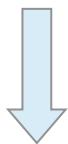


# Successfully Finding a Job Outside Academia



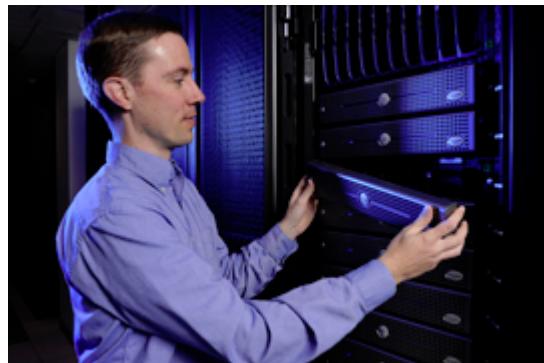
Michael Pavel  
“lame duck” IGRINS Postdoc



# Where exactly am I going next?



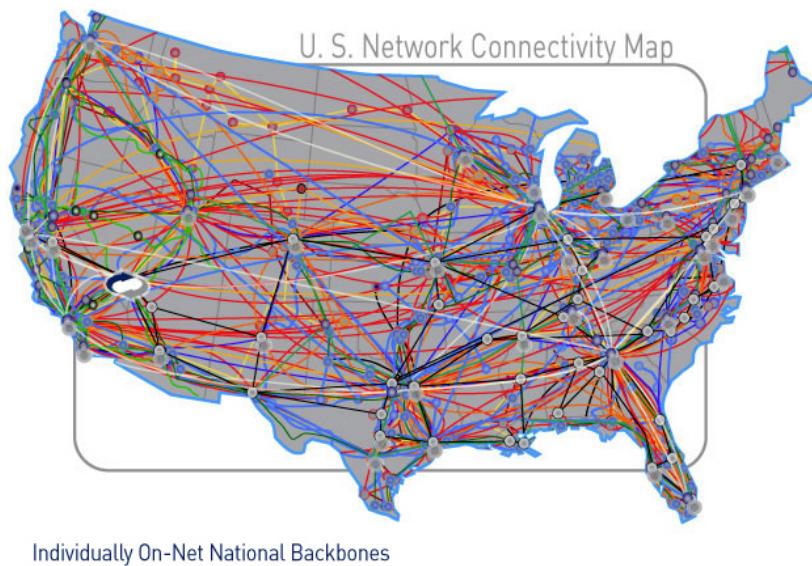
FFRDC – Federally Funded Research and Development Center



