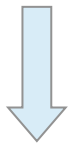


# Successfully Finding a Job Outside Academia



Michael Pavel  
"lame duck" IGRINS Postdoc



# Where exactly am I going next?



FFRDC – Federally Funded Research and Development Center



Center for Enterprise Modernization | FFRDC

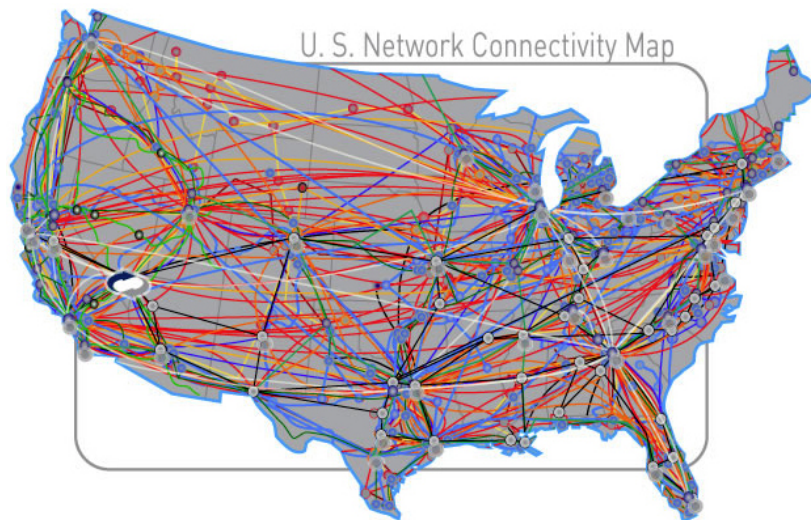
# What will I be doing?



