

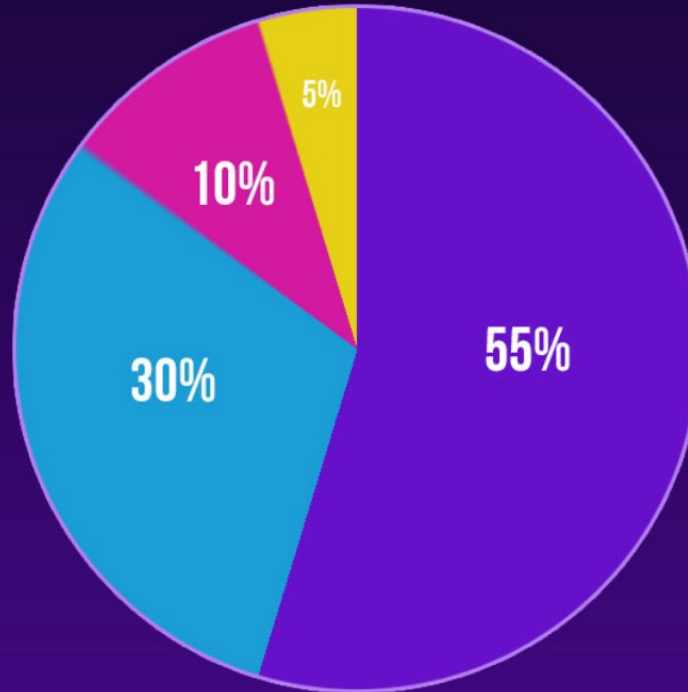
WHAT YOU NEED TO KNOW ABOUT GETTING A FACULTY JOB

CENTER FOR

ASTROPHYSICS

HARVARD & SMITHSONIAN

WHERE DO ASTRONOMERS WORK?



● UNIVERSITIES ● GOVERNMENT AGENCIES ● PRIVATE COMPANIES ● OTHER

<https://littleastronomy.com/where-do-astronomers-work/>

WHY SHOULD YOU LISTEN TO ME?

Offers and **acceptances**

Postdoc offers:

- **2001:** CfA Fellowship, Jansky Fellowship, Cambridge IoA Fellowship, NOVA Fellowship
- **2004:** Carnegie Fellowship, Carnegie-Princeton Fellowship, STScI Institute Fellowship, U.Vic HIA Fellowship, U.Arizona Bok Fellowship, **Hubble Fellowship**

Faculty job offers:

- **2007:** Harvard, Yale, STScI, Leiden, **U. Hawaii**, Australian National University
- **2011:** **Australian National University** (again)

WHAT YOU NEED TO GET ONTO SHORT-LISTS

- 3 Reference Letters
- Publication List
- Research Statement
- Teaching Statement
- Diversity Statement
- CV

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REFERENCE LETTERS

- Referees need to be **active, well-known, highly respected** in **your** field of research
- They preferably need to have **worked with you** (but not always)
- One referee should preferably **not** be from your current institution
- They need to be able to write that you are one of the **best potential faculty members** they have seen.

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HOW DO I KNOW IF SOMEONE IS ACTIVE?

- ADS: at least 1 first author paper / year
(exceptions: leading large team, building instruments)

WELL KNOWN?

- Invitations to speak at conferences
- Many different co-authors on his/her/their papers

HIGHLY RESPECTED?

- ADS: highly cited. Papers with more than 100 citations are considered highly cited.
- Check total citations, normalized citations and h-index. Compare with others in the field.
- Citations rise with time since PhD and vary with field.

WHO WILL NEED TO WRITE LETTERS

(Who do you need to impress?)

- Your PhD supervisor (keep in touch!)
- Collaborator 1 – from your current institution (postdoc supervisor, close collaborator, someone who works with you – if you have really impressed him/her/them).
- Collaborator 2 (preferably external to your current and PhD institution), current or previous Department Chair or Director (if they know you)

Writing good reference letters takes a lot of time and effort.

You need to **really impress** these people for them to write you good letters!

HOW DO I IMPRESS THEM?

