

## Major Fellowships for Physicists & Astronomers

This document lists scholarships and fellowships over \$10,000 for graduate students in Physics and Astronomy. The fellowships are organized by stage of a student's graduate career:

- Fellowships for Incoming Graduate Students: lists fellowships aimed at undergraduate seniors and 1<sup>st</sup> year graduate students.
- General Fellowships for Graduate Students: lists fellowships that are open to students at various points in their graduate careers. This includes several predoctoral fellowships.
- Dissertation Fellowships: provides options for students who have been admitted to candidacy and are in the dissertation (writing and research) stage of their career.
- Postdoctoral Fellowships: lists fellowships for students who have completed their dissertation and are seeking independent funding for their postdoctoral work.

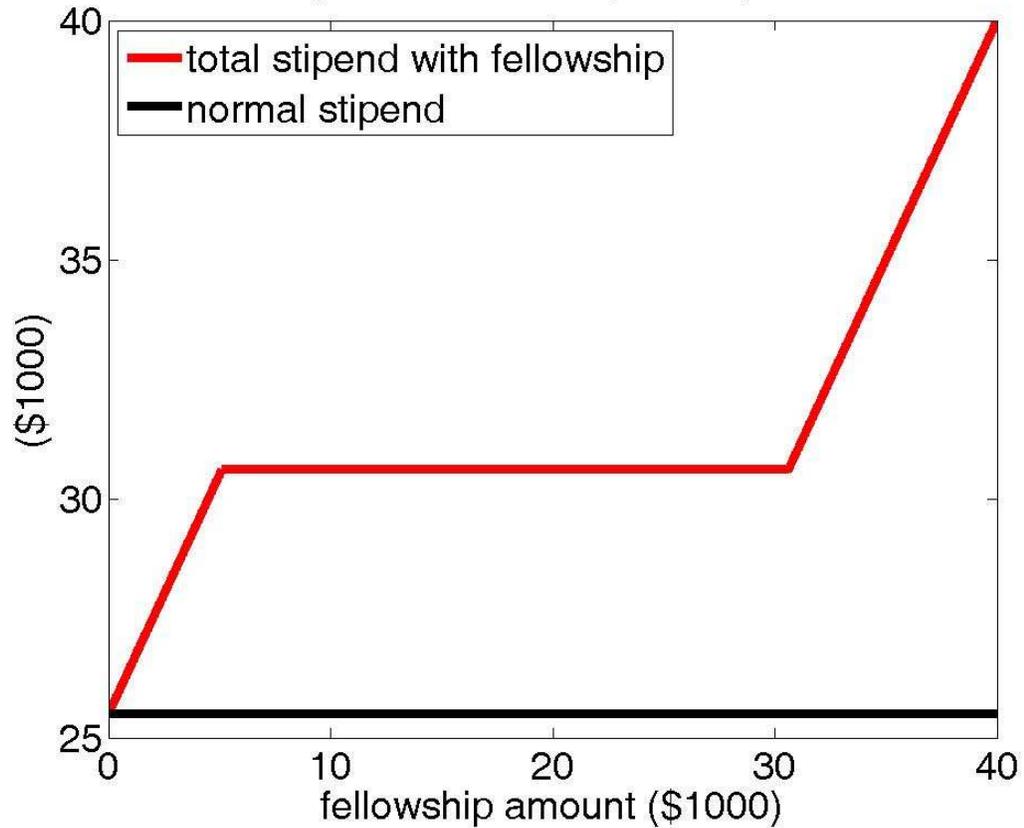
Each section contains information for each fellowship including deadlines, award amounts and website reference. **We have done our best to update the information, but you should check the fellowship websites for updated deadlines, stipend amounts, and eligibility rules.** The *Notes* column gives a snapshot of the award (e.g., targeted audience, funding available in addition to stipend); this section also describes whether the fellowship focuses on policy, education or research. Students are strongly encouraged to refer to the fellowship's website for the most up-to-date information. The major grantors are highlighted. The *Int'l* column is a quick indication whether or not international students and scholars are eligible for these awards.

There are a large number of smaller grants (\$5,000 and less). These awards are appropriate for support for short-term needs such as research-related travel, dissertation completion and print charges.