# 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**

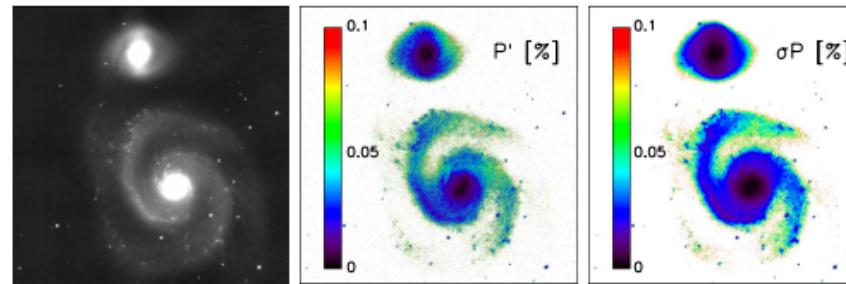


# Why Hire an Astronomer?

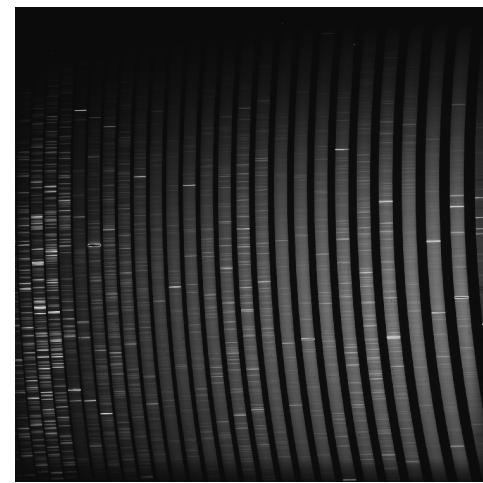
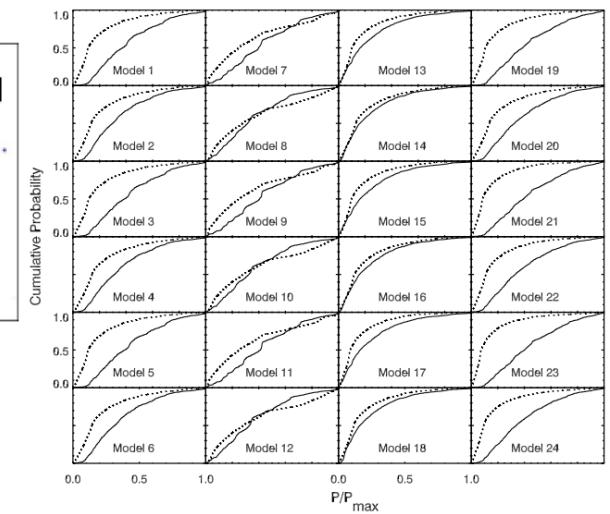
Hardware