- Do lots of consistently good work.
- Do not bother them with minor problems.
- Interact with them on a regular basis (weekly, bi-weekly). Bring lots of results.
- Don't miss meetings or deadlines.
- Give them excellent first drafts of papers
(learn how to write papers by reading papers).
- Learn from them. Make sure they do not have to say the same thing to you twice.
- Act like a faculty member. Join faculty-level committees, be visible, organize events, seminar series, or colloquia. Be involved in your department like a faculty member would.

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WHAT TRACK RECORD DO I NEED?

Look up recent hires of the organizations you will be applying to

How many first author / total publications did they have?

How many citations?

What jobs did they have prior to getting the faculty job?

Note that these vary substantially with field, and there are different pathways to the same job.

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RESEARCH STATEMENT

Usually 3-5 pages of what research you have done and your **research vision** for the faculty position. What will you do there that will make them want to hire you?

Do research into each organization and department.

What do their faculty work on?

Whose work does yours link with or complement?

What telescopes and facilities do they have access to?

Are they building instruments?

Do they have a strategic plan or set of science priorities?

Imagine yourself in the department. What is the most exciting research you would like to do there that uses their facilities, connects with their faculty, and builds on your previous research?

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- **Teaching Statement**
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TEACHING STATEMENT

Usually 1-3 pages of what teaching you have done and your **teaching vision** for the faculty position.

What helps?

- Teaching experience. The more the better. Teaching colleges require more teaching experience and (usually) innovative teaching, such as active learning.
- An interest in innovation in teaching. Take classes on innovative teaching styles.
- An idea of what classes you would like to teach at each level, and how you can bring fresh new ideas to those classes.

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DIVERSITY STATEMENT

Usually 1-3 pages of your thoughts on diversity and what contributions you have made to diversity and inclusion

What helps?

- Leadership (ideal) or contributions to IDEA committees, or other department or organization-wide diversity & inclusion activities
- Leadership or or contributions to education or outreach programs for students from under-represented minority groups, or underprivileged communities
- Successful mentoring or supervision of a diverse range of students

“I am supportive of diversity” without substance won’t be competitive

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WHAT CAN I DO TO BOOST MY CV?

- Apply for grants. Departments are looking for people with a proven track record of bringing in grant income (fellowships count)
- Apply for telescope and/or supercomputing time
- Be on committees and working groups that faculty are on
(e.g., telescope time allocation committees, colloquium committees, IDEA committees, student thesis committees)
- Make your organization, division, department or research group a better place to be (organize a seminar series, run your group's meetings, organize a journal club).
- Supervise students (undergrad, REU, interns, co-supervise PhD students)

COVER LETTER

A cover letter is needed for faculty job applications.

Do spend time on your cover letter. This could be 1-1.5 pages.

- 2-3 paragraphs about yourself
- 2-3 paragraphs about why you are applying for their faculty job
- What you will bring to the department and the institution
- Who do you envisage collaborating with or co-supervising students with
- Mention their facilities / telescopes / partnerships and how you will utilize them



INTERVIEW

- Job talk
- Selection committee interview
- One-on-one meetings with faculty members
- Meeting with students
- Meeting with postdocs (sometimes)
- Dinners, lunches
- Class-style lecture (especially at teaching colleges)

Preparation

Really imagine yourself in the role.

- what research you would do,
- what teaching you would do,
- who you would collaborate with,
- what students projects could you offer

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JOB TALK

Do your research about department, and make it clear you have thought about the department, how you would fit in, and what you would bring to the department.

- Talk about your previous work (include your first author paper references), not just those of your collaborators
- Talk about the research you will do at their institution. Visionary, timely, feasible.
- Include their facilities in your talk
- If they are involved in partnerships, or future telescopes, talk about how you will use these partnerships and telescopes.
- If you have possible student projects in your future research, mention it!
- Give credit to your students / collaborators

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SELECTION COMMITTEE INTERVIEW

Your research about the department will be critical at this interview

Typical questions:

1. **Ice breaker:** describe your previous work and what research you would do at the department. Be excited by your work. Mention the department's telescopes/facilities.
2. **Leadership:** we're looking for a leader in ..., tell us about your leadership in astronomy. Give examples!
3. **Future plans:** tell us your 3-year, 5-year, 10-year plans. Include research, building a research group (what size group), what grants you will apply for. What programs would you like to lead. Connect to what they're already doing and their future partnerships/telescopes/plans.
4. **Research group / grants:** describe the research group you would like to lead. How will you fund it?