### Why Should I Apply?

- IS THIS A TRICK QUESTION? ☺
- Prestige of being awarded a major fellowship is significant, with benefits that will extend well into your career, whether in industry or in academia.
- Give yourself a raise

## Impact of Fellowship on Stipend



- Ability to define or choose your own research project.
- Demonstrate to yourself, the department and future employers that you have the ability to successfully apply for and receive funding – a critical component in tenure-track positions.

### **When Do I Start the Application Process?**

Applying for a major grant requires initiative and planning. While most grants have deadlines in mid-fall and early winter, it is imperative that students start preparing their application(s) well in advance. The materials required vary by fellowship but usually include a well-defined project description, letters of recommendation, scientific justifications and, in some cases, support from a researcher at the granting institution/foundation. All these factors take time to create, organize and assimilate – so it is critical that the application process begin well in advance of the deadline(s).

## **Rice University Resources**

### **Departmental Support**

Most of the Physics and Astronomy faculty have gone through this process in the (not so?) distant past, and they can provide valuable advice. Your current advisor, or one you are considering working with, should be able to help focus your efforts and fine-tune your applications. (Fellowship money you earn will also save them money, so don't be afraid to approach them.) If you don't have a mentor, Professors Tom Killian, Pat Hartigan and Doug Natelson have agreed to serve as fellowship contacts.

### **Fondren Library**

The main library is a goldmine for books and references related to grant writing, scholarship and fellowship listings and writing CVs and resumes for scientists. Catalog is searchable online at <http://www.rice.edu/fondren/>.

## Fellowships for Incoming Graduate Students:

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Notes
Lucent Technologies: Bell Labs Graduate Research Fellowship Program	\$17,000	Jan		<a href="http://www.lucent.com/news/foundation/blgrfp/index.html">www.lucent.com/news/foundation/blgrfp/index.html</a>	Designed to increase the number of minorities and women in the fields of science, math, engineering and technology. Intended for graduating seniors, but 1st year grad students also eligible. Each participant is expected to spend the first summer working with their mentor at Bell Labs on a research project in their area of interest; during this time, students receive salaries commensurate with their experience. In addition to stipend, cover tuition, \$250 for books and \$1K for travel to conference(s). Renewable on an annual basis for up to 4 years.
National Physical Science Consortium (NPSC): Graduate	\$16,000	Nov		<a href="http://www.npsc.org">www.npsc.org</a>	These are industry sponsored fellowships. Number of awards and the associated selection process depends on participating employers.
U.S. Department of Energy: Fusion Energy Sciences Fellowship Program	\$19,800	Jan		<a href="http://www.ornl.gov/orise/edu/DOE/gi-gFES.htm">www.ornl.gov/orise/edu/DOE/gi-gFES.htm</a>	For 1st and 2nd year grad students (prior to being admitted to candidacy). Must work at one of the Universities with DOE research facilities. Some additional money available for travel. Administered by ORAU.
U.S. Department of Energy: Recovery Act Fellowships	\$50,500 incl. tuition	Nov		<a href="http://www.scied.science.doe.gov/SCGF.html">http://www.scied.science.doe.gov/SCGF.html</a>	For 1st and 2nd year grad students.
U.S. Department of Homeland Security (DHS), Science and Technology Directorate: Graduate Fellowships	\$27,600	Feb		<a href="http://www.ornl.gov/dhsed/">http://www.ornl.gov/dhsed/</a>	Managed by ORAU. In 2003, 50 awards were granted (out of 1550 applications).