-Someone in the FAA or Air Force comes up with a question

-A group of people with various technical backgrounds answer that question

**-Combine modeling with data to create understanding**

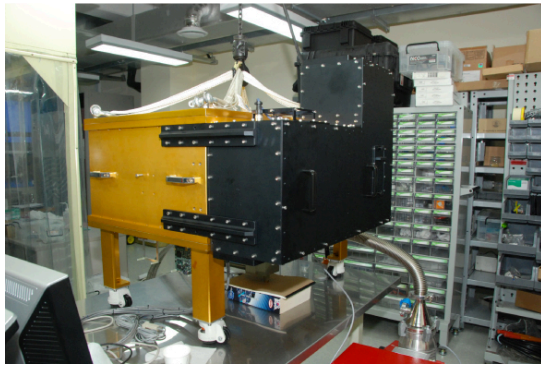


Individually On-Net National Backbones

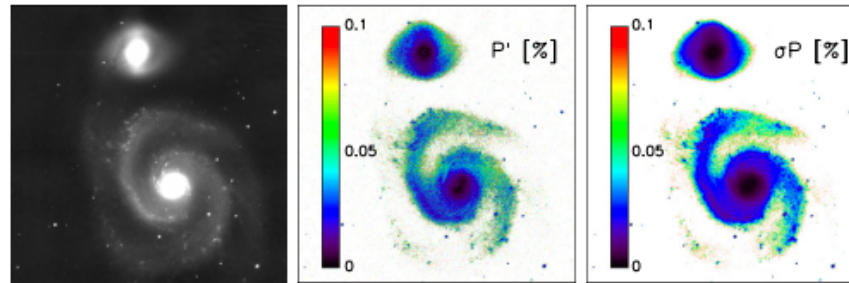


# Why Hire an Astronomer?

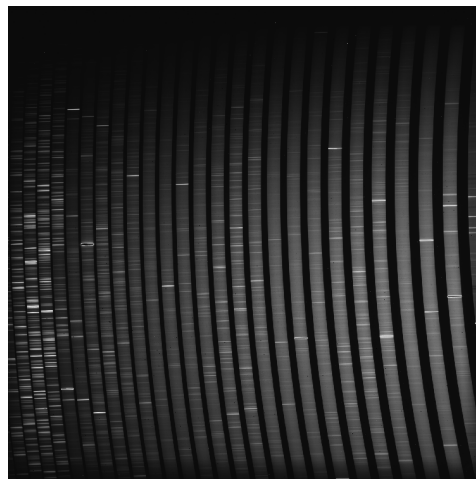
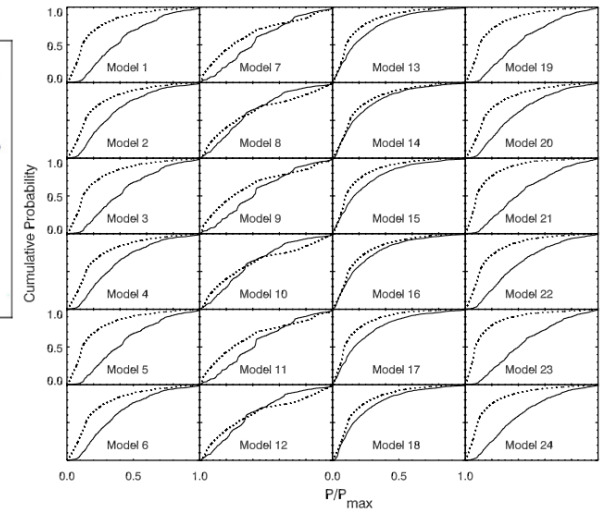
Hardware



