



**SIRTF**

---

# Space InfraRed Telescope Facility (SIRTF) Fellowship Program

## *Application Guidelines*

Issued by the  
*SIRTF Science Center*  
*California Institute of Technology*  
*Mail Code 220-6*  
*1200 East California Boulevard*  
*Pasadena, California 91125 USA*

### *Key Dates:*

Guidelines Issued: August 20, 2001  
**Applications Due: 5:00 p.m. (PST), November 16, 2001**

*<http://sirtf.caltech.edu/SSC/>*



# Table of Contents

<b>1</b>	<b>INTRODUCTION</b> .....	<b>1</b>
<b>2</b>	<b>FELLOWSHIP POLICIES</b> .....	<b>2</b>
2.1	ELIGIBILITY.....	2
2.2	HOST INSTITUTION.....	2
2.3	FINANCIAL SUPPORT .....	3
2.4	RESEARCH AREAS.....	3
2.4.1	<i>New Observations</i> .....	3
2.4.2	<i>Archival Research</i> .....	4
2.4.3	<i>Interpretive Investigations</i> .....	4
2.5	DURATION OF FELLOWSHIP.....	4
2.6	STATUS.....	4
<b>3</b>	<b>APPLICATION PROCEDURE</b> .....	<b>5</b>
3.1	GENERAL INFORMATION.....	5
3.2	APPLICATION DEADLINE.....	5
3.3	MATERIALS SUBMITTED DIRECTLY BY THE APPLICANT .....	5
3.4	RESEARCH PROPOSAL .....	6
3.5	ENDORSEMENT LETTER.....	6
3.6	LETTERS OF REFERENCE.....	6
3.7	REQUESTS FOR INFORMATION.....	7
<b>4</b>	<b>ADDITIONAL INFORMATION</b> .....	<b>7</b>
4.1	EVALUATION OF PROPOSALS AND SELECTION OF FELLOWS.....	7
4.2	COMMENCEMENT OF SIRTf FELLOWSHIP.....	7
4.3	VISA REQUIREMENTS.....	7
4.4	TAXES AND INSURANCE.....	7
4.5	COST PLANS.....	8
4.6	PUBLICATION ACKNOWLEDGEMENTS.....	8
<b>5</b>	<b>APPLICATION CHECKLIST</b> .....	<b>9</b>

*The SIRTf Science Center (SSC) is operated by the California Institute of Technology, under contracts with the National Aeronautics and Space Administration (NASA).*

# 1 Introduction

The *Space InfraRed Telescope Facility (SIRTF)* Fellowship Program provides an opportunity for highly qualified recent postdoctoral scientists to conduct independent research with the goal of enhancing the overall scientific return from the SIRTF mission. This can be accomplished through a proposal to conduct new observations with SIRTF, through exploitation of SIRTF archival databases, or through research that aids in the interpretation of SIRTF results, including theoretical investigations and laboratory astrophysics. Research must be conducted at a U.S.-based Host Institution chosen by the Fellow.

SIRTF is the infrared component of NASA's family of astronomical Great Observatories and represents an important scientific and technical bridge to NASA's Astronomical Search for Origins Program. The Observatory consists of a cryogenically-cooled 0.85-meter telescope and three science instruments capable of performing imaging and spectroscopy in the 3 to 180 micron range. SIRTF is scheduled to be launched from NASA's Kennedy Space Center into an Earth-trailing heliocentric orbit in July 2002. While the cryogenic lifetime requirement is 2.5 years, current estimates indicate that achieving a goal of a 5-year cryogenic mission lifetime is possible.

These *Application Guidelines* issued by the SIRTF Science Center (SSC), California Institute of Technology, solicits participation in the SIRTF Fellowship Program for the inaugural appointments starting in the autumn of 2002, shortly after the launch of SIRTF. An application for the Fellowship consists of a brief research proposal and supporting documentation, as described below. Applicants must have received their Ph.D. or equivalent degree in 1999 or later. **The deadline for receipt of applications is Friday, November 16, 2001. Award offers will be made by the SSC prior to February 1, 2002.**

The Fellowship provides an annual salary of approximately \$46,000 plus benefits, in addition to research and travel support for up to three years. Contingent on the availability of NASA funds, the SSC intends to select up to five Fellows annually during the SIRTF mission. The actual number of awards resulting from this first solicitation could be impacted by any subsequent change in the SIRTF launch schedule.