## General Fellowships for Graduate Students:

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
American Association of University Women (AAUW): International Fellowships	\$18,000 - \$30,000	Dec		<a href="http://www.aauw.org/fga/fellowships_grants/international.cfm">http://www.aauw.org/fga/fellowships_grants/international.cfm</a>	International Fellowships are awarded for full-time study or research to women who are not U.S. citizens or permanent residents. Both graduate and postgraduate study at accredited institutions are supported.
American Association of University Women (AAUW): American Fellowships	\$20,000 - \$30,000	Dec		<a href="http://www.aauw.org/fga/fellowships_grants/american.cfm">http://www.aauw.org/fga/fellowships_grants/american.cfm</a>	American Fellowships support women doctoral candidates completing dissertations or scholars seeking funds for postdoctoral research leave from accredited institutions. Applicants must be U.S. citizens or permanent residents. Candidates are evaluated on the basis of scholarly excellence, teaching experience, and active commitment to helping women and girls through service in their communities, professions, or fields of research. Short-term publications grants of \$6K are also available.
Congressional Black Caucus Foundation, Inc: Congressional Fellows Program	\$25,000	Apr		<a href="http://www.cbconline.org/Congressional_Fellows.html">www.cbconline.org/Congressional_Fellows.html</a>	The Congressional Fellows Program is CBCF's premier leadership development program for persons with graduate or professional degrees. The congressional office placement component of the program affords Fellows the opportunity to gain invaluable experience and insight as they assist in the development of legislative and public policy initiatives while working as congressional staff.
Fannie and John Hertz Foundation: Graduate Fellowships in the Applied Physical Sciences	\$25,000	Oct		<a href="http://www.hertzfoundation.org/app.html">www.hertzfoundation.org/app.html</a>	The Hertz Foundation's Graduate Fellowship award, which is based on merit (not need) consists of a cost-of-education allowance and a personal-support stipend of \$25K. The Fellowship award is renewable annually (upon a showing of satisfactory progress toward receipt of the Ph.D. degree) for a total Fellowship tenure of no more than five years. Fellowship is restricted to students from certain schools, Rice being one.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
Ford Foundation: Pre-Doctoral Fellowships for Minorities	\$17,000	Nov		<a href="http://www7.nationalacademies.org/fellowships/fordpredoc.html">http://www7.nationalacademies.org/fellowships/fordpredoc.html</a>	Open to students beginning their graduate careers in the Fall. \$6K in education allowance. National Research Council (NRC) administers the awards and progress of award recipients is monitored. Award recipients attend one Ford Fellows conference (expenses paid).
Fulbright Program, U.S. Department of State: Grants for Graduate Study & Research Abroad	Varies	Oct	✓	<a href="http://www.iie.org/fulbright">www.iie.org/fulbright</a>	The Fulbright Program aims to increase mutual understanding between the people of the United States and other countries, through the exchange of persons, knowledge, and skills. Nominations are made by the University, a process managed by the Fellowship & Scholarship office. Contact Dr. Patricia Bass. Fulbright has programs for both U.S. and non-U.S. citizens.
IBM: Ph.D. Fellowships	\$17,500	Dec		<a href="http://www-3.ibm.com/software/info/university/fellowship/phd/">www-3.ibm.com/software/info/university/fellowship/phd/</a>	Covers tuition and fees in addition to stipend. Must be nominated by faculty member. Awarded for one year, renewable up for up to 3 years depending on students academic standing. An internship is expected, but not required. Limited to students with interests in line with IBM research and development (see website for more details). Nomination forms available online mid-October through mid December. International students eligible.
Josephine de Karman Fellowship Trust: Josephine de Karman Fellowships	\$16,000	Jan		<a href="http://www.dekarman.org">www.dekarman.org</a>	Limited to one year. Award must be administered through the University. Graduating seniors - ABD graduate students eligible. Limited to one year, non-renewable. International students eligible on condition the award is used while they are in the U.S.
Link Foundation: Energy Fellowship Program	\$21,500	Dec		<a href="http://www.linkenergy.org">http://www.linkenergy.org</a>	2 year fellowships to support education and innovation in the area of societal production and utilization of energy. Additional \$2.5K to support research (e.g., equipment) and \$1K for travel to 1 conference. Candidates must have been accepted to a Ph.D. program. International students are eligible. Preference given to candidates who have a well-defined thesis direction but who still have enough time remaining working toward their Ph.D. that receipt of a Link Foundation Fellowship could make a difference.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
Los Alamos National Laboratory: Graduate Research Assistant Program	\$32,644 - \$54,776	Apr		<a href="http://www.lanl.gov/education/grad/about.shtml">www.lanl.gov/education/grad/about.shtml</a>	year-round educational program that provides students with relevant research experience while they are pursuing a graduate degree. In some cases, students can arrange to conduct master's or doctoral thesis research at the Laboratory. Appointments are available for 90 days up to one year, with option for renewal based upon program requirements. Salary depends on stage in graduate program; salary is adjusted accordingly.
National Aeronautics and Space Administration (NASA)/ United Negro College Fund Special Programs Corporation: Harriett G. Jenkins Predoctoral Fellowship Program	\$16,000 - \$22,000	Feb		<a href="http://www.uncfsp.org/jenkinscsp/">http://www.uncfsp.org/jenkinscsp/</a>	Applicants must be a member of an underrepresented group that includes women, minorities, and disabled persons. 3 year fellowship. Intended to support student until candidacy; ideal for 1st year grad students. Additional \$8.5K tuition allowance available to University.
National Aeronautics and Space Administration (NASA): Graduate Student Researchers Program (GSRP)	\$18,000	Feb		<a href="http://fellowships.hq.nasa.gov/gsrp/program/index.cfm">http://fellowships.hq.nasa.gov/gsrp/program/index.cfm</a>	Additional \$3K student allowance and \$3K University allowance provided (restrictions apply). Ideal for 1st year students. Award is made to advisor on behalf of student (so advisor must be identified). Recipients must complete annual report. Renewable up to 3 years.