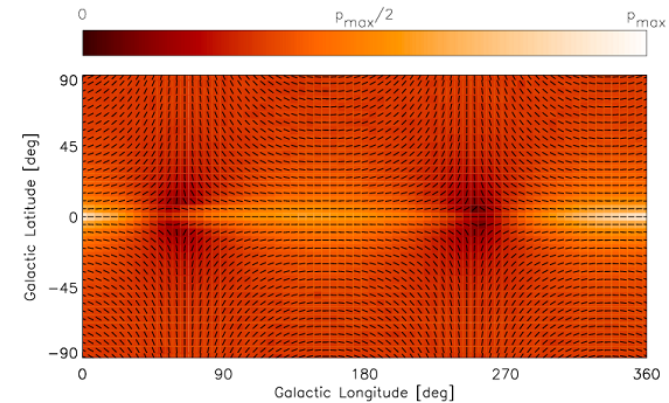
Data



Modeling

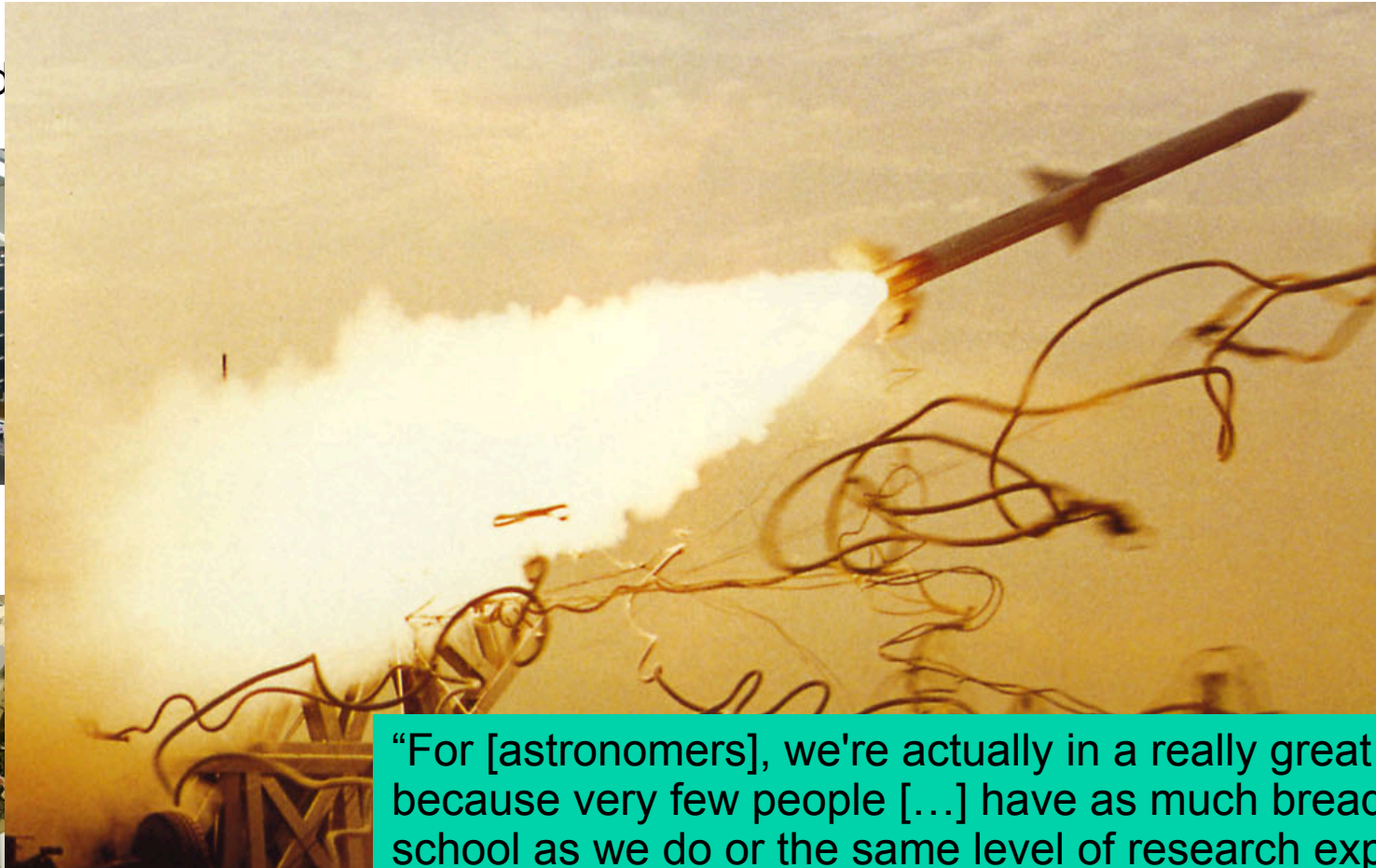
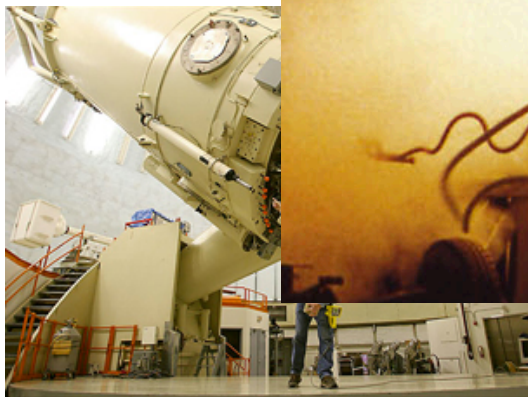
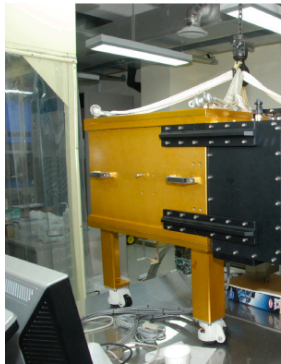


Actual IGRINS spectrum!

