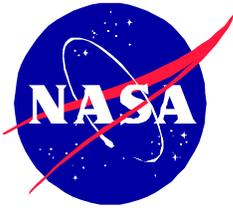


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**National Aeronautics and  
Space Administration**

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**NASA EARTH SYSTEM SCIENCE  
FELLOWSHIP PROGRAM**

**Proposals as New Applications Due March 16, 2004  
Proposals as Renewal (2<sup>nd</sup>-/3<sup>rd</sup>-year) Applications Due June 1, 2004**

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## NASA Graduate Student Fellowships In Earth System Science

### Introduction

#### The NASA Vision –

To improve life here,  
To extend life to there,  
To find life beyond.

#### The NASA Mission –

To understand and protect our home planet,  
To explore the universe and search for life,  
To inspire the next generation of explorers  
.... as only NASA can.

NASA announces graduate student fellowships for persons pursuing Master of Science (M.Sc.) or Doctoral (Ph.D.) degrees in Earth System Science and related disciplines. The purpose of NASA's Earth System Science (ESS) Fellowship Program is to ensure continued training of interdisciplinary scientists to support the study of the Earth as a system. NASA places particular emphasis on the applicant's ability and interest in pursuing academic training and research using observations and measurements from NASA's Earth orbiting satellites, and in developing inter- or cross-disciplinary research about the Earth system that is not currently emphasized in the research and development portfolio of the Office of Earth Science.

Close to 700 Ph.D. and M.Sc. fellowships have been awarded since the inception of the Earth System Science Fellowship Program in 1990. The graduates from these fellowships constitute a growing network of scholars endeavored to promote Earth system science.

The financial support for the ESS Fellowships comes from the "Office of Earth Science" portion of NASA's Graduate Student Researchers Program (GSRP) provided by the Office of Education (<http://fellowships.hq.nasa.gov/gsrp/nav/>), and the Office of Earth Science (<http://www.earth.nasa.gov>). For the 2004/2005 academic year, NASA expects to award up to 50 new fellowships.

### Scientific Areas of Support

The Earth Science Enterprise (ESE) fulfills NASA's mission *to understand and protect our home planet* by using the view from space to study the Earth system and improve prediction of Earth system change. The Enterprise also contributes to NASA's educational mission by *inspiring the next generation of Earth explorers*.

The Earth Science Enterprise, working with its domestic and international partners, provides accurate, objective scientific data and analysis to advance our understanding of Earth system processes and to help policymakers and citizens achieve economic growth and effective, responsible stewardship of Earth's resources. As outlined in the Earth Science Enterprise Strategy ([http://www.earth.nasa.gov/visions/ESE\\_Strategy2003.pdf](http://www.earth.nasa.gov/visions/ESE_Strategy2003.pdf)), NASA pursues answers to the fundamental question, "How is the Earth system changing, and what are the consequences for life on Earth?"

The frontier of the interdisciplinary field of Earth system science seeks to:

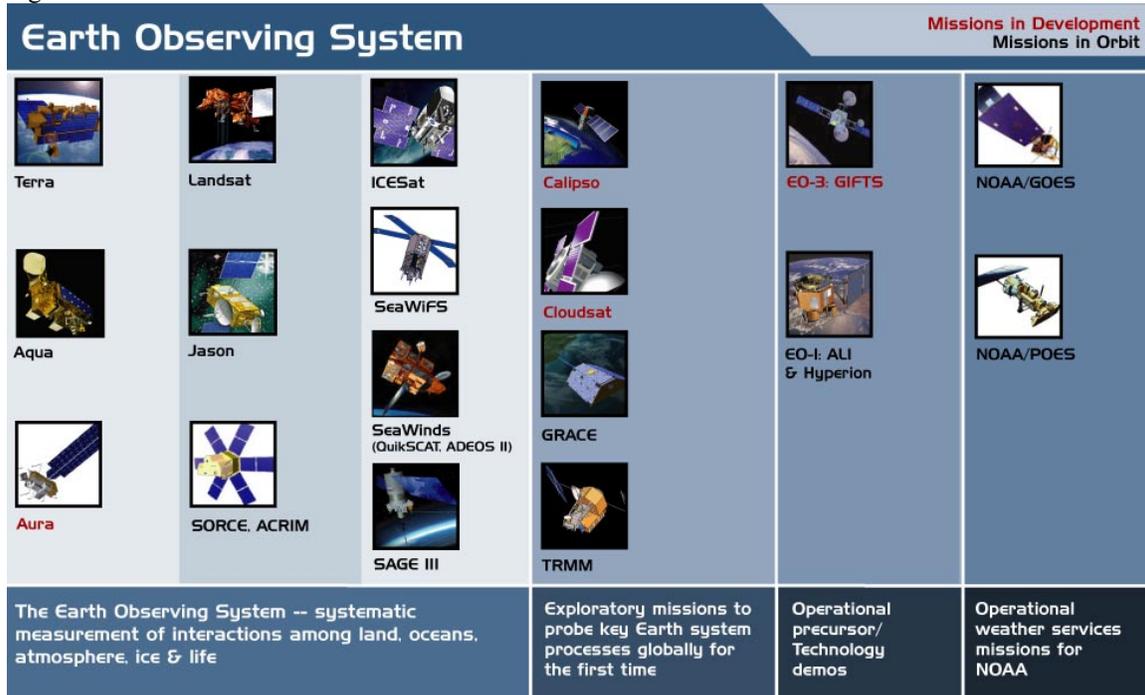
- (1) explore interactions among the major components of the Earth system – continents, oceans, atmosphere, ice, and life;
- (2) distinguish natural from human-induced causes of change;
- (3) understand and predict the consequences of change; and
- (4) use knowledge about the Earth to search for life in our Galaxy and the universe.