National Air and Space Museum (NASM) (Smithsonian Institution): Fellowships	\$20,000 - \$40,000	Jan		<a href="http://www.nasm.si.edu/getinvolved/fellow/gvrfellowinfo.cfm">http://www.nasm.si.edu/getinvolved/fellow/gvrfellowinfo.cfm</a>	9-12 month residency programs for students in doctoral programs interested in the history and science of aviation.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
National Consortium for Graduate Degrees for Minorities in Engineering and Science, Inc. (GEM): Graduate Fellowship Programs - M.S. Engineering, Ph.D. Engineering, Ph.D. Science	\$14,000	Nov		<a href="http://www.nd.edu/~gem/">http://www.nd.edu/~gem/</a>	Online application only. Ph.D. program only. Tuition and fees covered in addition to \$14K minimum stipend. Limited to participating universities; Rice is one of the participating schools
National Nuclear Security Administration Stewardship Science Graduate Fellowship (DOE)	\$32,400	Jan		<a href="https://www.krellinst.org/ssgf">https://www.krellinst.org/ssgf</a>	This fellowship supports graduate students planning full-time study for a Ph.D. in areas of interest to stewardship science areas such as <ul style="list-style-type: none"> <li>o High-energy density physics</li> <li>o Low-energy nuclear science or</li> <li>o Properties of materials under extreme conditions</li> </ul> * Applicants must be U.S. citizens or permanent resident aliens.
National Science Foundation (NSF): Graduate Research Fellowships	\$30,000	Nov		<a href="http://www.nsfgrfp.org/">http://www.nsfgrfp.org/</a>	Ideal for students early in their graduate careers. 1 <sup>st</sup> and 2 <sup>nd</sup> year students are eligible to apply with some limitations. Support is for 3 years. Additional \$10.5K cost of education allowance and one-time \$1000 travel award.
National Security Education Program (NSEP), Academy for Educational Development (AED): David L. Boren Graduate Fellowships	\$10,000 - \$28,000	Jan		<a href="http://nsep.aed.org/application.html">http://nsep.aed.org/application.html</a>	Applicants must be willing to sign a service agreement - details available on website. Fellowship designed to enable U.S. graduate students to pursue specialization in area and language study or to add an international dimension to their education. Ideal for students interested in foreign policy work. Language requirements apply. Award is for study abroad for 1 - 2 semesters. Limited opportunities for domestic study available.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
Phillips Academy: Andover Teaching Fellowship Program	\$18,500	Jan		<a href="http://www.andover.edu">http://www.andover.edu</a>	Independent high school teaching fellowship - 1 year training program
St. Lawrence University: Jeffrey Cambell Graduate Fellows Program	\$25,000	Feb		<a href="http://web.stlawu.edu/resources/positions/faculty/jeffcampfellow03.htm">http://web.stlawu.edu/resources/positions/faculty/jeffcampfellow03.htm</a>	The Fellows Program seeks to attract outstanding beginning scholars to campus to teach while working on their dissertations or terminal degree projects. Candidates must have completed coursework toward the Ph.D. or M.F.A. and must be members of underrepresented groups at St. Lawrence University and in American higher education, especially ethnic and racial minorities. The possibility of additional funds for travel to conferences and professional meetings, and office space with computer. The institution expects Campbell Fellows to be in residence for the academic year, to teach one course each semester in a department or program commensurate with their research interests, and to present a research-based paper to the faculty in the Fellows Lecture Series as well. St. Lawrence University is a liberal arts institution.
U.S. Department of Defense: Science, Mathematics and Research for Transformation (SMART) Scholarship for Service Program	\$38,000	Feb		<a href="http://www.asee.org/fellowships/smart/about.cfm">http://www.asee.org/fellowships/smart/about.cfm</a>	The SMART Scholarship for Service Program has been established by the Department of Defense (DoD) to support the education and recruitment of undergraduate and graduate students in Science, Technology, Engineering and Mathematics (STEM) fields. It involves internships and employment in national research labs after graduation.
U.S. Department of Defense: National Defense Science and Engineering Graduate Fellowship Program	\$27,000 - \$28,500	Jan		<a href="http://www.asee.org/ndseg">www.asee.org/ndseg</a>	DoD supports nearly 8000 graduate students annually, with an average 10% acceptance rate across disciplines. All applications must be submitted online. Intended for students in the early stages of their graduate careers. Covers 3 years; stipend increases by \$500 each year.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
U.S. Department of Health and Human Services (NIH): National Institute of General Medical Sciences	varies	varies		<a href="http://www.nigms.nih.gov/funding/trngmech.html#e">http://www.nigms.nih.gov/funding/trngmech.html#e</a>	Wide number of individual predoctoral and postdoctoral training grants for quantitative biologists (include biophysicist). Minority and other traditionally under-represented groups encouraged to apply. Several minority fellowships.
U.S. Nuclear Regulatory Commission: Graduate Fellowship Program	90% of salary	Sep		<a href="http://www.orau.gov/nrced">http://www.orau.gov/nrced</a>	Managed by ORAU. Pay 90% of salary for 24 months for MS candidates and 36 months for PhD candidates. Also cover tuition, reimburses for cost of books and course material and allows \$5K to university on behalf of the fellow. Applicant must commit to NRC employment for at least 2 years for each academic year of subsidized education, pass security clearance and have a 3.0 undergrad and 3.5 grad GPA. Application must be completed online
U.S. Office of Personnel Management: Presidential Management Intern Program (PMI)	\$34,451 - \$44,783	Oct		<a href="http://www.pmi.opm.gov">www.pmi.opm.gov</a>	Nominations must be made by the University. The Presidential Management Fellows (PMF) Program was established by Executive Order in 1977 to attract to the Federal service outstanding individuals from a wide variety of academic disciplines who have an interest in, and commitment to, a career in the analysis and management of public policies and programs. Recipients are assigned to various Federal agencies.

