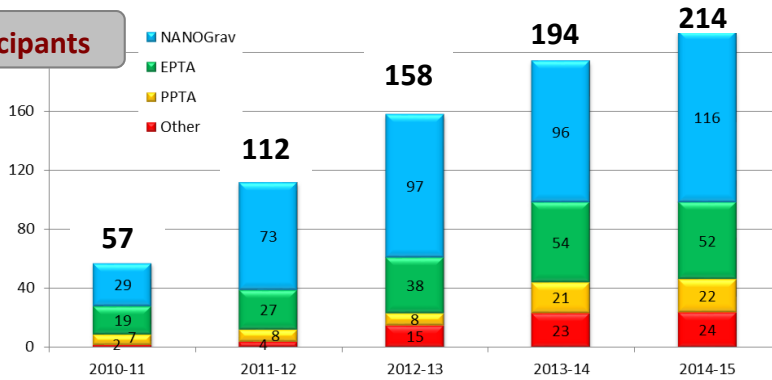


This newsletter presents findings from Quarter 1, 2014 evaluations of the IPTA Summer Meeting in Banff, Canada.

### PIRE project participants

PIRE project participation has increased by 10% to **214** in 2014. The majority of new participants are **NANOGrav** members.



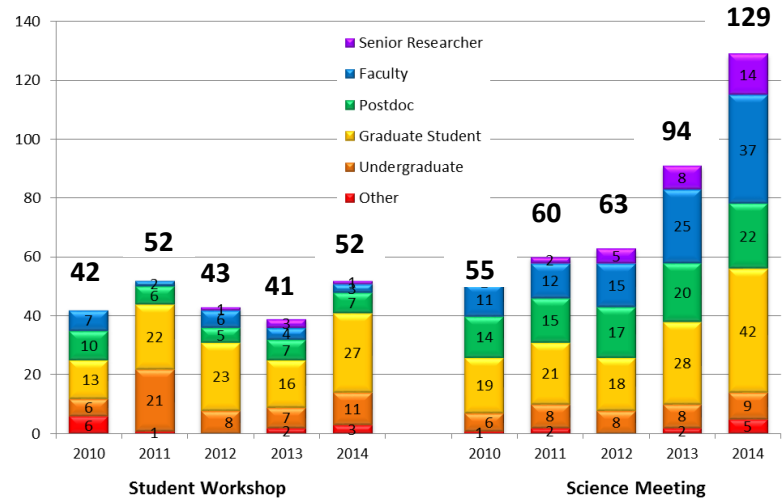
### PROJECT GOALS

- Goal 1: Knowledge and Skills
- Goal 2: Education
- Goal 3: Partnerships
- Goal 4: Institutional Capacity
- Goal 5: Workforce Development

### Annual IPTA Student Workshop and Science Meeting



- ◆ In June 2014, IPTA members attended a 1-week Student Workshop and 1-week Science Meeting in **Banff, Canada**.
- ◆ Student Workshop attendance increased in 2014 for the first time since 2011.
- ◆ Science Meeting attendance continued to increase, reaching **129** participants.



**Participants' suggestions:** Provide conference information earlier.

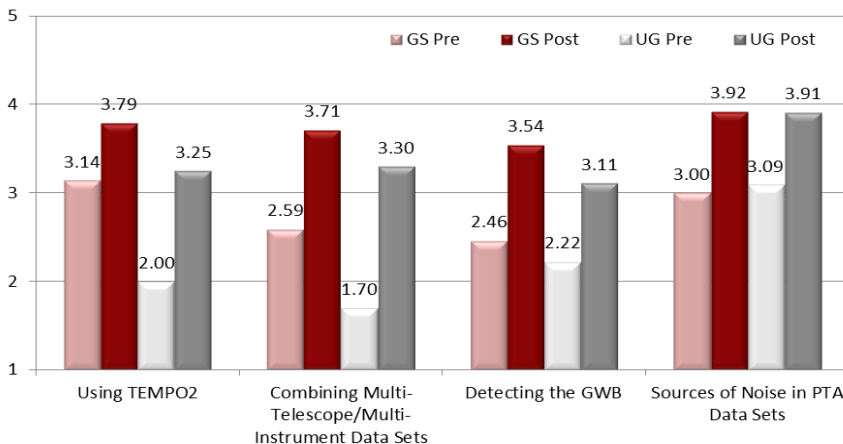
**Student Workshop** - More presentations by senior members, keep student presentations short, more activities to engage students.