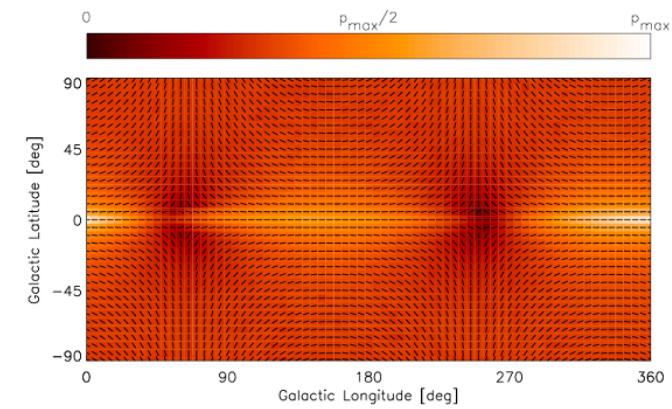
Data



Modeling

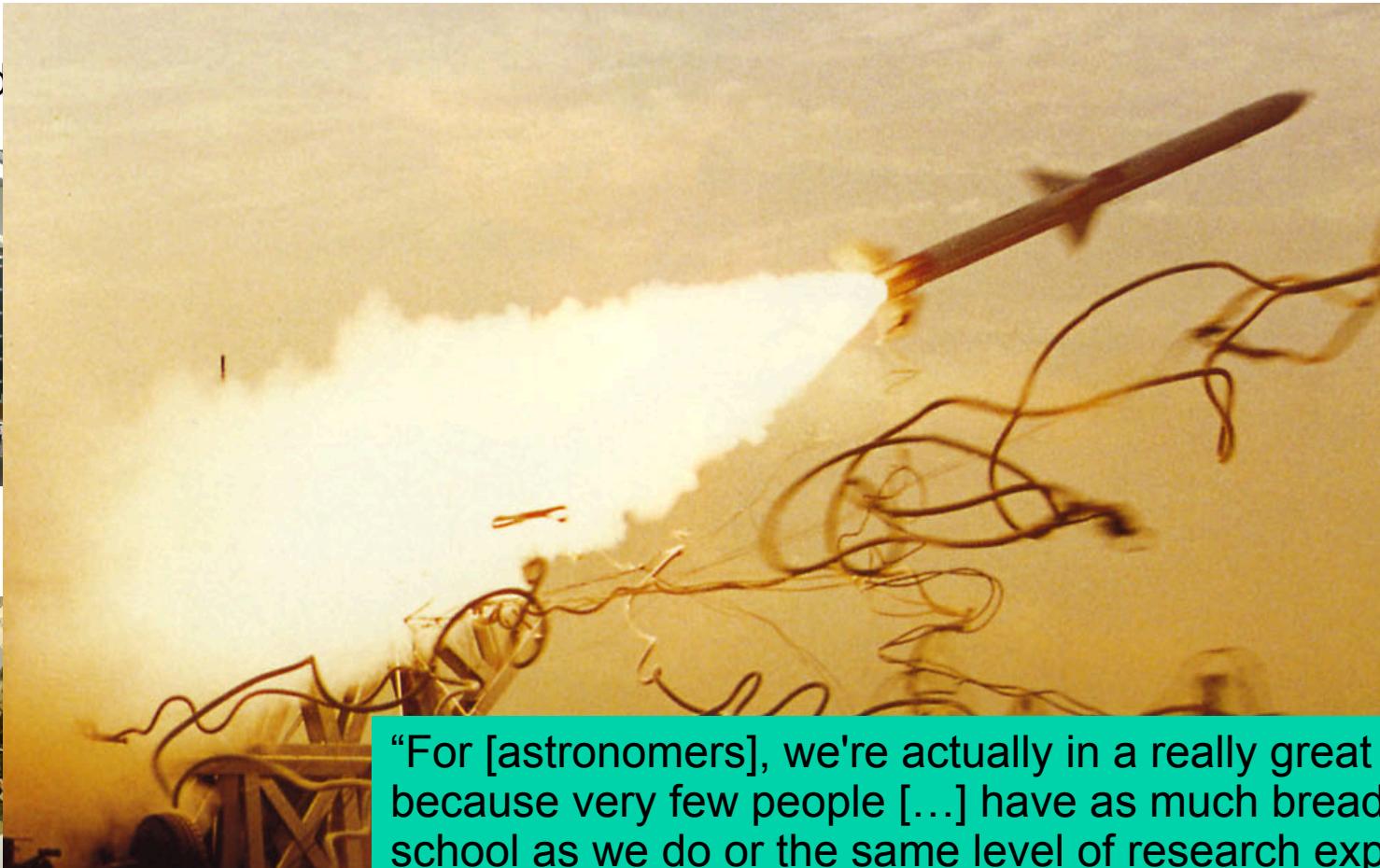
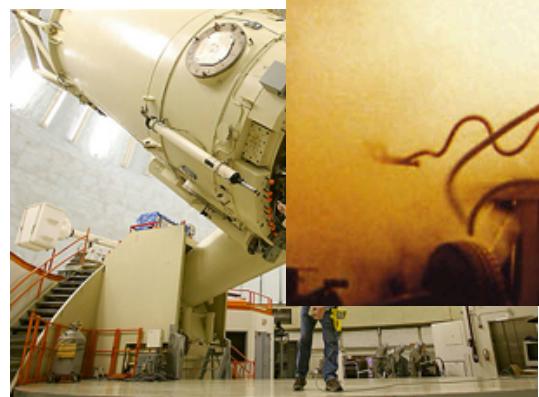


Actual IGRINS spectrum!

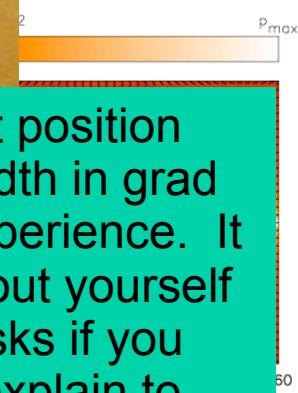
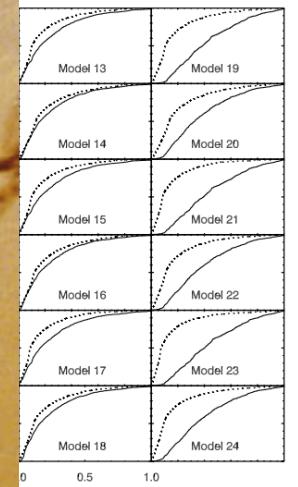