Applicants are urged to consult the SSC public Web site {<http://sirtf.caltech.edu/SSC/>} for the latest news and schedules pertaining to the mission. The SIRTF Fellowship guidelines are generally similar to those of the existing NASA Great Observatories. However, the reader is directed to carefully review the SIRTF-unique contents in §2.4.

SIRTF is managed for the National Aeronautics and Space Administration (NASA) by the Jet Propulsion Laboratory (JPL), California Institute of Technology. All aspects of science operations, including the issuance of these *Application Guidelines* and the selection of approved Fellowships, are managed by the SIRTF Science Center, California Institute of Technology.

## **2 Fellowship Policies**

This section briefly summarizes the general policies pertaining to the SIRTf Fellowship Program.

### ***2.1 Eligibility***

Applicants must have received a Ph.D., Sc.D., or equivalent doctoral-level research degree in astronomy, physics, or a related discipline on or after January 1, 1999. Applicants who have not yet formally received their degree must indicate the date by which they anticipate receiving their degree and present evidence of having completed the academic requirements before commencing the Fellowship.

All qualified applicants will receive consideration without regard to race, creed, color, age, sex, or national origin. Women and minorities are strongly encouraged to apply.

### ***2.2 Host Institution***

Contingent upon the availability of funding from NASA, SIRTf Fellowships are awarded through U.S.-based Host Institutions. Applicants may select any United States institution for carrying out their research as long as the choice is suitably justified in their proposal. Justification is particularly important in cases where the selected host is the institution at which the applicant earned his/her degree, or is the current home institution of the applicant.

A faculty member or a member of the scientific staff of the Host Institution shall serve as the Research Advisor for scientific purposes and will be the Principal Investigator of the Fellow's award for administrative purposes.

In order to avoid an excessive concentration of Fellows at any one institution, only one new Fellow from each annual competition will normally be approved for any single institution. Under exceptional circumstances, the SSC Director may approve two new Fellows at a given institution if that institution agrees to be ineligible for a new or transferring Fellow in the following year. Since this is the first solicitation for SIRTf Fellows, all U.S.-based institutions are currently eligible to be a Host Institution.

Applicants are asked to propose three prospective Host Institutions, in order of preference. As part of the application procedure (described in §3), an acceptance letter from the first-choice Host Institution is required. No prior acceptance from the two alternative institutions is required. The purpose of designating second- and third-choice institutions in the application is to provide the program with flexibility should there be an over-subscription of winners at any single institution. Barring this circumstance, it is expected that winners will utilize their Fellowships at their first-choice institutions.

In general, Fellows will work full-time on the research programs proposed in their applications and will be in residence at the proposed Host Institution during the entire period of the Fellowship. However, should a Fellow decide to work at an institution other than the original Host Institution prior to the completion of the appointment, the Fellowship award to the Host Institution will be closed on an equitable basis (termination for convenience), and the funds awarded to the new Host Institution, contingent upon approval from the SSC Director.

## 2.3 Financial Support

The initial annual stipend for a SIRTf Fellow will be approximately \$46,000 and will be subject to annual review and adjustment. In addition, the SIRTf Fellow can receive health insurance, relocation costs, and support for travel, computing services, publications, and other direct costs. It is expected that Fellows will devote their full-time effort to their research programs. No additional stipend, salary, or other remuneration may be accepted from another appointment, fellowship, or similar grant/contract during the period of the Fellowship.

## 2.4 Research Areas

The research proposed as part of the Fellowship application should enhance the overall scientific return from the SIRTf mission. This can be accomplished through a proposal to conduct new observations with SIRTf, through exploitation of SIRTf archival databases (including data from the Legacy Science Program and/or the First-Look Survey), or through research that aids in the interpretation of SIRTf results, including theoretical investigations and laboratory astrophysics.

