First, the bad news

- Only about 10,000 professional astronomers
  - In the world
  - Less than 1/1,000,000 people
- You can’t really be a professional astronomer without a PhD—that’s 5–6 years post BS/BA
- You never look through a telescope
It’s Not all Bad News

- Even if you aren’t a “professional astronomer” there are still lots of other related opportunities
- Most still require at least a MS/MA
- Most pay quite well (~$60,000/yr)
Education

- BS degree in **physics** (4–5 years)
  - Take *all* the **math** you can fit in
  - **CS** courses or **CUGS** in programming
  - Think about the astronomy **minor**
- Go to **Grad School** (5–6 years)
  - Astronomy
  - Physics with a tailored research project

Jobs

- **Post-Doc** (1–3 years)
  - A temporary, research intense, position
  - At a university or federal lab (e.g., NASA)
  - May have to do a second (or third...)
- **Full position**
  - Faculty at University (~55%)
  - Research Scientist at University or Lab (~30%)
  - Industry Research (~10%)
What do we do?

Teach physics and astronomy
Computer programming

Collect/analyze data
Write grant proposals

Write journal papers
Public lectures/interviews

Research

By topic area
- Stellar
- Galactic
- Galaxies
- Cosmology
- Dark Matter/Energy
- Planetary
- Theory

By spectral region
- Radio
- Microwave
- Infrared
- Visible
- UV
- X-ray
- Gamma Ray
Other Related Careers

Data/Image Analysis

- Industry job
  - Amazon, Lockheed, Sony, Raytheon, etc.
  - Makes use of the computer skills you developed
- Make use of instrument design or remote sensing skills you may have developed
- Can do with BS or MS
- “Big Data” or Data Analytics
Aerospace

- You are a physicist after all...
- Industry “engineering” position
  - Lockheed, Boeing, etc.
  - Can do with BS or MS

National Observatory

- Support Scientist (PhD)
  - Help researchers plan and execute programs
  - Can become director/admin
- Telescope Operator (MS; BS maybe)
  - Because nobody lets the scientists actually touch the multimillion dollar instrument!
  - Have to like working wonky/changing hours
Instructor/Support

- University or college
- Teach intro level courses and/or labs
- Manage instrumentation and equipment
- Typically requires MS/MA degree

Planetarium/Sci Museum

- University or non-profit institute
- Design exhibits
- Run public events/shows
- Can do with MS/MA
Additional Resources

- [https://aas.org/learn/careers-astronomy](https://aas.org/learn/careers-astronomy)