# Why Hire an Astronomer?

Hard



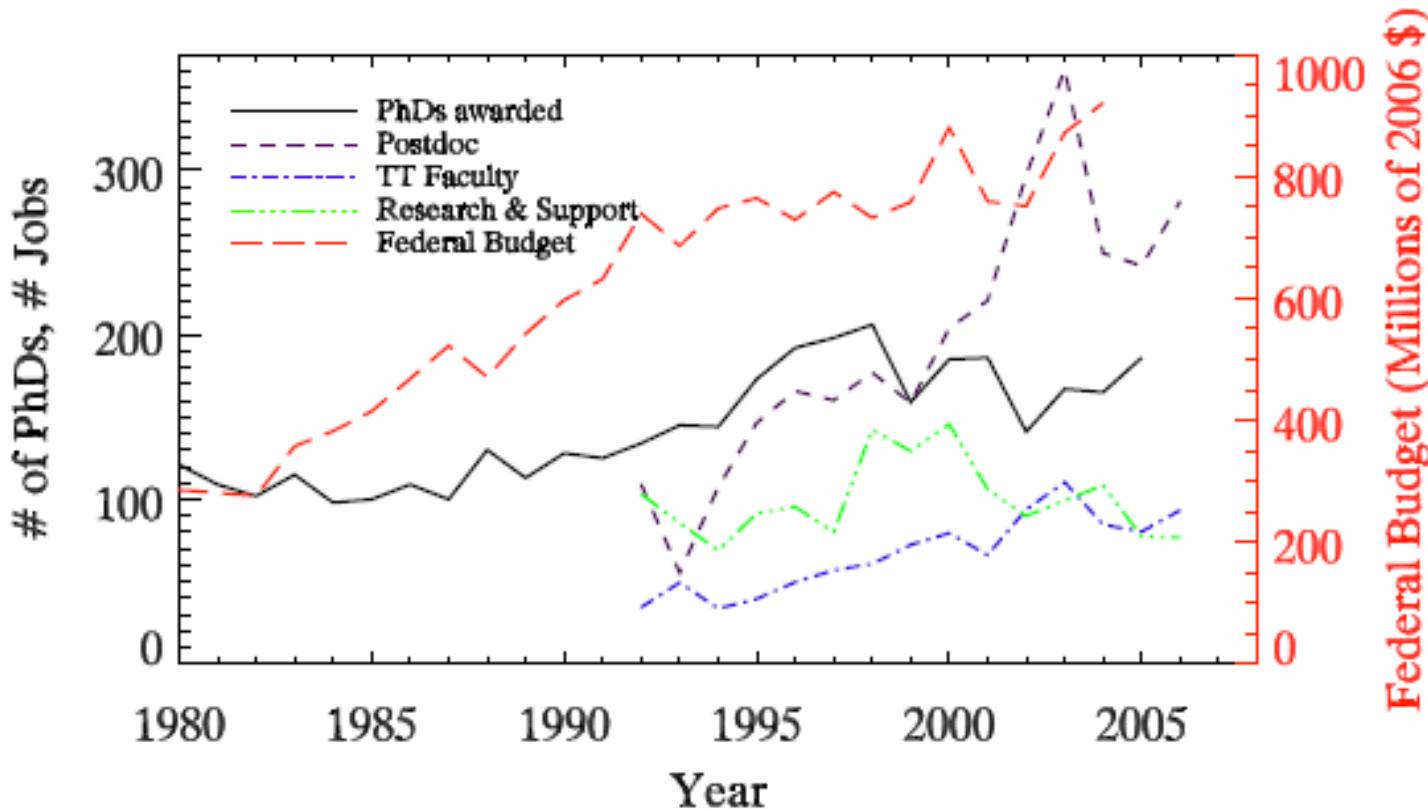
Modeling



“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 TECN spectrum.