### 2.4.1 New Observations

A maximum of fifty (50) total hours of SIRTf observing time are available for this round of the Fellowship Program, with most of the observations likely to be scheduled during Cycle 1, starting about eight months after launch. Given that not all Fellows will necessarily propose new observations, applicants are advised to define a robust and credible research plan utilizing no more than 10-15 hours of new SIRTf observations annually. *There is no requirement to propose new SIRTf observations, and all proposals will be reviewed without prejudice.* Applicants proposing new observations with SIRTf must describe their proposed observations in as much detail as possible, but do not need to submit formal Astronomical Observing Requests (AORs) until late 2002. [AORs are described in detail in the *SIRTf Observer's Guide*, available online in the 'Proposal Kit' section of the SSC public Web site.]

Apart from the exception noted in the following paragraph, new observations are subject to the general *SIRTf Observing Policies* (available in the online 'Proposal Kit'). More specifically, new observations cannot duplicate observations already approved by the SSC. The *SIRTf Reserved Observations Catalog* (ROC, also available online) lists the AORs for the Guaranteed Time Observations and those observations that comprise the ~100-hour First Look Survey.

Legacy Science observations will also take precedence over any observations proposed through the Fellowship Program. The detailed Legacy Science observations, specified by AORs, will not be delivered to the SSC before these Application Guidelines are issued. However, the Legacy Science target lists available within the online 'Proposal Kit' documentation should provide adequate information in any observation planning. Moreover, the applicant is advised to consult the Extended Abstracts and individual Legacy Science project sites, via the SSC public Web site.

Fellowship applicants may **not** propose new observations of Targets of Opportunity or Generic Targets, nor can they propose Second-Look Observations. Each of these categories is explained in the *SIRTf Observing Policies*.

### **2.4.2 Archival Research**

Applicants are encouraged to exploit the considerable archival data that will be in the public domain early in the first year of the SIRTf mission. Shortly after the completion of the 60-day In-Orbit Checkout, a SIRTf First-Look Survey (FLS) will utilize about 100 hours of observing time to characterize the infrared sky at sensitivities ~100 times deeper than any previous all-sky infrared dataset. The SSC will conduct the FLS on behalf of the broader scientific community and will disseminate the data as soon as they are deemed reliable for scientific analysis. It is anticipated that some of the FLS data will enter the public domain within about three months of launch. The FLS will be comprised of both extragalactic and Galactic observations. The motivation and technical details of the FLS are described on the SSC public Web site.

In addition, the Legacy Science Program will yield substantial amounts of processed data early in the SIRTf mission. Six projects utilizing 3160 hours of SIRTf observing time were selected in late 2000. Extended Abstracts of each of these projects can be found on the SSC public Web site. It is estimated that ~1000 hours of Legacy Science raw and pipeline-processed data will be available in the archive within seven months of launch, and that more than 2000 hours of data will be in the public domain within one year of launch. Applicants proposing to utilize SIRTf archival data are urged to familiarize themselves with the Legacy Science data sets and post-pipeline data products by consulting the information available online.

### **2.4.3 Interpretive Investigations**

Fellowship applicants may propose any type of research that will aid in the interpretation of SIRTf results. Such investigations could include observations with other space-borne or ground-based observatories, theoretical investigations, laboratory research, or numerical modeling. In any case, the applicant must explicitly identify the relevance and timeliness of their research to anticipated or potential SIRTf results.

## **2.5 Duration of Fellowship**

Contingent upon the availability of funding from NASA, SIRTf Fellowships are awarded to Host Institutions for up to a three-year period. Funding will be provided initially for the first year of the Fellowship. Renewal for the second and third years will be contingent on a demonstration of satisfactory progress and accomplishments.

## **2.6 Status**

SIRTf Fellowships are analogous to research fellowships or similar temporary programs at the postdoctoral level at universities. They are not intended to be, nor to compete with, permanent professional career positions.

### 3 Application Procedure

This section describes the procedures for submitting an application to the SIRTf Fellowship Program.

#### 3.1 General Information

Fellowships are awarded on the basis of a review of the applicant's proposed research, as well as the curriculum vitae, list of publications, summary of previous and current research, and three letters of reference. The details of the application are described below.