An agency goal of NASA is to understand the Earth system and apply Earth system science to improve prediction of climate, weather, and natural hazards. Within this goal, the Earth Science Enterprise has two

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primary strategic objectives: (1) Earth System Science: understand how the Earth is changing to better predict change and understand the consequences of change for life on Earth; and (2) Earth Science Applications: expand and accelerate the realization of economic and societal benefits from Earth science, information and technology. The continuum from *science* to *applications* is traversed through a logical progression of observation, research and data analysis, modeling, and scientific assessment. NASA supports both basic and applied research, leveraging its scientific capabilities into valuable decision support tools that benefit society.

Figure 1



Over the past decades, NASA's Earth-observing satellites and sponsored research have enabled a rich set of scientific discoveries including the processes behind Antarctic ozone depletion and the mechanics behind the El Nino-La Nina cycle. NASA's focus on the integration of satellite, suborbital and surface measurements, in conjunction with models and simulations, allows scientists to model the Earth's climate system, measure the global distribution of atmospheric aerosols and related changes over seasons and years, and develop new methods of measuring motions of the Earth's crust and interior that lead to earthquakes and volcanic eruptions. The Nation now has a system of Earth-observing research satellites (Figure 1) possessing the ability to characterize the current state of the Earth system in four dimensions – space and time, such as:

- Measuring and monitoring continental drift and plate tectonics, and understanding their impact on natural hazards, earthquakes and volcanoes
- Capturing and documenting dynamics of Earth's ozone layer and understanding the effects of its depletion on exposure to UV radiation at the Earth's surface
- Capturing and documenting global ocean circulation and its role in Earth's weather and climate
- Documenting land cover change at global and regional scales in response to natural and human influences
- Capturing the seasonal dynamics of land vegetation and ocean phytoplankton, and their capacity to cycle carbon through the Earth system and in food and fiber production
- Mapping the four-dimensional structure of storms and hurricanes in space and time, and their risks to human safety, property, and infrastructure

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- Mapping Greenland and Antarctic ice sheets in three dimensions with unprecedented accuracy to understand their role in Earth's weather, climate, and sea level change
- Measuring the Earth's radiation budget and its variations with unprecedented accuracy to assess its impacts on Earth's climate and weather
- Measuring Earth's gravity field and its variations over time with unprecedented accuracy to assess its impacts on ocean circulation and Earth's climate
- Measuring the distribution of aerosols and clouds, and assessing their roles in Earth's climate and energy budget
- Mapping the Earth's surface in three dimensions with unprecedented accuracy and resolution, and using this knowledge to improve understanding of floods, landslides, earthquakes, and volcanoes.

Building on these capabilities that have helped to close the gaps in our knowledge about the Earth system as well as utilizing the capabilities and technologies from the next generation of flight missions (Figure 2), the Earth Science Enterprise has established six focus areas for its future research and applications; the six focus areas are:

- **Climate Variability and Change**

Develop integrated models of the oceans, atmosphere, cryosphere and land surface, and apply to retrospective and future studies of climate variability and change. Mission activities that support this focus area include Terra, Aqua, ACRIMSAT, Jason, SORCE, GRACE, ICESat, Cloudsat, Glory, Aquarius, OCO, and a Joint Center for Satellite Data Assimilation (JCSDA).

