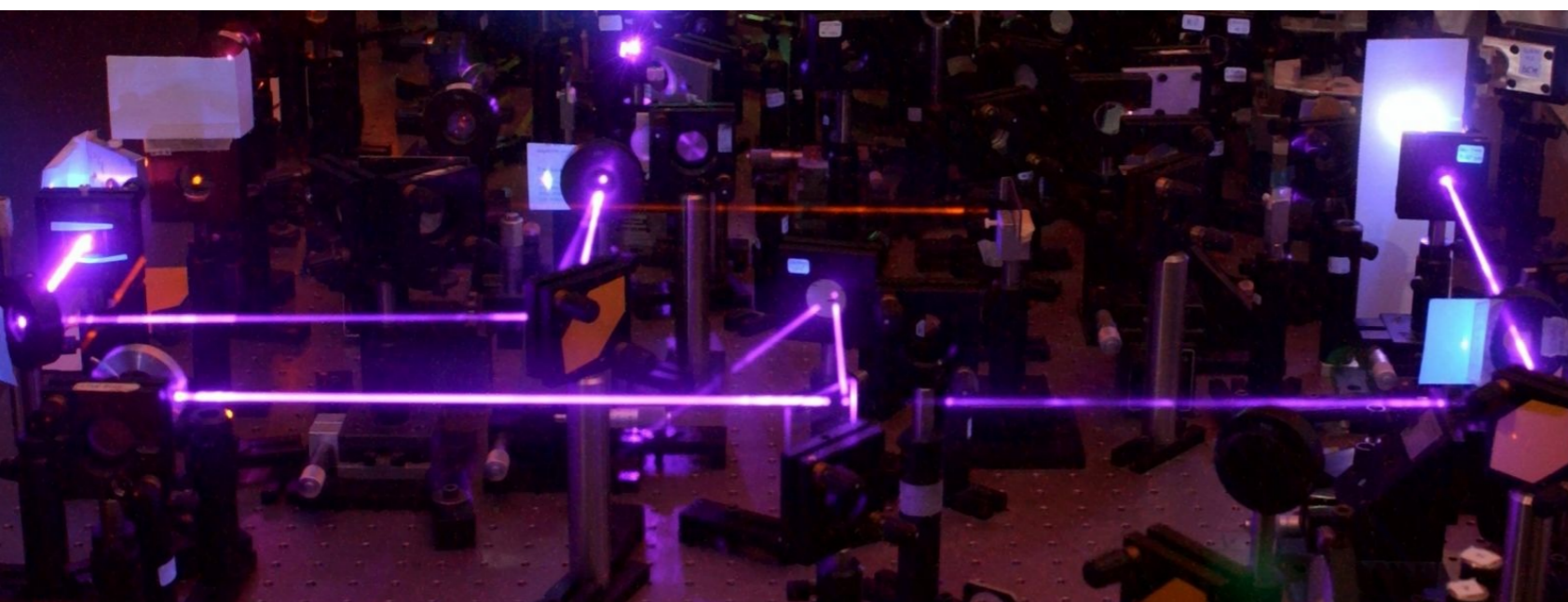
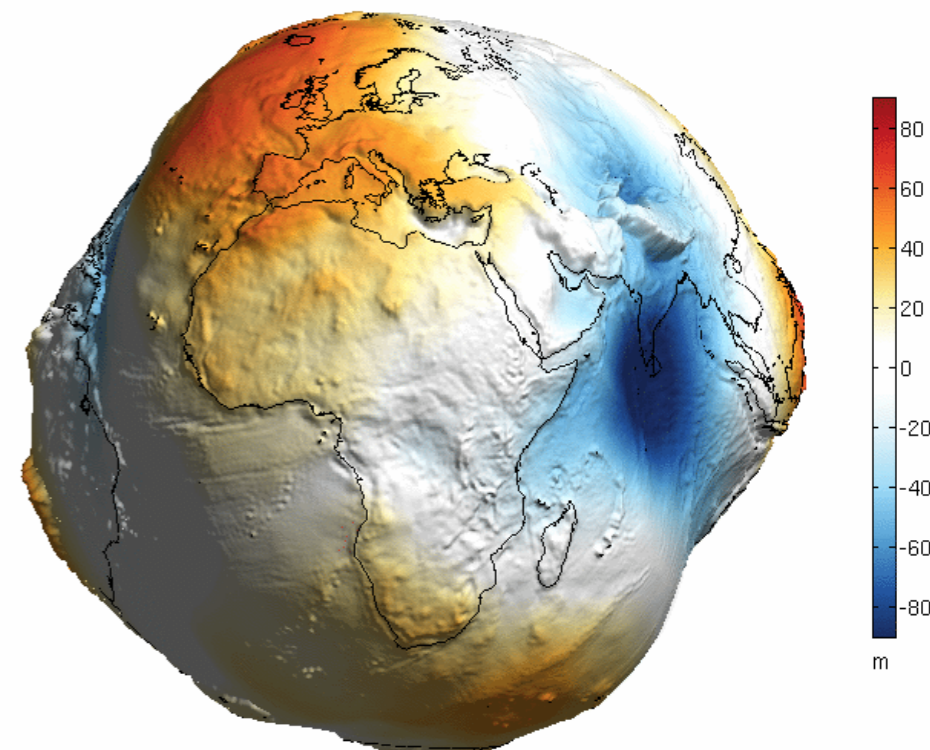