## Dissertation Fellowships:

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
Ford Foundation: Dissertation Fellowships for Minorities	\$21,000	Dec		<a href="http://www7.nationalacademies.org/fellowships/forddiss.html">http://www7.nationalacademies.org/fellowships/forddiss.html</a>	Supports students for their final year (must complete dissertation no later than the Fall of the following academic year). Advisor must sign candidacy verification form. National Research Council (NRC) administers the awards and progress of award recipients is monitored. Award recipients attend one Ford Fellows conference (expenses paid).
Smithsonian Astrophysical Observatory (SAO) (Smithsonian Institution): Predoctoral Fellowships	\$24,600	Apr	✓	<a href="http://cfa-www.harvard.edu/predoc">http://cfa-www.harvard.edu/predoc</a>	Allows students to do all or part of their research at CfA. Must be affiliated with ongoing CfA research (website has listing of possibilities). Some additional funds may be available for travel and relocation.
Smithsonian Institution, Office of Fellowships: Predoctoral Fellowships	\$17,000	Jan		<a href="http://www.si.edu/ofg/Applications/SIFELL/SIFELLapp.htm">http://www.si.edu/ofg/Applications/SIFELL/SIFELLapp.htm</a>	are offered to doctoral candidates who have completed preliminary course work and examinations. Candidates must have the approval of their universities to conduct doctoral research at the Smithsonian Institution. The term is 3 to 12 months. The stipend is \$17,000 per year plus allowances.
Spencer Foundation: Dissertation Fellowships for Research Related to Education	\$20,000	Oct	✓	<a href="http://www.spencer.org/programs/index.htm">http://www.spencer.org/programs/index.htm</a>	Funding for education-related dissertations in any discipline. Fellowship supports students for 1 - 2 years.