- **Atmospheric Composition**

Understand the trace constituent and particulate composition of the Earth's atmosphere and predict its future evolution. Mission activities that support this focus area include SAGE, UARS, TOMS, Aura, Glory, OCO, and Calipso.

- **Carbon Cycle, Ecosystems, and Biogeochemistry**

Understand and predict changes in the Earth's terrestrial and marine ecosystems and biogeochemical cycles. Mission activities that support this focus area include Landsat, Terra, Aqua, SeaWiFS, EO-1 (Hyperion & ALI), NPP, and OCO.

- **Water and Energy Cycle**

Characterize and predict trends and changes in key reservoirs and fluxes associated with the global water and energy cycle, including changes in the frequency and intensity of hydro-meteorological events and their regional manifestations. Mission activities that support this focus area include TRMM, Aqua, GRACE, ICESat, Calipso, GPM, Cloudsat, and Hydros.

- **Weather**

Develop the technology, observational and modeling capacity needed to improve daily and extreme weather forecasting (e.g., hurricanes, tornadoes). Mission activities that support this focus area include TRMM, QuikSCAT, Aqua, GPM, GIFTS, the Short-term Prediction Research and Transition Center (SpoRT), and JCSDA.

- **Earth Surface and Interior**

Utilize state-of-the-art measurements and advanced modeling techniques to understand and predict changes on the Earth's surface and in its interior. Mission activities that support this focus area include SRTM, GRACE, ICESat, and the geodetic laser, GPS, and interferometer networks.

Figure 2



The 10-year outcomes that NASA projects from its research and development in the six focus areas described above are summarized in Figure 3. The research necessary to answering the prediction questions listed in Figure 3 invariably also engage in questions about variability, forcing, response, and consequence of the Earth system and/or sub-systems. The Earth Science Enterprise Research Strategy, available online at [http://www.earth.nasa.gov/visions/researchstrat/Research\\_Strategy.htm](http://www.earth.nasa.gov/visions/researchstrat/Research_Strategy.htm), discusses the approach at a greater length that links variability, forcing, response, consequence, and prediction.