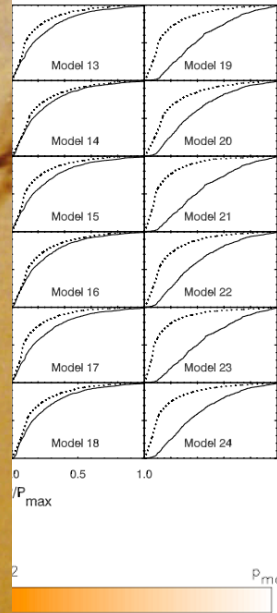


# Why Hire an Astronomer?

Hard



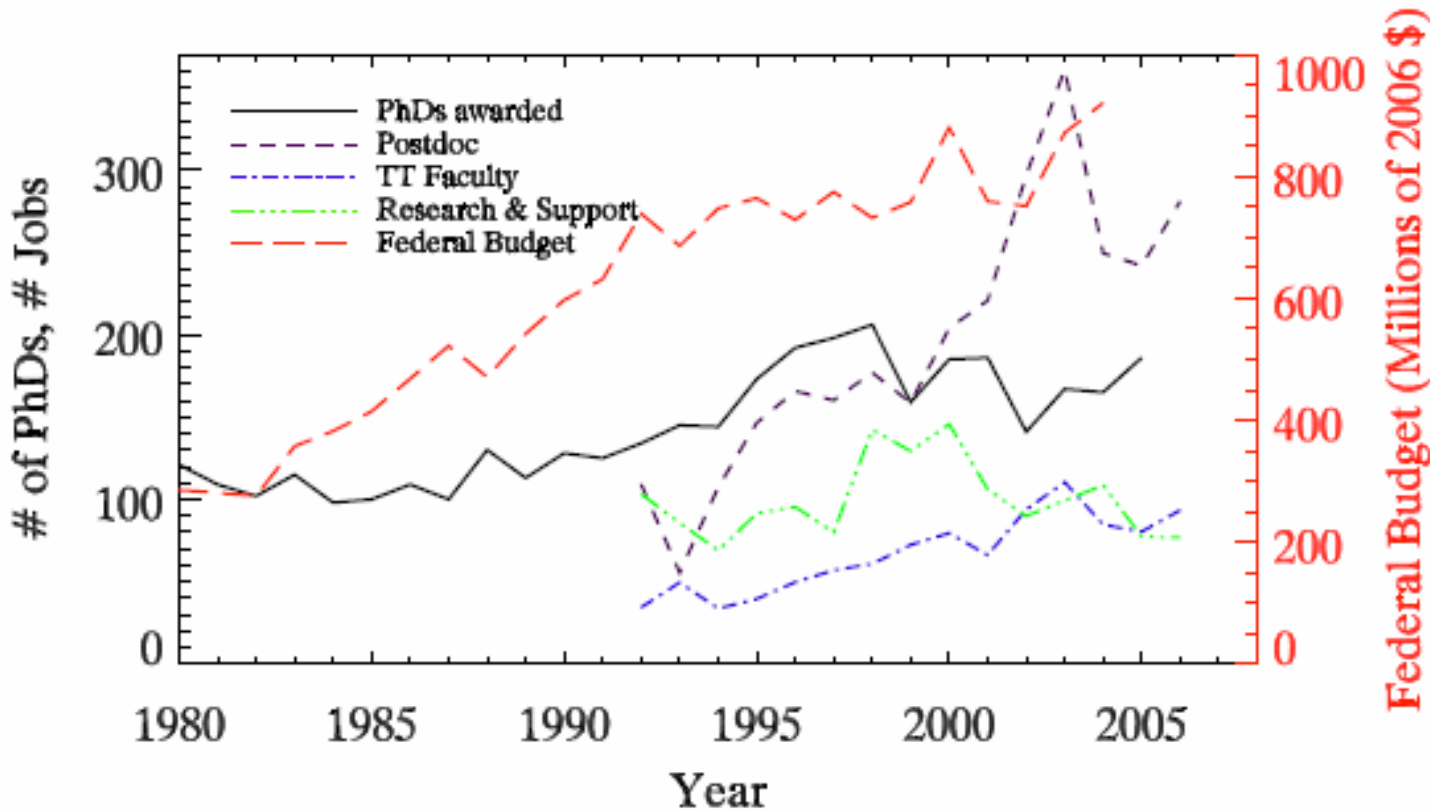
Modeling



“For [astronomers], we're actually in a really great position because very few people [...] have as much breadth in grad school as we do or the same level of research experience. It took a while to realize that, but you feel better about yourself when someone who has worked here 20 years asks if you can poke a hole in the atmosphere and you can explain to them that it doesn't quite work that way.”

Actual FORVING spectrum.