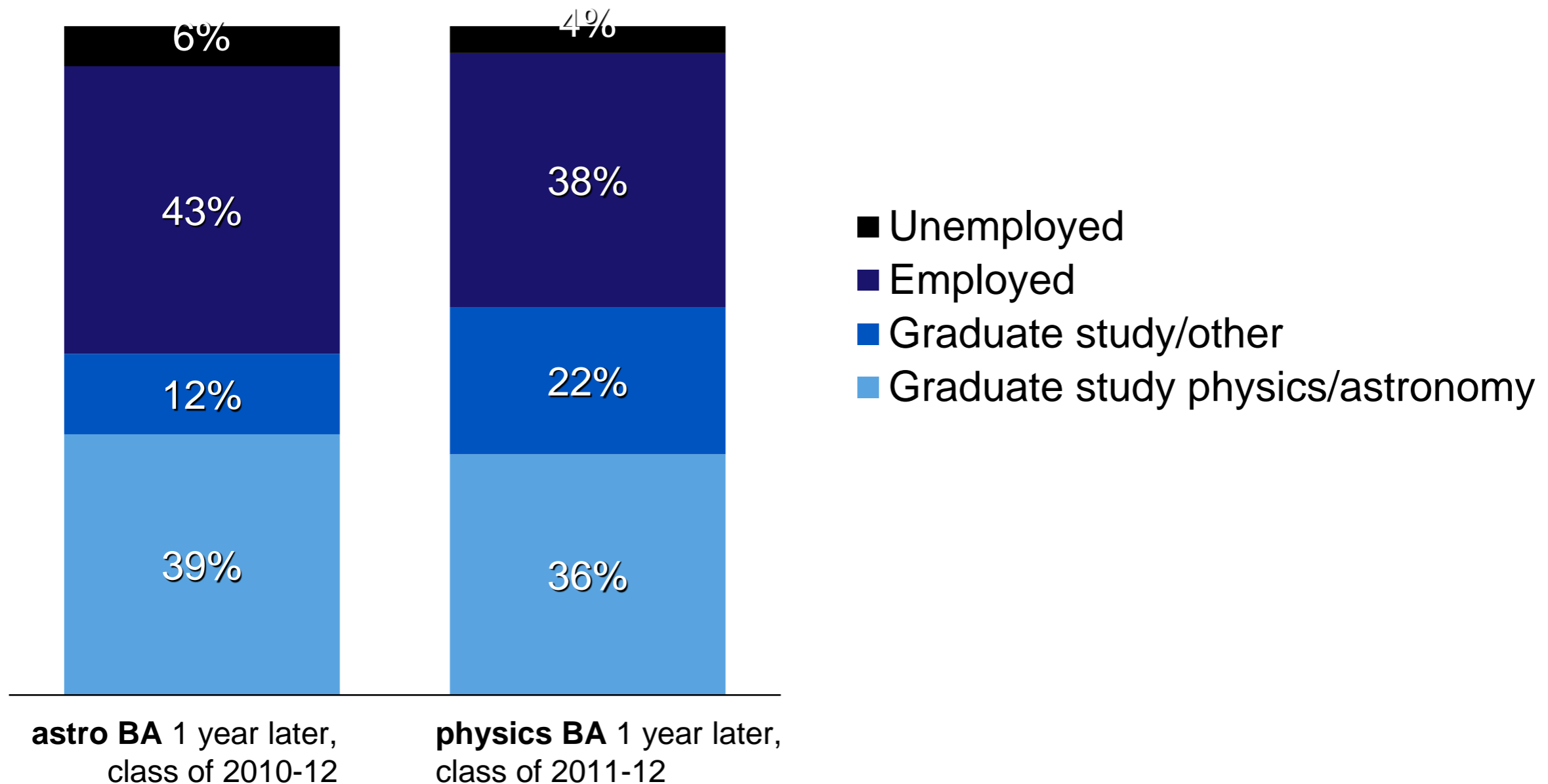


# Careers in physics and astronomy



# Job prospects

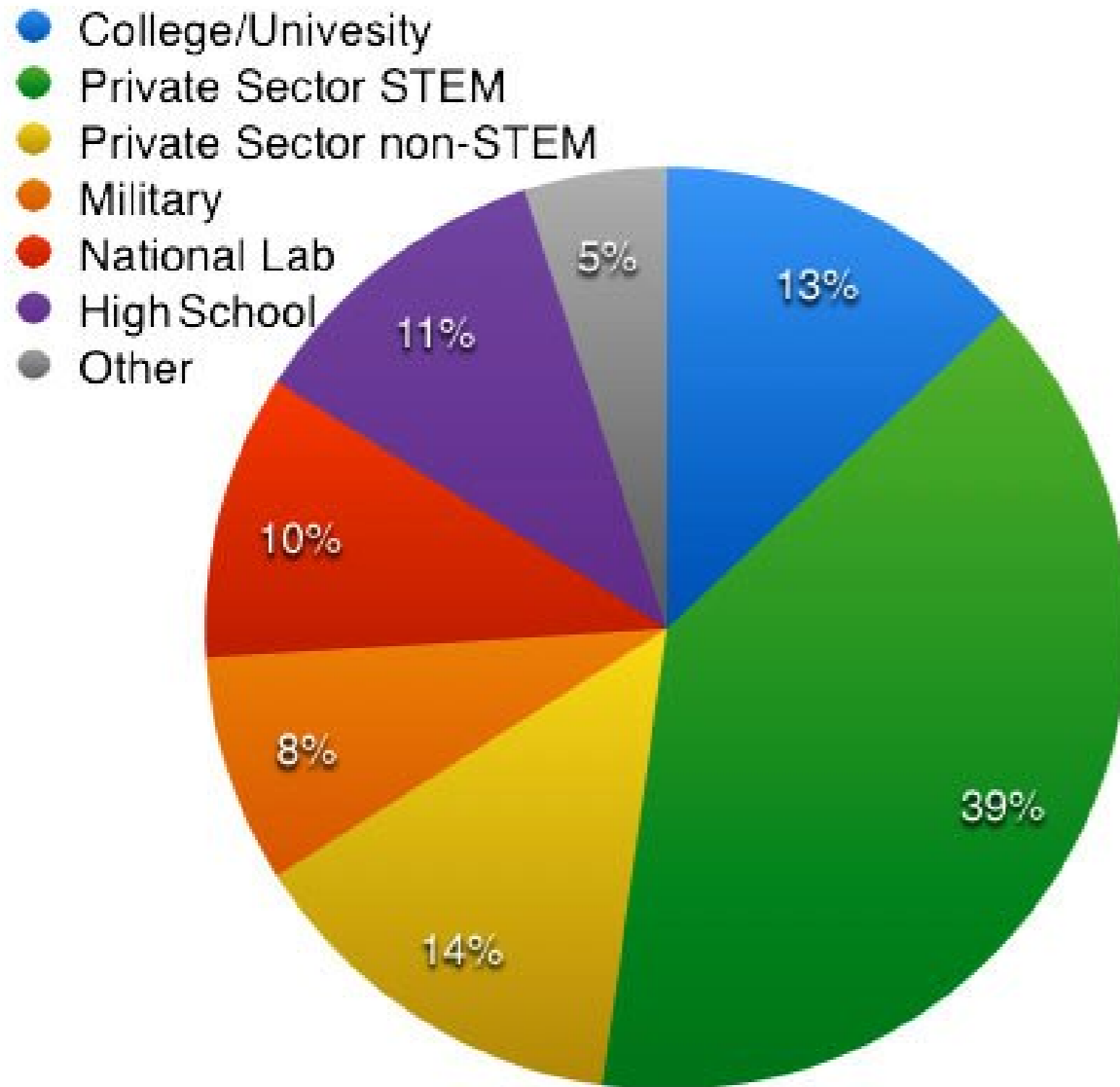
- Invested 4 years for your BA or BS
- Roughly 40% employment, 50% graduate school