Figure 3

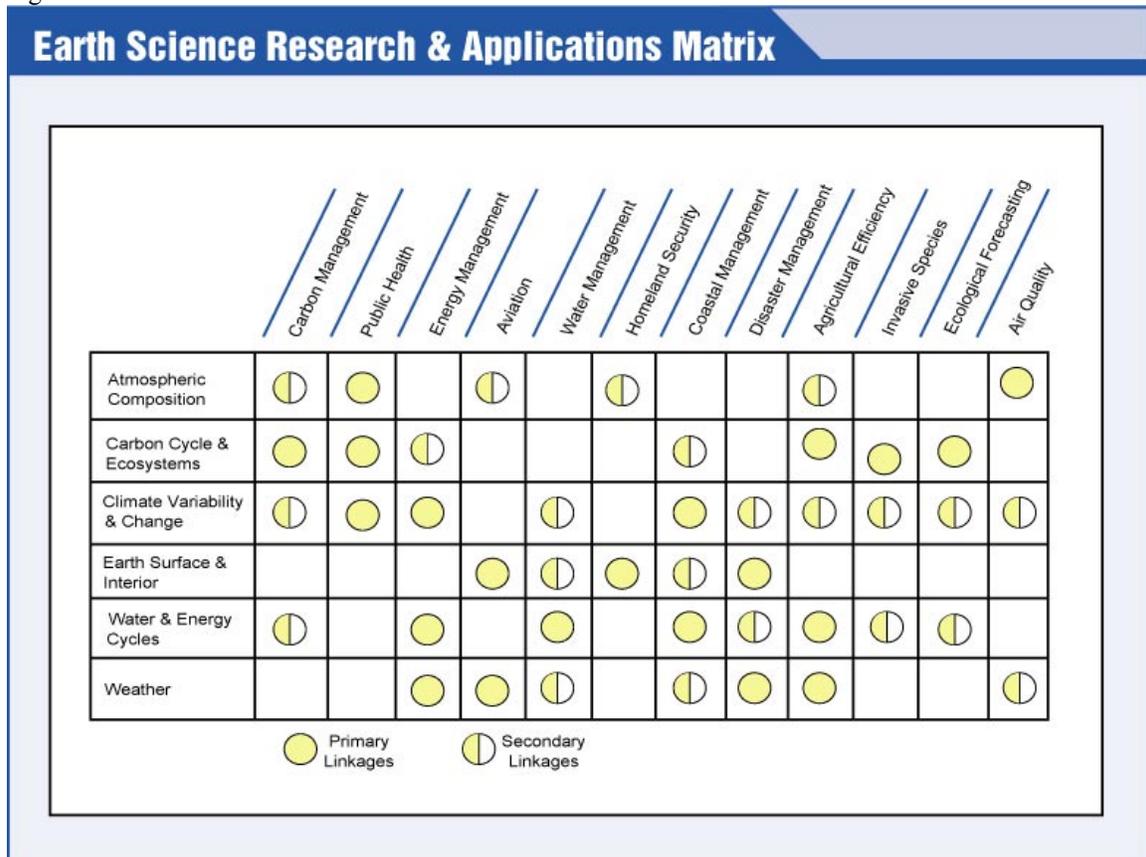
<b>Science for Society: Projected Outcomes from NASA Earth System Science</b>		
Science Focus Area	Prediction Question	10-Year Outcomes (With Partners)
Climate Variability and Change	How can predictions of climate variability and change be improved?	Predict near and long-term climate change, implications for global sea level change, regional temperature, precipitation, and soil moisture; e.g.: <ul style="list-style-type: none"> <li>• reduce uncertainty in global sea level rise by 50 percent by 2014</li> <li>• enable 10-year or longer climate forecasts by 2014</li> </ul>
Atmospheric Composition	How will future changes in atmospheric composition affect ozone, climate, and air quality?	Predict the course of recovery of Earth's atmospheric ozone shield and assess the quality of the air we breathe; e.g.: <ul style="list-style-type: none"> <li>• predict global distribution of stratospheric and tropospheric ozone to within 25 percent by 2014</li> <li>• enable extension of air quality forecasts for ozone and aerosols from 24 to 72 hours by 2014</li> </ul>
Carbon Cycle, Ecosystems, and Biogeochemistry	How will carbon cycle dynamics and terrestrial and marine ecosystems change in the future?	Predict global terrestrial and ocean biological productivity, ecosystem health, and interactions with the climate system, e.g.: <ul style="list-style-type: none"> <li>• project 10 to 100-year concentrations of carbon dioxide and methane with greater than 50 percent improvement in confidence by 2014</li> <li>• enable ecological forecasts that project sensitivity of terrestrial and marine ecosystems by 2014</li> </ul>
Water and Energy Cycle	How will water and energy cycle dynamics change in the future?	Improve intermediate range forecasts for droughts and seasonal water supply; predict global scale energy storage and transport in the atmosphere, e.g.: <ul style="list-style-type: none"> <li>• enable seasonal precipitation forecasts with greater than 75 percent accuracy at 10s of km resolution by 2014</li> <li>• balance global water and energy budgets to within 10 percent by 2014</li> </ul>
Weather	How can weather forecast duration and reliability be improved?	Significantly improve short-term and severe weather forecasting capabilities for hurricanes, winter storm hazards, and extreme weather events, e.g.: <ul style="list-style-type: none"> <li>• enable decreased hurricane landfall uncertainty from plus/ minus 400km to plus/minus 100 km in 3-day forecasts by 2014</li> <li>• enable 7-10 day forecasts at 75 percent accuracy by 2014</li> </ul>
Earth Surface and Interior	How can our knowledge of Earth surface change be used to predict and mitigate natural hazards?	Predict volcanic activity within a month and estimate earthquake probabilities for selected tectonic zones, e.g.: <ul style="list-style-type: none"> <li>• enable 30-day volcanic eruption forecasts with greater than 50 percent confidence by 2014</li> <li>• enable estimation of earthquake likelihood in North American plate boundaries with greater than 50 percent confidence by 2014</li> </ul>

Focusing on partnerships with domestic Federal agencies and other international organizations, the Earth Science Enterprise also seeks to facilitate the assimilation of NASA's Earth science observations, measurements and model output into the decision support tools or systems of the partner organizations to

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provide essential services to society. The Earth Science Enterprise has identified twelve elements of applications of national priority: carbon management, public health, energy management, aviation, water management, homeland security, coastal management, disaster management, agricultural efficiency, invasive species, ecological forecasting, and air quality. The linkages between the six science focus areas and the twelve elements for applications are depicted in Figure 4. The Earth Science Enterprise Applications Strategy, available online at <http://www.earth.nasa.gov/visions/appstrat2002.pdf>, provides a detailed discussion of the systems approach that NASA takes to benchmark its partners' decision support tools.