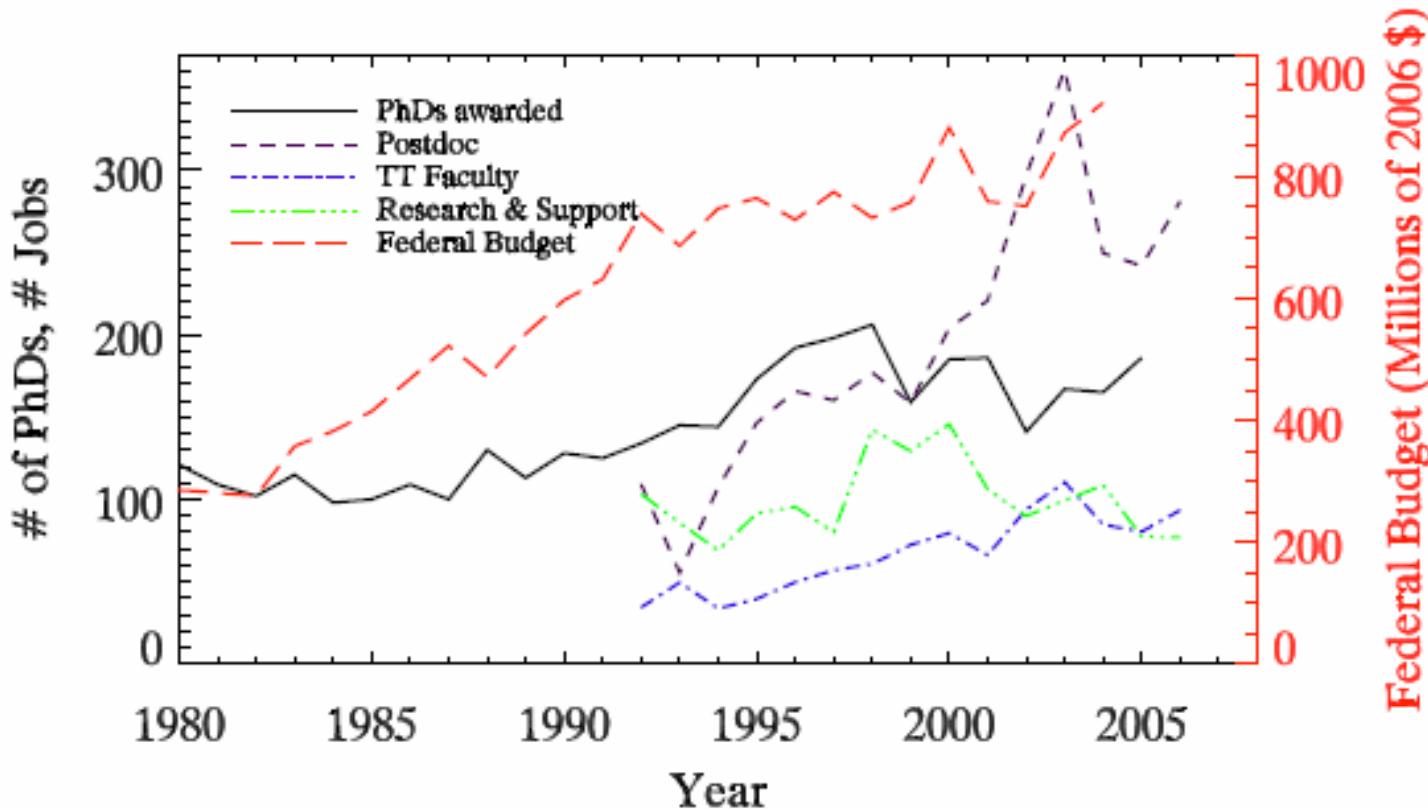
# Astronomical Employment Outlook



“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

## Intellectual skills

- Programming/  
Modeling
- Interpreting Data
- Physics

✓ Research  
✓ PhD

## Technical Skills

- Electronics
- Cryogenics
- Machine Shop

## Communicating

- A better writer
- Presentations
- First Impressions

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

# 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?



*No Shotgun Approach!*

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™**

**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



# 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



# 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?