#### 3.2 Application Deadline

The application deadline for the inaugural cycle of SIRTf Fellowships is **Friday, November 16, 2001 (5:00 p.m. PST)**. All application materials, including those not sent directly by the applicant, must be received at the SSC by this date. Applications received by electronic means (E-mail) or by fax will not be valid. Incomplete applications and/or applications received after the deadline will not be considered.

#### 3.3 Materials Submitted Directly by the Applicant

The applicant should submit the following materials (one copy) as a single package directly to the address listed below:

- Completed and signed application form, available online and as part of these Application Guidelines;
- Curriculum vitae;
- List of publications;
- Summary of previous and current research (limited to two pages);
- Copy of the brief research proposal (not to exceed four pages), as described in §3.4 below.

All materials submitted must be in 12-point or larger fonts, single spaced, and single sided. Non-U.S. applicants should ensure that their applications will photocopy successfully onto 8.5 inch x 11 inch (21.6 cm x 28 cm) paper without being compromised.

The address for submission of application packages is:

SIRTf Fellowship Program  
SIRTf Science Center  
California Institute of Technology  
Mail Code 220-6  
1200 East California Boulevard  
Pasadena, California 91125 USA.

Note that cost plans are not required to be submitted at the time of the application. Detailed budget instructions will be mailed to successful applicants and their Host Institutions.

### ***3.4 Research Proposal***

Each applicant must formulate a specific research plan that is related to SIRTf science and is generally compatible with the research activities of the Host Institution. The text of the research proposal should not exceed four pages in length, with up to two additional pages permitted for references, figures and tables. Reviewers will be instructed to ignore any pages in excess of the stated limits. Reviewers will see only black-and-white copies of the research proposal, and hence applicants are discouraged from using color figures.

### ***3.5 Endorsement Letter***

Applicants must arrange for their research proposals to be read and approved by the designated Research Advisor of the first-choice Host Institution, and endorsed by an authorized official of the first-choice Host Institution. The endorsement should be sent directly to the SSC by the first-choice Host Institution such that it is received by the application deadline. The institutional endorsement is necessary to indicate that adequate facilities will be provided for the SIRTf Fellow, but does not ensure selection by the SSC Director following the peer review. This endorsement should consist of an acceptance letter signed by an authorizing official (typically the department chairperson) of the first-choice Host Institution. A possible acceptance letter is as follows:

*SIRTf Fellowship Program  
SIRTf Science Center  
California Institute of Technology  
Mail Code 220-6  
1200 East California Boulevard  
Pasadena, California 91125 USA.*

*I am writing in regard to [applicant's name]'s application for a SIRTf Fellowship. We have reviewed his/her research proposal entitled "[program title]" and are pleased to endorse it and to inform you that we will welcome him/her here and offer him/her support and facilities should a Fellowship be offered. Dr. [Research Advisor's name] has agreed to serve as his/her Research Advisor.*

*Sincerely yours,  
Chairperson*

### ***3.6 Letters of Reference***

Applicants should arrange for letters of reference to be submitted by three individuals familiar with their scientific abilities, whose names are to be listed on the standard application form. **These letters must be received by the application deadline and should be submitted directly to the SSC by the three referees** (at the address listed in §3.3).

### ***3.7 Requests for Information***

Requests for additional information on application procedures and supporting documents should be addressed to the electronic SIRTF HelpDesk at [sirtf@ipac.caltech.edu](mailto:sirtf@ipac.caltech.edu). The subject field of the query should include the phrase “Fellowship Program.”

## **4 Additional Information**

This section provides additional information pertaining to the SIRTF Fellowship Program.

### ***4.1 Evaluation of Proposals and Selection of Fellows***

A broad-based peer review panel will meet to review all application materials, including the short research proposal and supporting documents. The evaluation and recommendation by this external review panel will form the basis on which the SSC Director will select the inaugural SIRTF Fellows.

The SSC Director will make offers for SIRTF 2002 Fellowships no later than February 1, 2002. Acceptance or refusal must be decided upon by the successful applicant on or before February 15, 2002. After this date other offers may be made if some Fellowships are not accepted.

### ***4.2 Commencement of SIRTF Fellowship***

It is expected that SIRTF Fellowships will generally begin by September/October 2002. However, other starting dates may, in individual cases, be jointly negotiated with the Fellow, the Host Institution, and the SSC Director. All Fellowships must in any case commence by the end of 2002.