Foreign country interviews: make sure you know what grants are available in that country and what you would apply for



SELECTION COMMITTEE INTERVIEW

More Typical questions:

1. **Supervision:** describe your supervision style. What would you do if one of your students was struggling. Have you ever had supervision hurdles and how did you overcome them?
2. **Department specific:** Why are you applying for this position? What do you find attractive about working in our department? Who would you collaborate with?
3. **Teaching:** describe your teaching style. Describe your experiences teaching. What classes have you taught? What classes would you like to teach?
4. **Diversity:** describe your contributions to diversity and inclusion.
5. **Wild cards:** What are your strengths / weaknesses. What do you most regret in your career? If I gave you X dollars (a large amount), what would you do with it? If I gave you Y (a large amount) of telescope time, what would you do with it?
6. **Wrap up:** Do you have any questions for us? Do have questions ready. Leadership opportunities within the department or university, strategic plan. plans for supercomputing facilities / telescopes / partnerships

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ONE-ON-ONE MEETINGS



Some faculty members will have a list of questions for you, and others will not. Some will carry the conversation, and others will not.

They are looking for someone who they would like to have as a colleague. Many faculty are like families and are looking for someone who will fit in well.

You need to be prepared to have a **productive and positive conversation** with all faculty members. **Be ready** with specific topics to discuss.

Do your research! ADS and the department website is your friend.

What research are they doing? What else are they involved in (instruments, telescopes)? Think about how your research connects with theirs. Are there projects you could co-supervise together? If in doubt, read a paper of theirs and ask a question to start a science conversation.

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STUDENT MEETINGS

Most faculty interviews include a meeting with students. Student opinions **do count** in most departments.

Sometimes there is a student chair assigned who runs the meeting interview-style, but mostly the students will be in the room expecting you to start talking to them about your vision for student projects and teaching.

Do:

- Introductions – find out their names and what they're working on
- Talk about your great potential student projects
- Mention what grad classes you could teach, and how you would bring innovation to those classes
- Ask them if they're happy

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DINNERS / LUNCHESES

These are for the department to learn more about you and whether you will fit in in their department. These are very helpful to you for learning about the department and their priorities.

Sometimes:

- They will focus on you and your science and will ask additional questions about your research / teaching / possible student projects
- They will discuss local department or university politics
- They will talk about non-work activities and interests

Try to find common ground, e.g., if someone mentions they like American Idol, and you watch American Idol, say so!

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CLASS-STYLE LECTURE

This is usually on a topic of your choice to the entire department including students.

Do:

- Prepare a lecture on a topic you love, so that you will have enthusiasm in the lecture
- Prepare and practice this really well
- Include innovative teaching methods and feedback (phone surveys, clickers, think pair share, flipped classroom, etc)
- Add humor (if you can)



<https://echo360.com/5-ways-to-make-your-lecture-more-interactive-and-engaging/>

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WHAT ELSE DO I NEED TO KNOW?

While interviewing:

Self-care: Interviews are exhausting. You might be “on” for two days straight from 9am-10pm.

- Get enough sleep
- Prepare, and then take it easy in the day or two before the interview (hobbies, sports, reading, yoga, etc)
- Try not to schedule interviews on weeks when you have a deadline

At your current institution:

- Be **VISIBLE!**
- Make sure the faculty at your institution **know who you are** and **what you're working on**.
- Go to colloquia, department social events, interact with the staff
- **Socialize** with your peers, postdocs, **and senior researchers** in your field (at conferences, at your home institution, with visitors/colloquium speakers in your field).

Faculty at the department you are interviewing can and do contact their collaborators/friends in your current department and ask them what they think of you. It helps if they know you, or of you, and have a good opinion of you.

ASK ME QUESTIONS