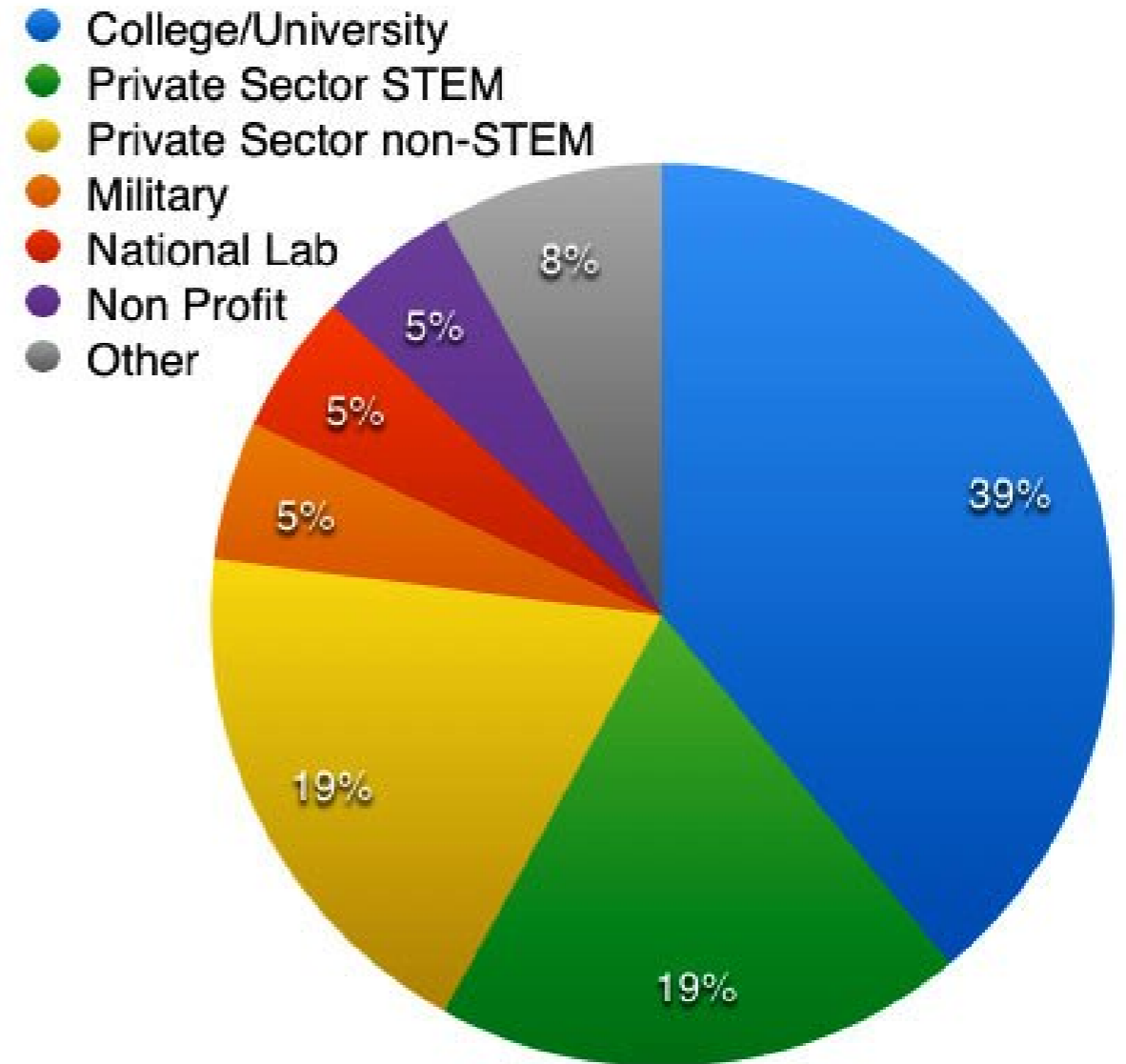
# Employment breakdown

- Physics and astronomy majors hired in a range of fields to work with software, hardware, processes, and people

Physics Bachelor's Initial Employment,  
Classes of 2009-10



Astronomy Bachelor's Initial Employment,  
Classes of 2010-12



# What do they do?

- Software
  - **search engines**
  - **image processing** and compression, automatic camera control, motion recognition
  - **scientific computing and data management** (such as neutrino astrophysics, geophysics)
  - systems engineering for space missions or communications satellites
  - tomography scanners of all types
  - RF filters for cellular phones
  - **finance** (risk systems, modeling equities and currencies, high-speed trading, predictive fraud detection systems)
  - navigation
  - **simulating** and optimizing oil and gas pipelines
  - environmental regulations
  - control software for gas-powered turbines
- Hardware
  - advanced hard drives and memory