Figure 4



The Earth System Science Fellowship Program, focused on graduate research, is a component of NASA's Earth Science Education Program. The Earth Science Education Program consists of activities in higher education (including early-career, graduate, and undergraduate), elementary/secondary (including GLOBE), and informal education, all aimed at *inspiring the next generation of Earth Explorers* to join the national and international workforce that work to understand and mitigate the effects of climate change, reduce our vulnerability to natural and technological disasters, enhance homeland and national security, stimulate our economy through technological innovation, and protect our environment.

Please see <http://www.earth.nasa.gov> for the full range of capabilities that the Earth Science Enterprise has in research, applications, advanced technology, education, and observation and information systems.

**Purpose of this Program Announcement**

Earth System Science Fellowship applications will be considered for research in any of the six focus areas described above. Proposals may stem from atmospheric chemistry and physics, ocean biology and physics, ecosystem dynamics, hydrology, cryospheric processes, geology, geophysics, engineering, and computing

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or information science. Specific research, whether relating to observations, process studies, modeling, and/or analysis, **should emphasize the use of remote sensing and be relevant to the Earth Science Enterprise strategic objectives** (e.g., use of remote sensing data in process studies and/or Earth system modeling, integration of sub-orbital and satellite-based remote sensing observations towards establishing climate data records, improvement of remote sensing technology and capability, management of large remote sensing data sets) towards a full understanding of the Earth's planetary system. NASA is particularly interested in supporting investigations that fulfill a growing need in competencies relating to data assimilation and continuing improvement of remote sensing techniques.

Each proposal must identify on the application form (see Application Procedures below) at least one, but no more than two, focus areas addressed by the proposal.

Although the development of Earth science applications projects is generally beyond the scope of a graduate thesis, the applicants to the Earth System Science Fellowship Program are encouraged to identify the potential for extending the research results to decision support. The identification of the potential for Earth science applications on the application form is **optional**. It will not be a factor in the technical evaluation, but may be used in programmatic considerations in selection when two or more proposals are of equal scientific merit. If such identification is made on the application form, it should be accompanied by a description of the potential for applications in the proposal. This description should be clearly identified in a section or paragraph of no more than 500 words and be within the page-limit of the proposal; it should address the specific prospective usage in a systemic, scalable, and sustainable solution for decision support, the potential user organization, and the practical benefits that would accrue.

NASA discourages submission of paleo-climate, paleo-ecology, and paleo-hydrology related applications to this program. Proposals that address the molecular biology, biochemistry, development, physiology, or evolution of living organisms, without a direct connection to the role of ecosystems (terrestrial, freshwater or marine) in the Earth system and not amenable to remote sensing approaches, should be submitted to NASA's Graduate Student Researchers Program (GSRP; deadline February 1, <http://fellowships.hq.nasa.gov/gsrp/nav/>), under appropriate elements (e.g., Office of Biological and Physical Research, Office of Space Science, etc.).

### **Terms and Conditions**

Awards are made initially for one year and may be renewed annually, based on satisfactory progress as reflected in academic performance and evaluations by the faculty advisor, for no more than two additional years. The three-year period is the maximum length a student may receive support from the ESS Fellowship Program in pursuing a M.Sc. or Ph.D. degree. For example, a student who has been supported for three years to obtain her/his M.Sc. degree cannot apply to the ESS Fellowship Program for additional three years of Ph.D. support. However, a student in the second or third year of a M.Sc. program may use the three years of support to complete the M.Sc. and initiate Ph.D. research. In all instances, the maximum period of support by the ESS Fellowship Program is three years. The maximum amount of award is \$24,000/annum. The fellowship may be used to defray student's stipend, living and educational expenses, travel expenses to scientific conferences, research supplies (other than equipment), tuition, and fees.

### **Eligibility**

Students admitted to, or already enrolled in, a full-time M.Sc. and/or Ph.D. program at accredited U.S. universities are eligible to apply. Students may enter the Fellowship Program at any time during their graduate work. Students may also apply in their senior year prior to receiving their baccalaureate degree, but must be admitted and enrolled in a M.Sc. and/or Ph.D. program at a U.S. university at the time of the award. An individual accepting this award may not receive concurrently other Federal fellowships or traineeships. However, NASA may allow an applicant to receive Fellowship Supplements from other U.S. Federal agencies to cover expenses not covered by NASA's educational fellowships; for example, the purchase of equipment, which is not permitted through a NASA Fellowships but is allowed under a National Science Foundation Graduate Research Fellowship. The NASA Fellowship Program is open to all

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students enrolled full-time at accredited US institutions; however, U.S. citizens and permanent residents will be given preference when two or more proposals are of equal scientific merit. Students with disabilities and/or from under-represented minority groups are urged to apply. No applicant shall be denied consideration or appointment as a NASA Earth System Science Fellow on grounds of race, creed, color, national origin, age, or sex.