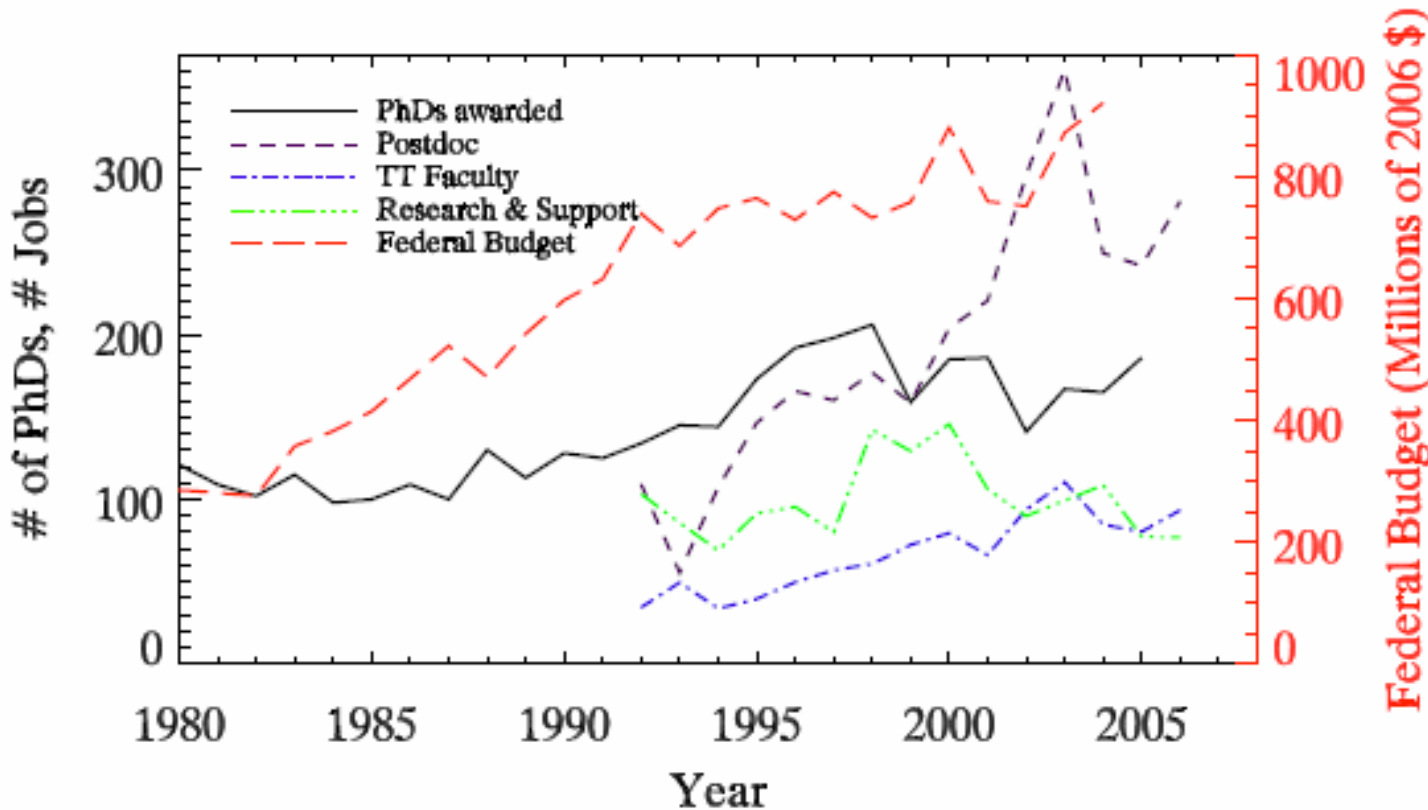
# Astronomical Employment Outlook



“Employment & Funding in Astronomy” by Seth+10

Do I want to wager the next 6-10 years of my life on a 50/50 shot at a permanent position?

# Astronomical Employment Outlook



“Employment & Funding in Astronomy” by Seth+10

Late in grad school I developed a plan...

1. If an academic job (somehow) fell into my lap...
2. If I thought I was on track for a Nobel prize, I'd keep going
3. Most likely, I needed to build desirable employment skills