  - fiber optics communication components
  - **sensors** across the EM spectrum
  - **lasers** and optical amplifiers
  - new alloys
  - **semi-conductor manufacturing**
  - military vehicle sensors
  - **patents of all types**
- Process
  - improving manufacturing
  - software **debugging**
  - **regulation**
- Social
  - team management
  - **marketing**
  - training
  - sales
- Education

# Companies hiring majors

- **Ohio companies who hired phys/ast majors 2011-13**

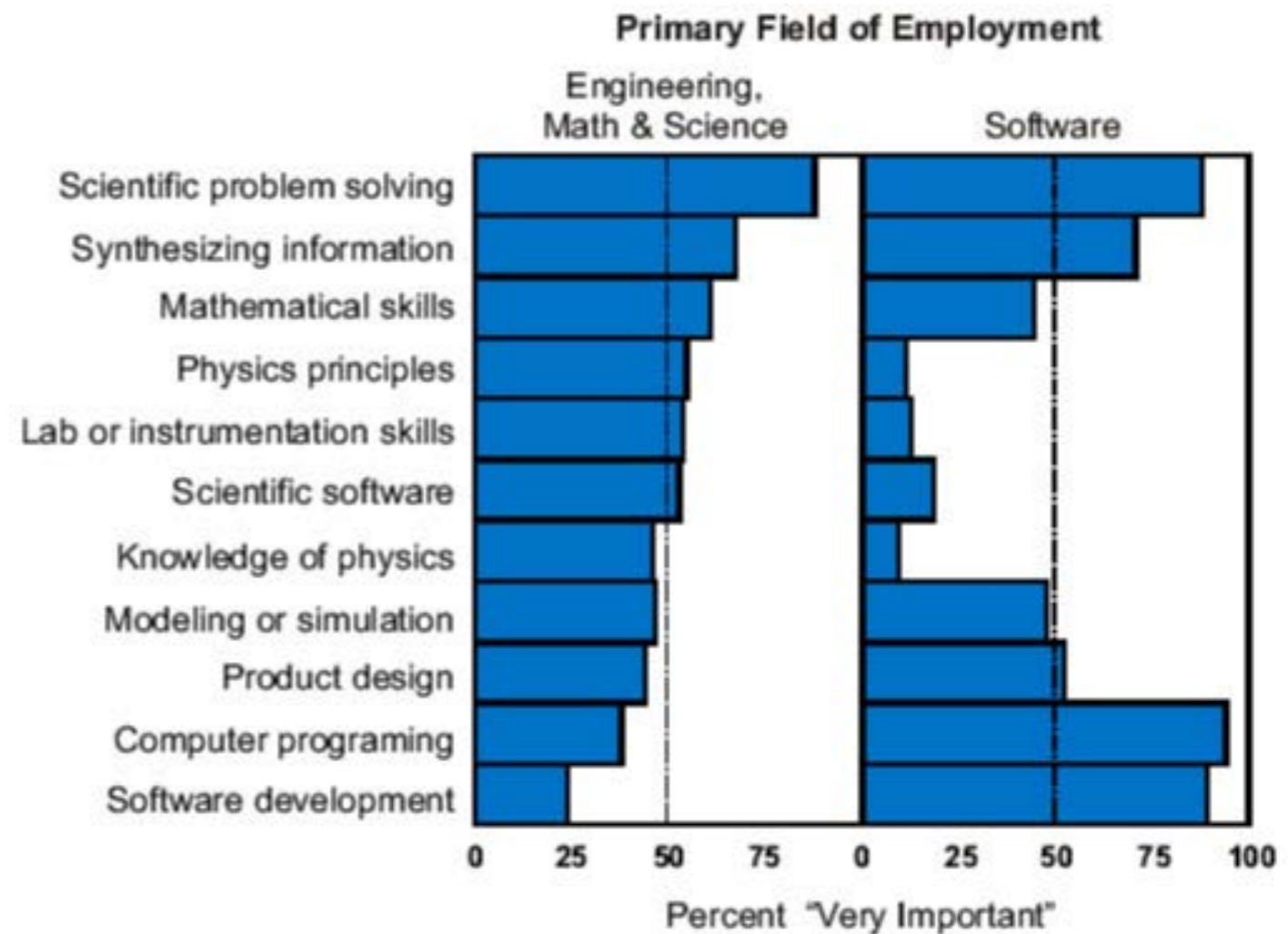
- Cleveland Clinic
- Concurrent Computer Corporation
- First Solar
- General Electric
- Hyundai Ideal Electric Company
- Jonas Software
- Kent Displays, Inc.
- Laptop Guy
- MarketVision Research
- National Air & Space Intelligence Center
- Nissin Brake Ohio
- Ohio State Medical Center
- Ohio Supercomputer Center
- Paragon Robotics
- Patheon Pharmaceuticals, Inc.
- Southwest Regional Medical Center
- Sterilization Monitoring Service at Ohio State
- Tribute Software, Inc.