### **Obligation to the Government**

A student receiving support under the Earth System Science Fellowship program does not thereby incur any formal obligation to the Government of the United States. However, the objectives of this program will clearly be served best if the student actively pursues research or teaching in the field of Earth system science after completion of graduate studies.

### **Disposition of Unused Funds**

In case a student or faculty advisor ceases to participate in the program for any reason, the university with prior NASA approval may appoint another student or faculty advisor to complete the remaining portion of the current grant year provided the area of research remains the same. Beyond the current grant year, the substitute recipient must submit a complete application to NASA to be evaluated with other new applicants in the next announcement cycle in the following year.

### **Proposal Evaluation and Selection**

The Office of Earth Science at NASA Headquarters will make the selection of proposals for award on a competitive basis. Criteria for evaluation include: (a) the quality of the proposed research; (b) the relevance of the proposed research to the Earth Science Enterprise strategic objectives as outlined above; and (c) academic excellence based on applicant's transcripts and the letter of reference by student's academic advisor, and the degree it supports the proposed research. Evaluation will be conducted by members of the academic community, the Earth Science Enterprise, and professional societies in remote sensing and scientific disciplines.

### **Application Procedures**

#### New Applications

New applications must include twenty (20) copies of the proposal, including at least one (1) with original signatures and official copies of the transcript(s). All copies of the proposal should be printed on one side of each sheet only. The font must be readily legible and not smaller than 12-point size. Each of the twenty (20) copies of the proposal must be individually stapled by assembling the necessary materials in the following order:

1. A print-out of the application form from **SYS-EYFUS** that has been completed electronically (see "Instructions for Internet Submission of Application/Proposal Cover Page"), that has been signed by the applicant, the faculty advisor, and the authorizing institutional official.
2. A titled abstract (no more than 150 words) and a description of proposed research, totaling no more than 6 single-spaced pages. The research plan should be presented with a clear scientific hypothesis or question(s) to be addressed by the proposed work. The page limit includes necessary references, figures, and/or tables, but does not include the application form, degree schedule, nor the budget.
3. A schedule stating the proposed start and completion dates of the applicant's degree.
4. A completed budget form.
5. A recommendation letter from the academic advisor.
6. Copies of undergraduate and graduate transcripts (Provide explanations if the transcripts are not current or recent.)

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### Renewal Applications

All renewal applications must include four (4) copies of the following materials, including at least one (1) with original signatures.

1. A print-out of the application form from **SYS-EYFUS** that has been completed electronically (see Instructions for Internet Submission of Application/Proposal Cover Page), that has been signed by the applicant, the faculty advisor, and the authorizing institutional official.
2. A progress report of approximately 3-6 pages in length. The progress report should (a) summarize work accomplished during the previous year, relating the actual accomplishments with the plan originally outlined in the proposal and/or including any unanticipated opportunities, surprises or unusual developments, and (b) describe plans for the coming year, including explanations of any substantial deviation from the plan originally outlined in the proposal. Attach preprints or reprints as appropriate.
3. An updated schedule for completion of the degree program.
4. A completed budget form.
5. A recommendation letter from the academic advisor.
6. Recent transcripts.

Completed, assembled proposal package should be submitted to:

Earth System Science Fellowship Program  
NASA Peer Review Services, Code Y  
500 E Street, SW, Suite 200  
Washington, DC 20024-2760  
Telephone: (202) 479-9030

### **Submission Deadlines**

Deadline for receipt <b>NEW</b> applications:	4:30 p.m., EST March 16, 2004
Deadline for receipt of <b>RENEWAL</b> applications:	4:30 p.m., EDT, June 1, 2004

### **Announcement of Selections**

The new applications that are selected for award will be announced (<http://research.hq.nasa.gov>) by **June 30, 2004** with an anticipated starting date of the fellowship award to be **September 1, 2004**. After the selections are announced and posted at the aforementioned web address, a letter notification will be sent to the student's university address, unless request is made in writing to be forwarded to an alternate address.

The renewal students will be notified by **July 31, 2004** concerning the continuation of the fellowship awards.

### **Inquiries**

Additional inquiries may be sent to Ms. Anne Crouch at [acrouch@hq.nasa.gov](mailto:acrouch@hq.nasa.gov) or by calling (202) 358-0855.

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## **Privacy Act Statement**

### **General**

Pursuant to Public Law 93-579, Privacy Act of 1974, as amended (5 U.S.C. 552a), the following information is being provided to persons who are asked to provide information to obtain a NASA Graduate Student Fellowship.