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
The Five College ABD Fellowship Program	\$30,000	Dec		<a href="http://www.fivecolleges.edu/academic_programs/academprog_fellowship.html">www.fivecolleges.edu/academic_programs/academprog_fellowship.html</a>	The Five College ABD Fellowship Program provides a year in residence at one of the campuses for graduate students in the final phase of the doctoral degree. The chief goal of the program is to promote diversity in the academy by enabling more scholars of underrepresented groups to embark on an academic career with their doctoral degree completed. By furnishing a stipend, housing, and other benefits, the program allows fellows to focus on completing their dissertations. The program also strives to encourage their interest in college teaching while here, and acquaints them with these schools.
U. S. Department of Energy (DOE) and Argonne National laboratory: Laboratory Graduate Research Program	NOT SPECIFIED	Nov		<a href="http://www.dep.anl.gov/p_graduate/lab_grad.htm">http://www.dep.anl.gov/p_graduate/lab_grad.htm</a>	Allows student to conduct all or part of their research at Argonne. Provides stipend, \$5K for tuition expenses and, in some cases, travel expenses. University is expected to absorb any tuition costs above \$5K.

## Postdoctoral Fellowships

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
American Academy of Arts & Sciences: Visiting Scholar Program	\$35,000 - \$50,000	Oct		<a href="http://www.amacad.org/visiting.htm">http://www.amacad.org/visiting.htm</a>	The purpose of the Visiting Scholars Program (VSP) is to stimulate and support research conducted by scholars and practitioners who show promise of becoming leaders in their field, especially those who work on multidisciplinary topics. The Program offers opportunities for them to carry out their individual research as well as to collaborate with Academy Fellows on shared scholarly or policy-related interests. It also helps to create a national network for scholars in the early stages of their career, assisting them in their research and professional development. The Academy sets topics of research such as education and science & global security.
American Physical Society (APS) & American Institute of Physics (AIP): Congressional Science Fellowships	\$50,000	Jan		<a href="http://www.aps.org/public_affairs/fellow/">www.aps.org/public_affairs/fellow/</a>	It is the aim of the APS and AIP in sponsoring these fellowships to provide a public service by making available individuals with scientific knowledge and skills to Members of Congress, few of whom have a technical background. In turn, the program enables scientists to broaden their experience through direct involvement with the legislative and political processes. Fellows gain a perspective which, ideally, will enhance not only their own careers but also the physics community's ability to more effectively communicate with its representatives in Congress.
Ford Foundation: Postdoctoral Fellowships for Minorities	\$40,000	Dec		<a href="http://www7.nationalacademies.org/fellowships/fordpost.html">http://www7.nationalacademies.org/fellowships/fordpost.html</a>	Prefer candidates to apply for a host institution other than the one with which they're affiliated at the time of the application. Each applicant must present a clearly articulated plan of study or research that will further his or her career in higher education. Employing institution allowance of \$1.5K. National Research Council (NRC) administers the awards and progress of award recipients is monitored. Award recipients attend one Ford Fellows conference (expenses paid).

Scholarship/Fellowship Name	Award Amount	Deadline	Int'l	Website	Description/Notes
Harvard-Smithsonian Center for Astrophysics (CfA) (Smithsonian Institution): Postdoctoral Fellowships	\$45,000	Nov		<a href="http://cfa-www.harvard.edu/postdoc">http://cfa-www.harvard.edu/postdoc</a>	Look for postdocs to start in summer and fall. Research areas include atomic and molecular physics, geophysics, the solar system, stars, galaxies, and cosmology. Techniques used range from computer simulations through observations in the radio, infrared, optical, ultraviolet, X- and gamma-ray bands, to instrument development and laboratory experiments. Additional \$12K annual research budget (depends on availability of funds). Appointments are for 2 years, usually extended to a third year. International students are eligible.
Smithsonian Institution, Office of Fellowships: Postdoctoral Fellowships	\$30,000 - \$40,000	Jan		<a href="http://www.si.edu/ofg/Applications/SIFELL/SIFELLapp.htm">http://www.si.edu/ofg/Applications/SIFELL/SIFELLapp.htm</a>	are offered to scholars who have held the degree or equivalent for less than seven years. Senior Fellowships are offered to scholars who have held the degree or equivalent for seven years or more. The term is 3 to 12 months. Both fellowships offer a stipend plus allowances. Earth and Planetary Sciences Senior and Postdoctoral stipends are \$40,000 per year.
University of Michigan, Michigan Society of Fellows: Postdoctoral Fellowships	\$44,558	Oct	✓	<a href="http://www.rackham.umich.edu/Faculty/society.html">www.rackham.umich.edu/Faculty/society.html</a>	For students or recent graduate to apply for a position at the University of Michigan.