- **UT Physics and Astronomy majors have been hired across the country**

- Raytheon
- Ball Aerospace
- FirstSolar in Toledo
- Space Telescope Science Institute
- NASA Glenn Research Center
- Apache Point Observatory in NM
- Hayden Planetarium (NYC)
- Einstein Planetarium, National Air and Space Museum in D.C.
- U.S. Patent Bureau
- Ohio Bureau of Criminal Investigation
- Wachovia
- Disney

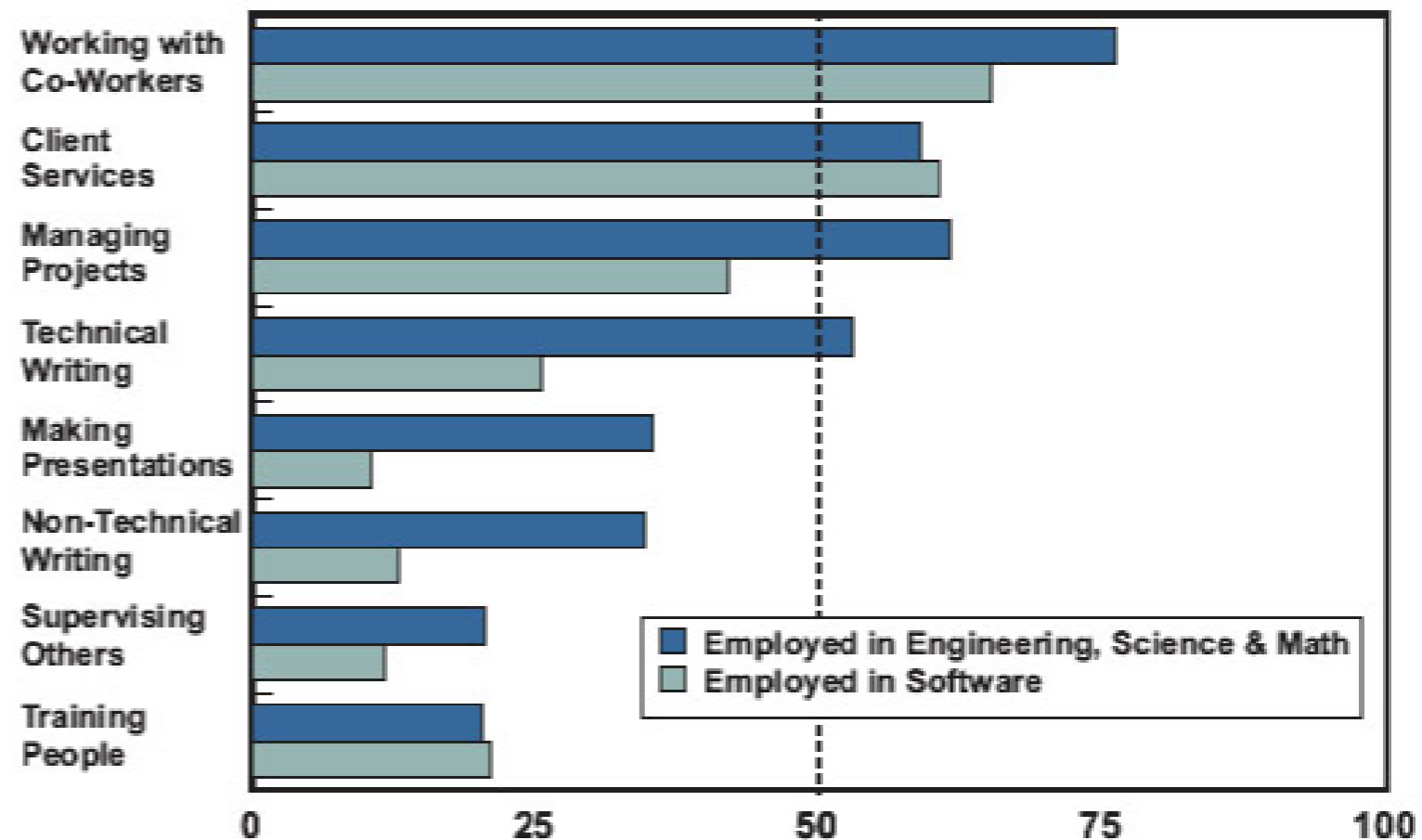
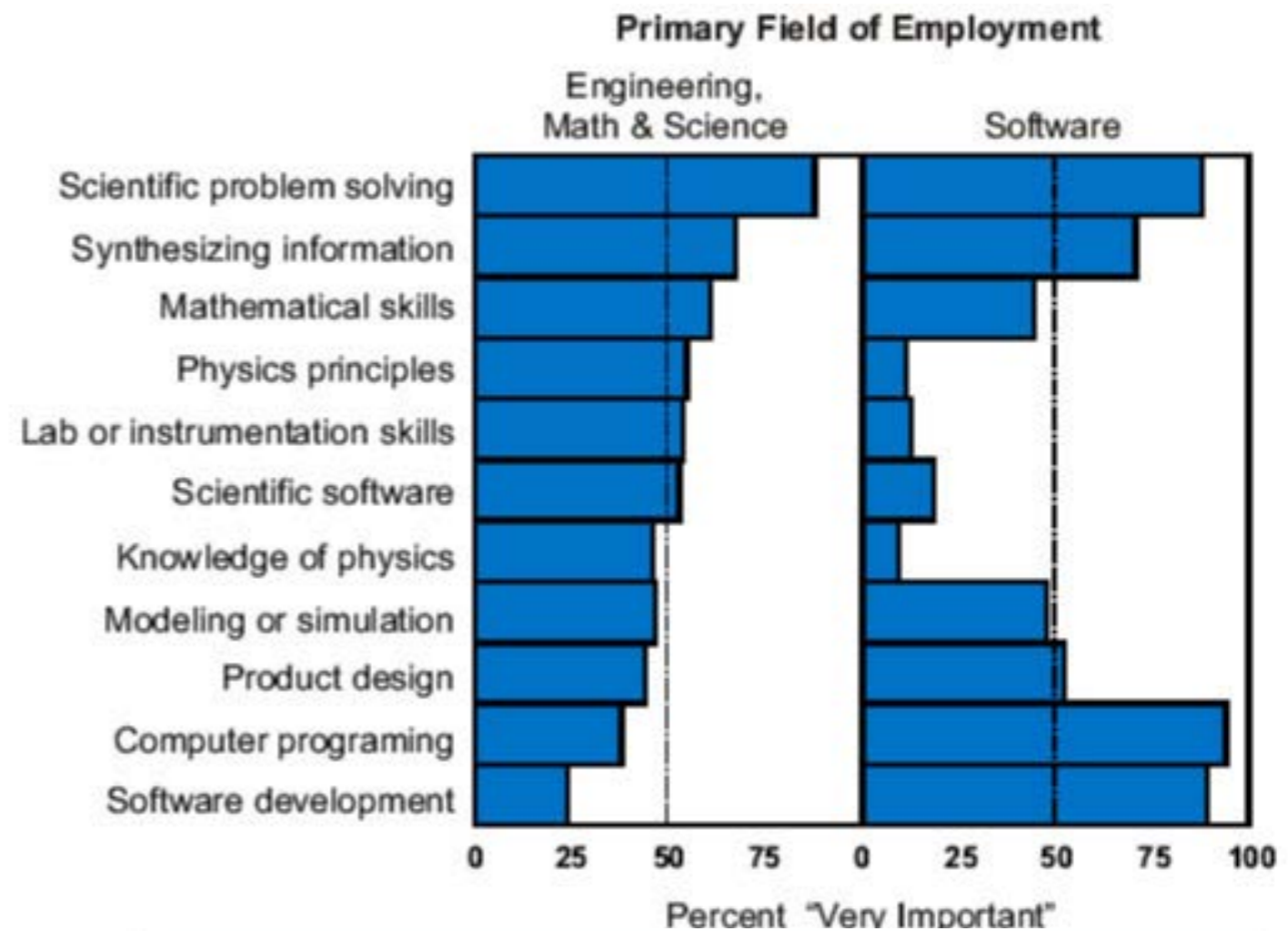
# What skills do they use?

- Course/lab skills
  - science content
  - mathematical and programming techniques