**Science Meeting** - More networking and collaboration opportunities, reduce costs, ensure high quality video-conferencing capability

### Data analysis practicum ratings:

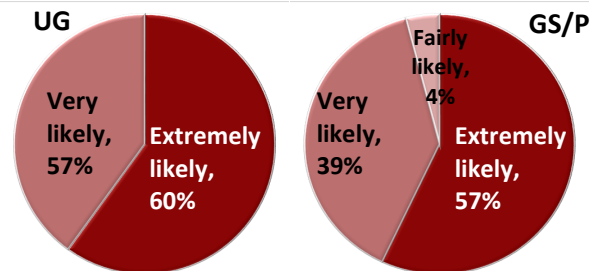
Undergraduates, PhD students, and postdocs rated four data analysis practicums from 1=very low to 5=very high.

- ◆ Undergraduates rated their familiarity with the material lower than PhD students/postdocs before and after the practicum.
- ◆ Current interest in the topics, ability to do practicum, increased understanding, and usefulness were *very high* for PhD students and *medium to very high* for undergraduates.



### Likelihood to utilize information presented

Participants are *extremely likely* to use information presented at the student workshop with very little difference between undergraduates and graduate students.



### New knowledge and skills:

A high proportion of undergraduates noted newfound software skills and a similar proportion of graduate students noted gains in specific content knowledge.



## Reasons for attending the Student Workshop

- Increase understanding of pulsar timing
- Increase understanding of gravitational wave sources
- Increase skills using software programs
- Build collaborations with international scientists
- Increase knowledge of how to detect pulsars
- Increase knowledge of IPTA research

	Students' strengths	%	Students' weaknesses	%
<b>Knowledge and skills</b>	Understanding pulsar timing	51	Understanding interstellar medium	54
	Using identified software programs	37	Using instruments and software	46
	Conducting mathematical calculations	37	Understanding the stochastic background	43
	Analyzing astrophysics-related data	37		
<b>Careers and Collaborations</b>	Interest in pursuing a career in astrophysics research	80	Having ideas for possible research topics	49
	My commitment to develop and maintain international partnerships	40	Awareness of careers in astrophysics	46
			Knowledge of how to collaborate with a researcher from another country	43

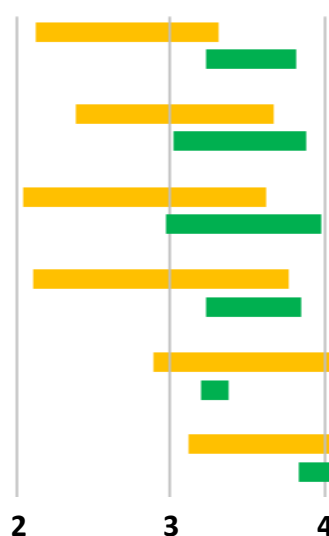
## Progress made towards achievement of project goals

**Student Week:** Undergraduates' ratings had more variation in pre- to post-survey ratings. Their post ratings tended to be lower than PhD student/postdoc ratings.

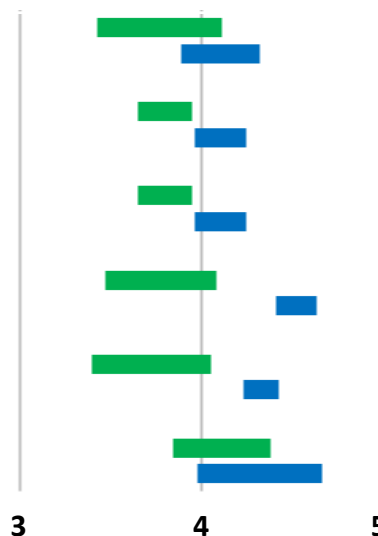
**Science Meeting:** Faculty/senior researchers had higher mean ratings than PhD students/postdocs and less variability.

### Student Workshop

- Goal 1A: Knowledge
- Goal 1B: Skills
- Goal 2: Education
- Goal 3: Partnerships
- Goal 4: Institutional capacity
- Goal 5: Workforce development



### Science Meeting



#### Impact Ratings

- 1 = minimal
- 2 = a little
- 3 = moderate
- 4 = a lot
- 5 = extensive

#### KEY:

- Undergraduates
- PhD Students/Postdocs
- Faculty/Senior Researchers



## Key Findings and Recommendations



- ◆ Students' greatest weakness in knowledge and skills are **understanding interstellar medium** and the **stochastic background**, and using **instruments/software**. *Address these areas in future activities and workshops.*
- ◆ The Student Workshop and Science Meeting impact participants differently based on their academic status. *Develop well-rounded programming that **meets all participants needs**.*
- ◆ Faculty/researcher participation in Student Workshop was the lowest since 2011. *Encourage **more faculty/senior researchers** to participate in student week, as students remarked there were not enough presentations by these participants.*

## Upcoming Evaluation Activities

- Analyze Research Abroad Experience post-survey results.
- Analyze pre- and post-Intercultural Development Inventory (IDI) results.
- Conduct telephone interviews with Research Abroad Experience mentors.
- Attend and conduct evaluation of fall NANOGrav meeting in Milwaukee, WI.