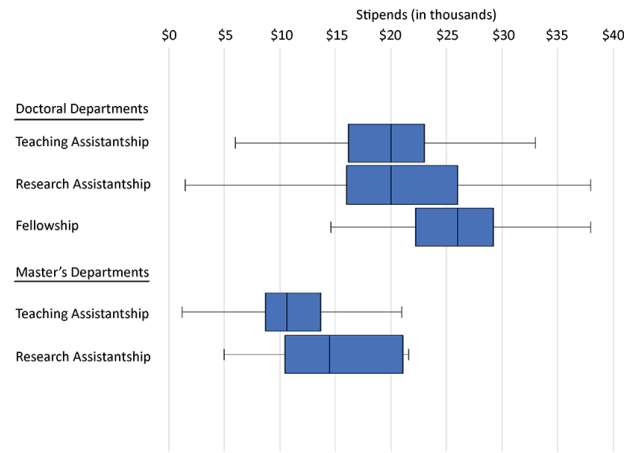


Starting the Conversation on Lowering the Financial Stress for Physics Students

Stipends for First-Year Physics Graduate Students, Academic Years 2014-15 and 2015-16 Combined



Note: The number of fellowships was too small to report for departments where a masters was the highest degree offered. The stipend data does not take into account the number of hours that an individual is contracted to work. The full stipend range is represented by the lines extending to each side of the box. The box represents the middle 50% (25th to 75th percentile) of stipends. The vertical line within the box represents the median stipend.

AIP | Statistics

aip.org/statistics

**to convert to 2020 dollars,
add about \$6k**

Starting Salaries for New Physics Bachelors, Classes of 2019 & 2020 Combined

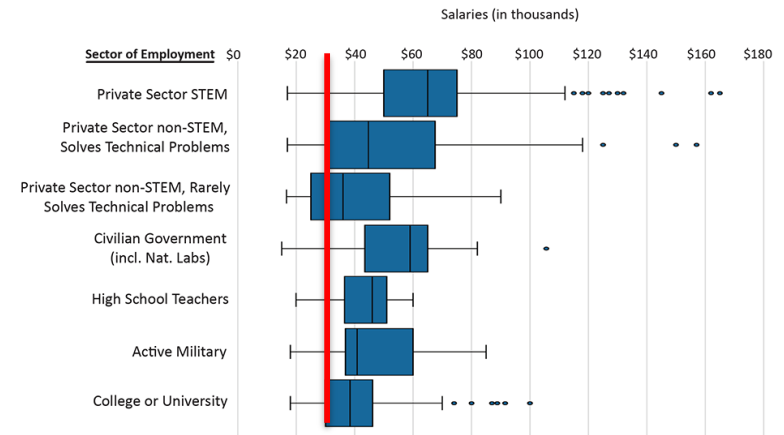


Figure only includes bachelors in full-time, newly accepted positions. The full starting salary range is represented by the lines extending to each side of the box. The box represents the middle 50% (25th to 75th percentile) of the salaries. The vertical line within the box represents the median starting salary for the sector. The dots outside of the lines are statistical outliers. Solves technical problems refers to respondents who selected "Daily", "Weekly", or "Monthly" on a four-point scale that also included "Rarely or Never" when asked how frequently they solved technical problems in their position.

AIP | Statistics

aip.org/statistics



Jaideep Taggart Singh
 Michigan State University / FRIB
 1600-1638, November 15, 2022, Argonne 402 / E1100
 2022 NSAC Long-Range Plan Town Hall Meeting on
 Nuclear Structure, Reactions and Astrophysics

**Maria
Goeppert
Mayer**



“Valuable Research Experience” Does Not Pay the Bills

THE TIME IS NOW

Systemic Changes to Increase African Americans with Bachelor's Degrees in Physics and Astronomy