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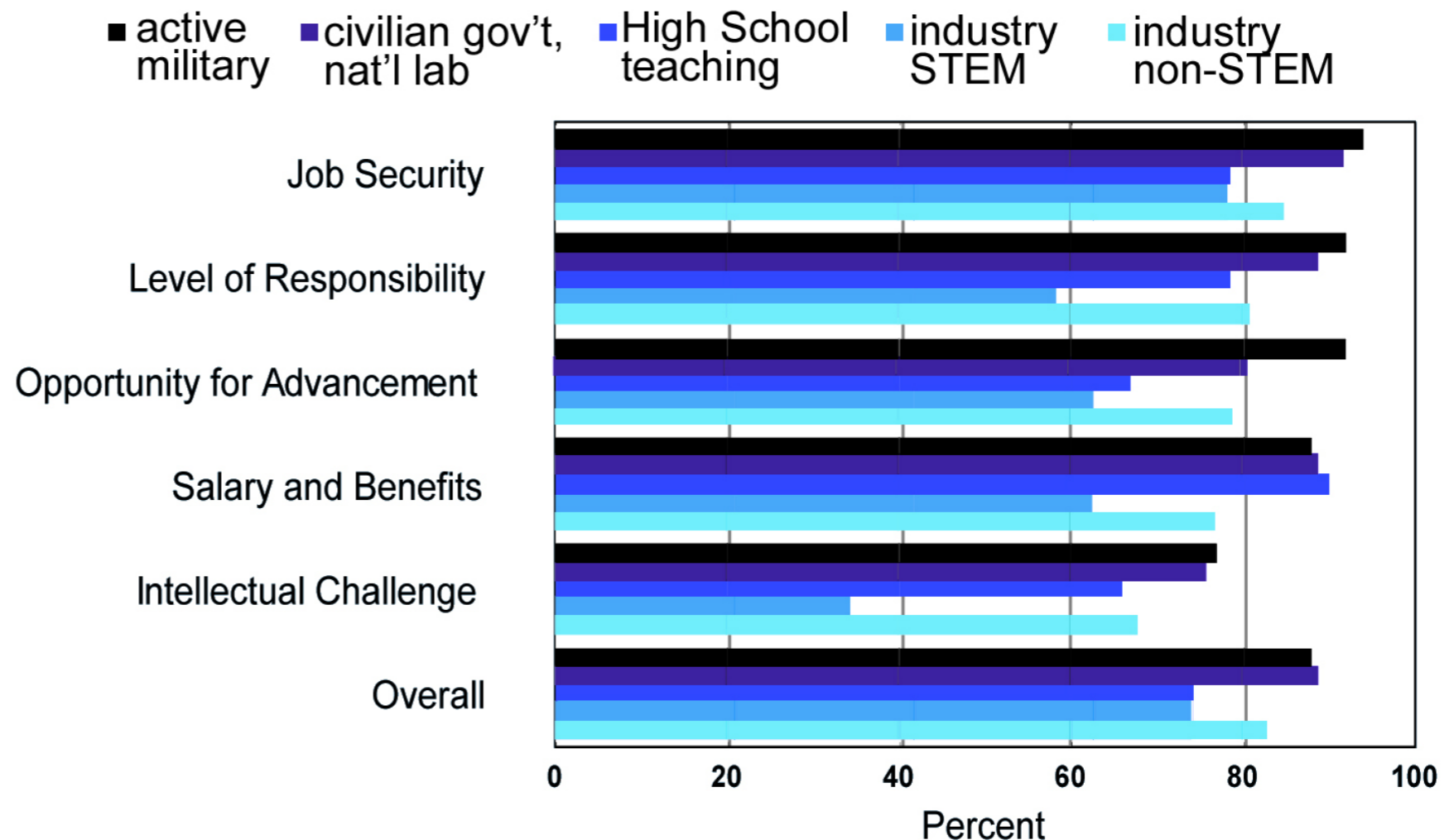
- Course/lab skills
  - science content
  - mathematical and programming techniques
- Soft skills
  - communication
  - training/mentoring
  - working with others
  - managing a team



# Compensation

- Stating salaries range
  - university/college (\$25-50k + tuition) and private sector \$40-\$60k
- Satisfied with their jobs!
  - variety of projects, challenging work, interesting peers, real-world impact, flexible work environment

Job satisfaction of physics BAs in private sector STEM positions, classes of 2009-10 combined