### **Authority**

This information is collected under the authority of the National Aeronautics and Space Act. Publication 85-568, as amended, 42 U.S.C. 2451, et. seq.

### **Purpose and Uses**

The information requested on the application form will be used to determine your eligibility for participation in the NASA Graduate Student Fellowship Program. The information requested regarding your disability status will be used to determine the degree to which members of each ethnic/racial/disability group are being reached by NASA's announcement of this program, and will not affect your application. Additionally, NASA may disclose this information to other organizations or individuals having relationships with NASA, including but not limited to academic organizations, non-profit organizations, and other governmental agencies, as well as Congressional offices in response to an inquiry made on your behalf. Disclosure may also be made to concerned parties in the course of litigation, to law enforcement agencies, and to other Federal agencies in exchanging information pertinent to an agency decision.

### **Effects of Nondisclosure**

Furnishing the information on the application form is voluntary, but failure to do so may result in NASA's inability to determine eligibility for participation and selection for award in the Graduate Student Fellowship Program. However, your application will not be affected if you choose not to provide information on your ethnic, racial, or disability status.

### **Definitions for Applicant Background - Section VI**

**American Native or Alaskan American:** A Person having origins in any of the original peoples of North America and who maintains cultural identification through tribal affiliation or community recognition.

**Hispanic:** A person of Mexican, Puerto Rican, Cuban, or South American or other Spanish culture or origin, regardless of race.

**Asian:** A person having origins in any of the original peoples of East Asia, Southeast Asia or the Indian subcontinent. This area includes, for example, China, India, Indonesian, Japan, Korea and Vietnam.

**Pacific Islander:** A person having origins in any of the original peoples of Hawaii; the U.S. Pacific territories of Guam, American Samoa, and the Northern Marinas; the U.S. Trust Territory of Palau; the islands of Micronesia and Melanesia; or the Philippines.

**African American, nor of Hispanic origin:** A person having origins in any of the black racial groups of Africa.

**White, not of Hispanic Origin:** A person having origins in any of the original peoples of Europe, North Africa, or the Middle East.

**Individuals with Disabilities:** An individual having a physical or mental impairment that substantially limits one or more major life activities; who has a record of such impairment; or who is regarded as having such impairment.

## Instructions for Internet Submission of Application/Proposal Cover Page

SYS-EYFUS is a central, uniform proposal submittal and review system that NASA has adopted for all solicitations for scientific research. The World Wide Web address for the system is:

<http://proposals.hq.nasa.gov/>

For those of you who have not used SYS-EFUS in the past, you will be required to establish an account. Click "New User" on the left-hand pane to begin. Existing users should click "Login" to begin.

**Note: All renewal students have an established account. Click "Forgot Password" (located in left sidebar) to receive your user ID and password by email.**

### Detailed Instructions:

#### *Accessing the SYS-EYFUS System:*

1. The SYS-EYFUS application is located at <HTTP://PROPOSALS.HQ.NASA.GOV>
2. If you are an **ESTABLISHED USER**, click the hyperlink for **LOGIN** (located in left sidebar and in the text), enter your Username and Password.
3. If you have never used SYS-EYFUS before, click on **NEW USER** (located in left sidebar and in the text). This will take you to the Personal Information Search Page. Follow the steps listed below:
  - a) You will be required to verify that you do not have a current SYS - EYFUS login. Type in your first name and/or last name and click the **SEARCH** button.
    - i. If your name appears click on the **CHOOSE ONE** button next to your name. Your user id and password will be emailed to you. You may login into the SYS-EYFUS website once you receive your password information.
    - ii. If your name does not appear in the list offered by SYS-EYFUS, click the **CONTINUE** button to add a new record.
    - iii. If no records were found matching your search criteria. Click the **ADD RECORD** button below to complete a new form so that we may add you to our database.
  - b) The **General Information** page will ask for the following information: **name, gender, email address(es), birth date, disability, citizenship, birthplace, and ethnic origin**. It is especially important to correctly identify the email address(es) to which you want electronic notifications sent.
  - c) The **Add Address Form** page allows you to enter your contact information. There are two options, but each requires you to look up your Zip + 4 and Congressional District (see sections iii and iv below).
    - i. You can click inside the **Organization** box and type the name of your school or institution and click on search. If found, the computer will automatically fill in the city, state, and zip, but will leave blanks for you to fill in your department, division, mail stop, street address, etc.
    - ii. If your organization is not in the database or if you simply wish to enter an address, click on the "Add Domestic Address" button and fill in the fields.
    - iii. The **Lookup Zip+4** link will take you to a United States Postal Service page where you will need to re-enter your address and click "Process". Once you see your complete zip code, click the "Back" button of your browser twice to return to the address form. Enter the +4 code in the second zip code box.
    - iv. To the right is the **Congressional District** link. Click on this link and enter your state and zip code+4, and click "Submit". Once you see your Congressional District, click the "Back" button of your browser twice to return to the address form. Enter the Congressional District number in the box.
  - d) The **Interest Information** page allows you to identify interests within NASA. You must pick at least ONE interest on this page.
  - e) The **Expertise Information** page allows you to identify one or more areas of expertise. You must pick at least ONE area of expertise.