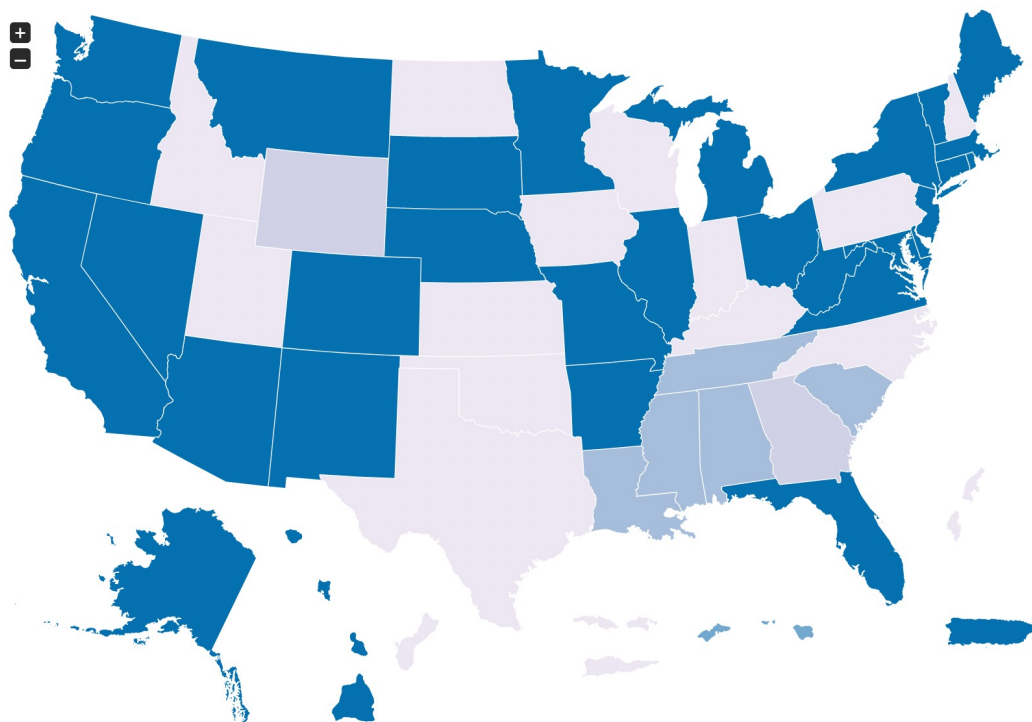


**FACTOR 4:
PERSONAL SUPPORT**






Many African American students need support to offset financial burdens and stress.

<https://www.aip.org/diversity-initiatives/team-up-task-force>

Pay Undergraduate Researchers \geq \$15/hour



Legend

-  States with Higher Minimum Wage than Federal
-  States with the same Minimum Wage as Federal
-  States with lower Minimum Wage rates - Federal Applies
-  States with no Minimum Wage rates - Federal Applies
-  States with special Minimum Wage

Federal Minimum Wage as of October 1, 2022

\$7.25 per hour

<https://www.dol.gov/agencies/whd/minimum-wage/state>

Conversation Starter: Pay undergrad researchers $>$ \$15/hour ($>$ \$30k/year)

Make It Much Easier To Request A Graduate Application Fee Waiver

The costs of transitioning to graduate school for some undergraduates is too high to be manageable and prevents otherwise qualified candidates from applying.

Average Big 10 graduate application fee = \$75 / school

10 schools = \$750 = >100 hrs @ federal minimum wage

Some programs exist:

Big 10 – FreeApp

<https://btaa.org/resources-for/students/freeapp/eligibility>

Quote from website:

“The FreeApp waiver program is very competitive, and a limited number of waivers are available.”

Conversation Starter: A fee waiver request should just be a no-questions-asked one sentence email to the school’s Graduate Program Director.

Make the Physics GRE Optional Permanently

The costs of transitioning to graduate school for some undergraduates is too high to be manageable and prevents otherwise qualified candidates from applying.

GRE subject test fee = \$150 / attempt

GRE additional score report fee = \$27 / school (first 4 are free)

10 schools with 2 GRE attempts = \$462 = 64 hours @ federal minimum wage

A program does exist: GRE Fee Reduction Program

Conversation Starter: Let's just make the Physics GRE optional permanently in order to reduce the financial burden of applying to graduate school.

Make Signing Bonuses or Moving Expenses for Entering Graduate Students an Allowable Cost on Grants

The costs of transitioning to graduate school for some undergraduates is too high to be manageable and prevents otherwise qualified candidates from applying.