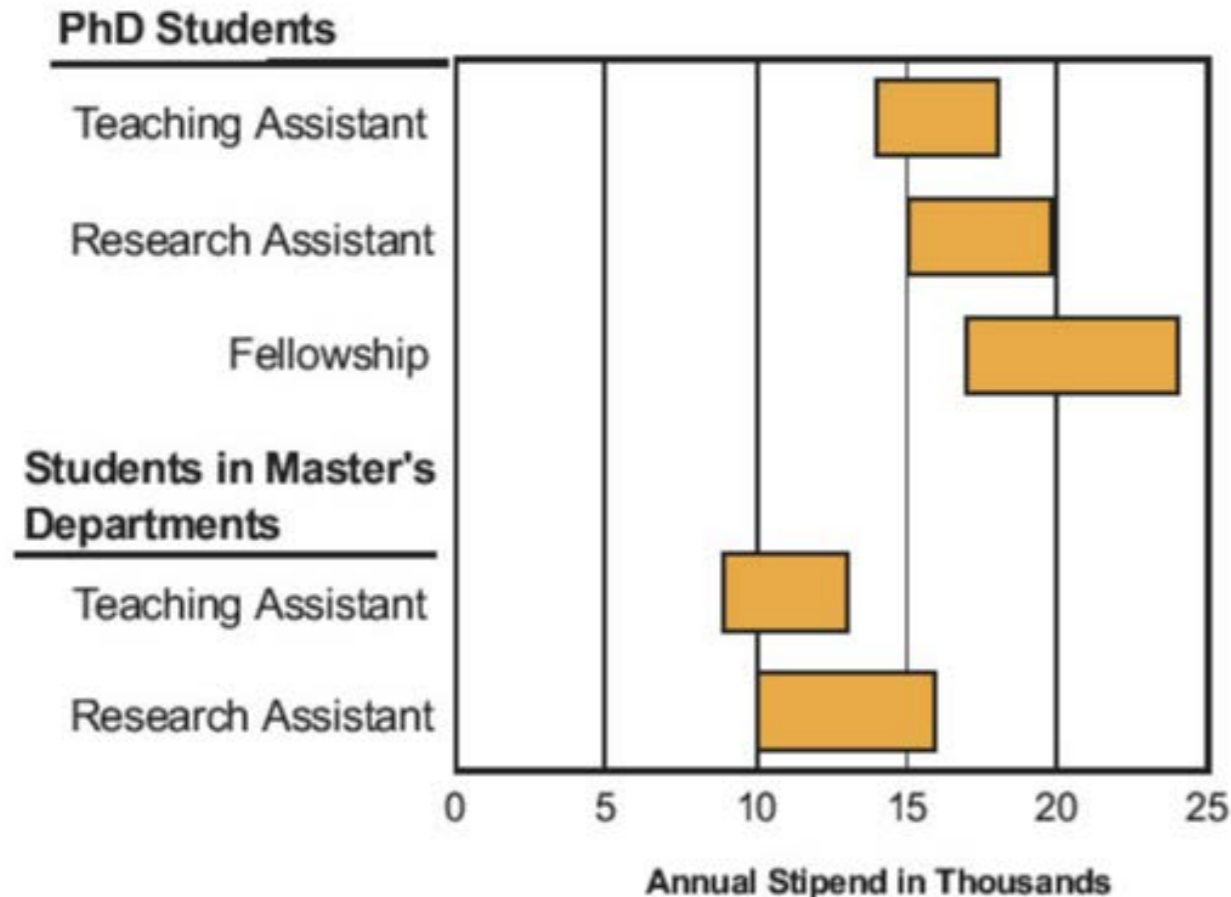


# Graduate school and research

- Invested 2-3 years for a masters or 5-7 years for a doctorate
  - becoming world expert in one narrow topic
- Usually supported by your advisor, the department
  - very rare to work an outside job while in graduate school

## Typical Stipends

### Full-time Physics Graduate Students

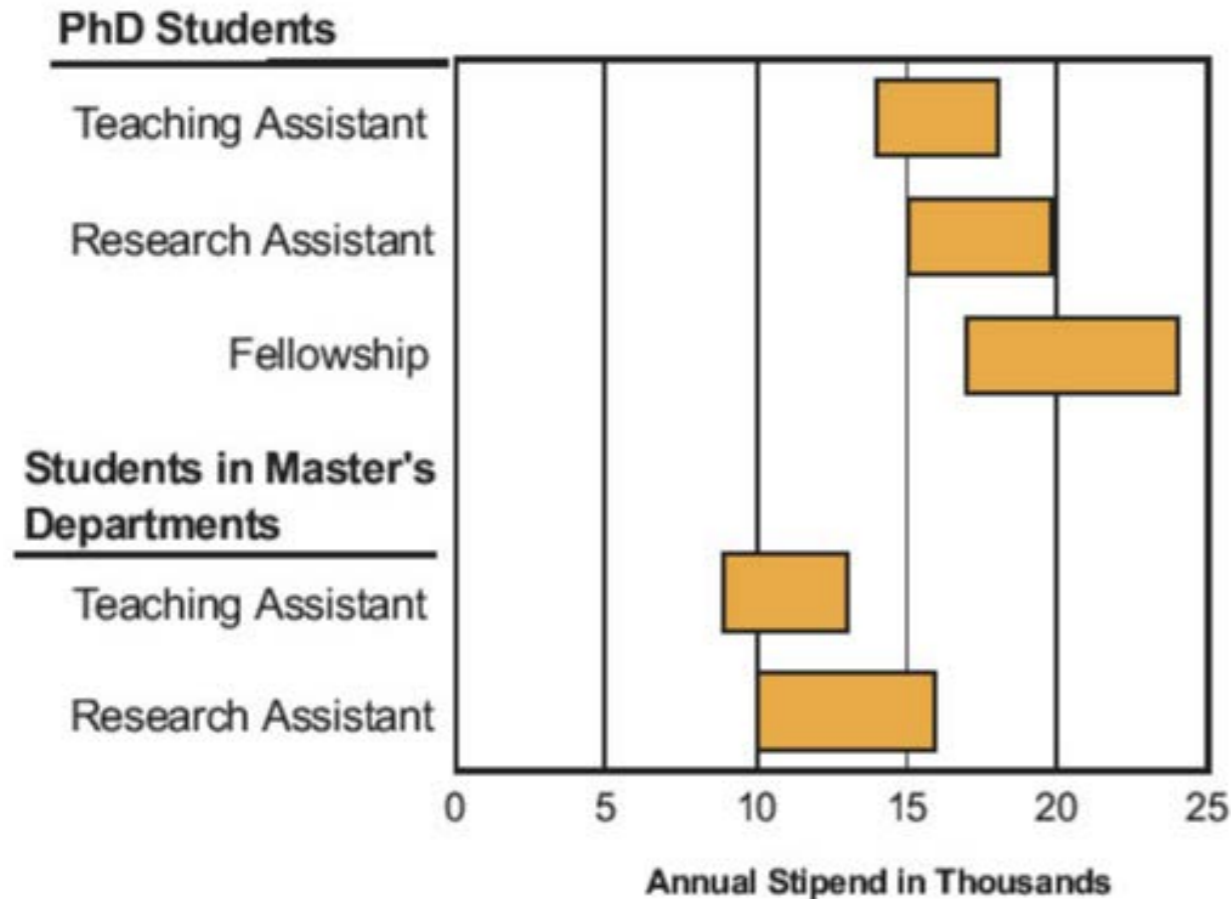


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## Typical Stipends

### Full-time Physics Graduate Students



### Percent