# My Employability Plan

## **Intellectual skills**

- Programming/  
Modeling
- Interpreting Data
- Physics

## **Technical Skills**

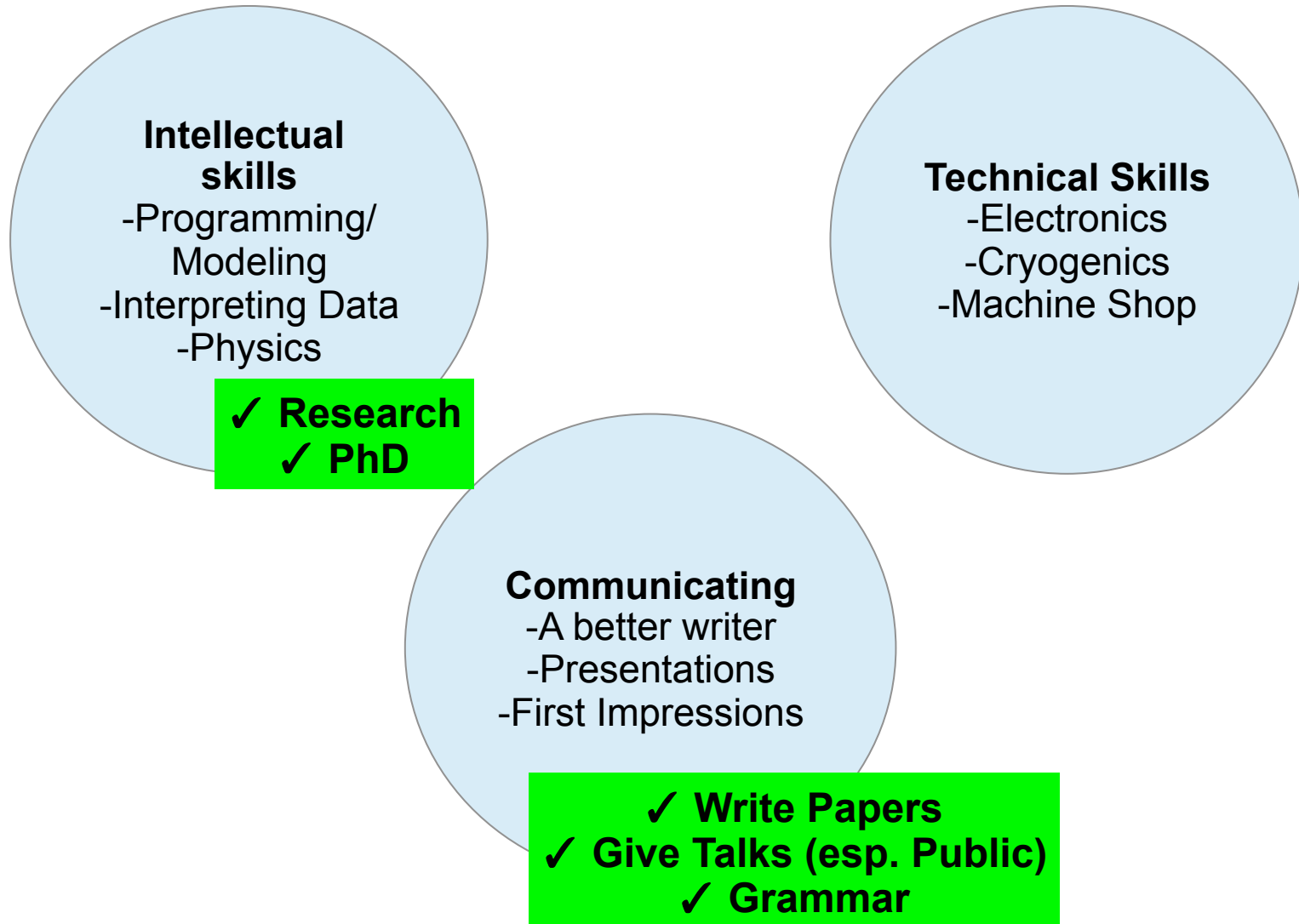
- Electronics
- Cryogenics
- Machine Shop

## **Communicating**

- A better writer
- Presentations
- First Impressions



# My Employability Plan



# My Employability Plan

## Intellectual skills

- Programming/Modeling
- Interpreting Data
- Physics

- ✓ Research
- ✓ PhD

## Technical Skills

- Electronics
- Cryogenics
- Machine Shop

**Find a Postdoc to Build Skills**

## Communicating

- A better writer
- Presentations
- First Impressions

- ✓ Write Papers
- ✓ Give Talks (esp. Public)
- ✓ Grammar

# How did I get the job?



Large Established Organizations

- Stability
- Branding
- Internal Mobility (vertical and horizontal)

When I felt my skills were honed I began to look for jobs.

Only jobs that I thought I would enjoy for 5+ years.

**GENERAL  
DYNAMICS**

**NATIONAL  
INSTRUMENTS™**

*No Shotgun Approach!*

**USAJOBS®**  
"WORKING FOR AMERICA"

**Raytheon**

  
**Newport®**

# How did I get the job?



Friends on the inside...

- Their jobs
- Work environment
- Hiring process**

# How did I get the job?

- Electronic Application
  - Understand the job description
  - Be aware of automated systems**
  - Use buzzwords in your application
- One month later: email contact
- Two months: On-site interview (4-5 hours)
  - HR contact
  - Direct Supervisor
  - 45 minute seminar
  - 4 individual meetings with colleagues
  - HR again
  - Have professional business cards**
- Thank you emails to everyone I met**
- I contacted HR every two weeks to maintain communication
- Four months: employment offer



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**“5 minutes early is on time, on time is late”**

**Stand out from other applicants**

**Leave a positive impression with everyone**



# Astronomers have valuable skills!

- Basic Programming
- Developing Physics-driven Models
- Working with actual data
- Writing telescope/grant proposals
- Professional Communication
  - Writing
  - Public Speaking



(GenericMotivationalStockPhotos.com)

# Just for Fun- Does Money Drive You?