Moving expenses = \$1000 (varies wildly depending on circumstances) = 138 hours at federal minimum wage

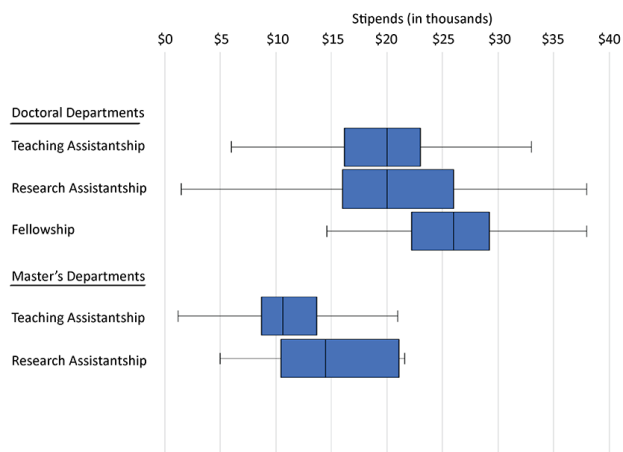
Conversation Starter: Make moving expenses or “signing bonuses” for incoming graduate students allowable costs from federal grants (DOE & NSF).

Pay Graduate Students a Living Wage

A Ph.D. in Physics is a great investment in one's long-term career prospects and future earnings – we should advertise this.

However, we are asking our students to sacrifice too much both personally and financially during the training period in graduate school.

Stipends for First-Year Physics Graduate Students, Academic Years 2014-15 and 2015-16 Combined



Note: The number of fellowships was too small to report for departments where a masters was the highest degree offered. The stipend data does not take into account the number of hours that an individual is contracted to work. The full stipend range is represented by the lines extending to each side of the box. The box represents the middle 50% (25th to 75th percentile) of stipends. The vertical line within the box represents the median stipend.

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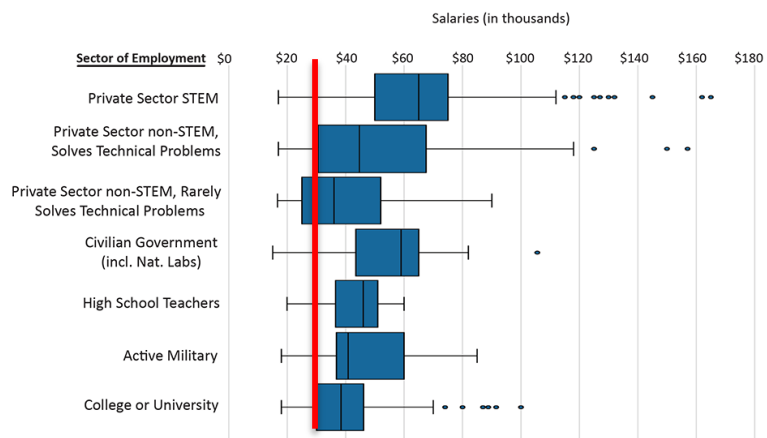


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What is a living wage? According to DOE Office of Science: \$45k/yr (\$22.5/hr)

LIVING WAGES

SC is committed to ensuring that students, trainees, and postdoctoral fellows are paid a fair and equitable wage sufficient to allow a reasonable standard of living. Applicant institutions are strongly encouraged to examine their institutional pay scales to ensure that all personnel earn a living wage. The provision of fellowships, traineeships, stipends, honoraria, subsistence allowances, and other similar payments may be allowable expenses on SC financial assistance awards, per 2 CFR 200.430, § 200.431, and § 200.466. For graduate students, SC considers a reasonable living wage to be an annual income of \$45,000, excluding benefits. 

DE-FOA-0002844 - Post Date: Friday, September 30, 2022 (h/t B. VanDevender)

Conversation Starter: Let's start requesting \$45k/yr/grad in our grant proposals.

Make Funds Available for Graduate Students For 6 Weeks Paid Parental Leave

A Ph.D. in Physics is a great investment in one's long-term career prospects and future earnings – we should advertise this.

However, we are asking our students to sacrifice too much both personally and financially during the training period in graduate school.

It is reasonable to essentially force our graduate students to put off starting a family until later in life?

Conversation Starter: Let's give our graduate students 6 weeks paid parental leave when they become parents.

Make Funding Supplements Available for Graduates Students that are Parents

A Ph.D. in Physics is a great investment in one's long-term career prospects and future earnings – we should advertise this.

However, we are asking our students to sacrifice too much both personally and financially during the training period in graduate school.

It is reasonable to essentially force our graduate students to put off starting a family until later in life?

Conversation Starter: Let's increase the graduate student stipend by \$3k/yr/child for graduate students that are parents.

Provide Graduate Students a Cash Advance Before Their First Work Travel

Work travel can be a great perk and rewarding experience for our graduate students.

However, our students can quickly become stuck in “Reimbursement Hell.”

Conversation Starter: Let’s just give our graduate students a \$5k cash advance before their first work travel to be repayable only when they leave graduate school.