(Note: NASA Peer Review Services frequently searches expertise areas for potential reviewers. If you are qualified to serve as a reviewer in a tropical area, please select that expertise.)

- f) The **Education Information** page asks for credentials. Institution, Degree, and Field of Study are the most important fields.
- g) Create your Username and Password on the **Login Information** page. Please note the following parameters:

**USERNAME:** Must be at least 8 characters.

**PASSWORD:** At least one character each from at least three of the following sets of characters: uppercase letters, lowercase letters, numbers, and special characters.

4. SYS-EYFUS will confirm that your personal information has been added, and your user ID and password will be e-mailed to you for your records.
5. Click the "Continue" button, and the system will take you to the **SYS-EYFUS Options** page.
6. SYS-EYFUS Options will be displayed, including (at a minimum) the following choices:
  - a) Edit Personal Information
  - b) Submit a **NEW** Notice of Intent
  - c) Submit a **NEW** Proposal Cover Page
  - d) Review an Assigned Proposal
7. Click the "Submit a NEW Proposal Cover Page" button
8. Click the "New Proposal Cover Page" again.
9. Click "All Opportunities"
10. Click the appropriate row, either
  - a) Earth System Science Fellowship/04 (NEW)
  - b) Earth System Science Fellowship/04 (RENEWAL)
11. Once you access the proposal cover page you will notice your pre-filled information.  
**(Note: For the Fellowship only, the PI is the student)**
12. Continue completing the form.
  - a) Please type in a **Short Title** (55 characters) and a **Full Title** (255 characters) for your application.
  - b) Select at least one, but no more than two subjects listed under **Focus Areas**.
  - c) A check on **Potential for Earth Science Applications** is **optional**. Check this box only if a description of the potential is included in your proposal.
13. Click Continue.

Team Member Page appears. **To proceed, please first select the appropriate role from the "role" box; then, enter the first and last names and click the "search" button. If this individual is already in our database, you may choose the correct information and proceed. If our database does not contain the information about this individual, you need to get him/her to obtain an account. Note: Authorizing Official is Mandatory.**

14. You must select the Authorizing Official for your institution and your Advisor.
15. Click Continue.
16. Proposal Option Page appears.
17. You may select "Show/Print or "Edit Proposal Information".
18. Print Cover Page and obtain the appropriate signatures. This original signature page should be attached to your original proposal.
19. Follow the instructions in the announcement for further guidance on proposal submission requirements.

Students without access to the Web or who experience difficulty in using this site may contact the Help Desk at [proposals@hq.nasa.gov](mailto:proposals@hq.nasa.gov) (or call 202.479.9376) for assistance. After you have submitted your proposal cover page electronically, if you are unsure if it has been successfully submitted, do not re-submit. Please call the Help Desk. They will be able to promptly tell you if your submission has been received. Please note that submission of the electronic cover page does not satisfy the deadline for proposal submission.

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Budget Form

Student Name: \_\_\_\_\_ Date of Birth: \_\_\_\_\_  
Last First MI

Budget Information

Prorate Stipend and Allowances if Anticipated Tenure is Less Than 12 Months

Student Stipend (Maximum of \$18,000)\* \$ 18,000

Student Allowance (**Itemize**) \*\*

Travel to conferences and seminars, health insurance, books, etc.

Student Allowance \$ 3,000  
(Maximum of \$3,000)

University Allowance (**Itemize**) \*\*

Tuition & Fees expenses

University Allowance \$ 3,000  
(Maximum of \$3,000)

Total Requested \$ 24,000  
(Maximum of \$24,000)

\*Clear justification must be made and approved by the Authorizing Institutional Official of the university if the amount of student stipend is greater than \$18,000.

\*\* Requested budget in these two categories may be exchanged, as long as the total sum for the two categories does not exceed \$6,000