

# Resources for Postdocs

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## Introduction

Pursuing a postdoctoral positions is **one** direction that a graduate student can pursue after defending their Ph.D. This document was written to provide some guidance in this aspect, with a focus in atmospheric science. There is a lot of information that is not “common knowledge” in this process, and it is often expected that students figure out their postdoctoral future for themselves. Of course, it is also perfectly fine to not want to pursue a postdoctoral position, especially if you know you do not want to stay in academia. Postdocs are often severely underpaid given their qualifications (except for a few national fellowships). If you truly love doing research, or need some time to figure out the next steps in your life, then a postdoc may be right for you. Just be aware that funded postdoc positions can range anywhere from a few months, to a few years.

If you are interested in pursuing a postdoc, I suggest you to: (1) identify scientists who you want to work with, in (2) places you can see yourself happy. The former is important because you want a mentor that is not only a good scientific fit, but also one that has your best interests at heart. Your future career is quite dependent on reference letters. The latter is important because you **need** to be happy if you want to have a successful postdoc. “Secondary” factors such as distance to partners/family, population density of the area, cost of living, etc. should not be ignored, because if you are not happy, you **will not do good science!**

There are three main ways to secure funding for a postdoc in atmospheric science. The first and most common way is to apply for an open position that has already been funded (**funded** opportunities). The two other ways, a **national postdoctoral fellowship** or an **institutional fellowship**, are a bit more prestigious, but also come with a few downsides. Each funding opportunity is described in detail below.

## Funded Postdocs

By and far the most common way to secure a postdoc position is by applying to an advertisement for a postdoctoral scientist. Many principal investigators, both in academia and government labs, often advertise positions for postdoctoral scientists through the ES Jobs list-serv [[https://mailman.ucar.edu/mailman/listinfo/es\\_jobs\\_net](https://mailman.ucar.edu/mailman/listinfo/es_jobs_net)]. These positions are **already funded** under a grant of the principal investigator, and more likely than not, **have specific timelines and deliverables associated with the grant**. Some advisors will allow you to spend 50% of your time on the advertised project and the other 50% on your own interests, but that is not always the case. It is generally a good idea to peruse the list-serv to see if there are any open positions that might interest you. For these positions, you typically will have to write a cover letter, provide your CV, and three letters of reference. A virtual interview will likely occur.

## Fellowships

Fellowships are typically postdoctoral positions that allow for near-unlimited academic freedom. If you want to pursue your own ideas, or want to work with a mentor who does not have funding for you, applying for a fellowship is a great choice. Furthermore, national fellowships allow you to pick wherever you want to go, so fellowships are also a fantastic choice if you are location-constrained. However, while fellowships are considered more prestigious, there are a few drawbacks. First, and foremost, they often require **a lot of effort**. The applications almost always require you to write a scientific proposal which can range from a few pages to ten pages (NSF). While the experience of writing a proposal can be particularly good for a young scientist, it takes a lot of time and effort. If you want to apply for multiple fellowships, consider recycling your proposals. Postdoctoral fellows are also often overlooked, in the sense that their success is not directly tied to the success of their advisor (in contrast to when a postdoctoral scientist is on a funded grant).

## National Fellowships

National fellowships are fellowships that are funded typically through a National organization (NOAA, NSF, NASA). These are often the most amount of work, but can be highly rewarding in terms of intellectual freedom that they provide. Since the McDonnell Fellowship was discontinued in 2021, there are two that I am immediately aware of right now:

- NOAA CG & C, winter deadline
- NSF (limited to US citizens/green card holders (?)), rolling deadline

Healthcare can be an issue for external postdoctoral fellows; generally you are not employed by a specific institution but rather the funding organization, which disqualifies you from institutional healthcare. It is a good idea to figure these

things out before putting in the time and effort to write a fellowship. See the timeline section for more details.

## Institutional Fellowships

Institutional fellowships, on the other hand, are fellowships that are provided by a specific university/department. They are also prestigious but require you to identify one, if not more than one advisor at the university who would be a good match for you. Typically you should provide ample justification for why a particular department is the perfect fit for your research interests. These usually have **deadlines throughout the fall semester**. I've listed a few off the top of my head here, but they are quite limited in scope and there are definitely more out there, especially ones that are focused on DEI.

- NCAR Advanced Study Postdoctoral Fellowship
- MIT Houghton/Lorenz Postdoctoral Fellowship Program
- Harvard University Center for the Environment, Environmental Fellows Program
- University of Chicago
- California President's Postdoctoral Fellowship Program
- UC Berkeley Miller Institute Research Fellowship
- Lamont-Doherty Earth Observatory Postdoctoral Fellowship
- Columbia University Earth Institute Postdoctoral Fellowship
- CIMES/GFDL/Princeton Postdoctoral Research Program
- Princeton University Harry Hess Postdoctoral Fellowship Program
- Scripps University Postdoctoral Program
- Cooperative Institute for Climate, Ocean & Ecosystem Studies (CICOES)
- University of Oklahoma

## Timeline

In general, it is advised to contact potential mentors **around 9-months to a year before you graduate**. This may seem very early, but you want to start this process early, especially if you are interested in applying for a fellowship, since those applications take time to write. If you contact someone early enough, you may even find out early about funded opportunities. Finding out about postdoctoral opportunities can be as simple as cold-emailing a number of principal investigators you'd like to work with. It is also a good idea to attend conferences in the year leading up to your graduation (or even the year before), since networking at conferences is quite common to secure postdoctoral scientist positions.

If you are applying to a fellowship, you should contact a potential host at least a few months (the earlier, the better) before the application is due, to set up a meeting to discuss research fit and to allow yourself time to write the proposal.

## **Post-Offer**

Coming soon!