### ***4.3 Visa Requirements***

Non-U.S. nationals will normally apply for an Exchange Visitor visa sponsored by their Host Institution. For Immigrant visas, the awardee must apply independently, and cannot cite the SSC or the California Institute of Technology as a participant in the visa request. Foreign nationals who intend to work at U.S. government institutions should ensure that they are eligible to work at their chosen Host Institution.

### ***4.4 Taxes and Insurance***

The Host Institution and the individual SIRTF Fellow are responsible for complying with matters related to income taxes.

A health insurance program must be provided by the Host Institution for the Fellow. Funding for this purpose may be requested in the submitted budget consistent with the Host Institution policies on this matter.

It is the responsibility of the Fellow to become familiar with the policies of the Host Institution concerning these matters.

#### ***4.5 Cost Plans***

After the selection process is concluded, Fellows and Host Institutions will be notified of the intent to award Fellowship support to the Host Institution. The Host Institution should then submit a formal cost plan, signed by an authorizing official, to the SSC address cited in §3.3. Allowable budget expenses include health insurance, relocation expenses (first year only), and direct support costs, such as expenses for the Fellow's professional travel during the appointment, computing services, publication costs, and other direct research costs. In preparing the budget, an institution's indirect cost rate may not be applied against either the fellowship stipend or the health insurance.

Note that a cost plan should not be submitted with the Fellowship application. Detailed budget instructions will be mailed to successful applicants and their Host Institutions.

#### ***4.6 Publication Acknowledgements***

Publication of science results obtained through the SIRTF Fellowship Program in refereed journals is strongly encouraged. SIRTF Fellows should identify themselves as such and should acknowledge the Fellowship Program as follows: *“Support for this work was provided by NASA through the SIRTF Fellowship Program, under award [xxxxxx].”*

## 5 Application Checklist

Before submitting a SIRTf Fellowship application, please review the following checklist.

- You must have received, or expect to receive, your Ph.D or equivalent degree on or after January 1, 1999 and prior to the initiation of the Fellowship
- Submit one copy of the following materials as a single package to the SIRTf Science Center:
  - Completed and signed application form, including list of three references (please use application form included in these *Application Guidelines*, or available on the SSC public Web site);
  - Curriculum vitae;
  - List of publications;
  - Summary of previous and current research (limited to 2 pages);
  - Research proposal (limited to 4 pages plus up to 2 pages of references/figures). The relevance of the research to SIRTf science must be unambiguous.
  - Do not attach additional materials (reprints, preprints, etc.).
- Have the following materials sent directly to the SIRTf Science Center:
  - Acceptance letter signed (original) by an authorizing official of the first-choice Host Institution;
  - Recommendation letters from three referees.
- All materials should be mailed to the following address:  
SIRTf Fellowship Program  
SIRTf Science Center  
California Institute of Technology  
Mail Code 220-6  
1200 East California Boulevard  
Pasadena, California 91125 USA.
- **DEADLINE FOR RECEIPT OF ALL MATERIALS, INCLUDING LETTERS OF REFERENCE, IS NOVEMBER 16, 2001 (5.00 p.m. PST).**

# SIRTF Fellowship Program Application Form

1. Name \_\_\_\_\_
2. Address \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
3. Telephone \_\_\_\_\_ E-mail Address \_\_\_\_\_
4. Date of Ph.D. (month/year) \_\_\_\_\_ University \_\_\_\_\_
5. Thesis Title \_\_\_\_\_
6. Thesis short summary (not to exceed 100 words):

7. Thesis Advisor \_\_\_\_\_
8. Proposed Institutions  
First Choice \_\_\_\_\_ Research Advisor \_\_\_\_\_  
Second Choice \_\_\_\_\_  
Third Choice \_\_\_\_\_
9. Proposed Research Title \_\_\_\_\_
10. Proposed Research short summary (not to exceed 100 words):

11. List of Referees (names and institutions) who will send letters of reference directly to the SSC:
  1. \_\_\_\_\_
  2. \_\_\_\_\_
  3. \_\_\_\_\_

Send to: SIRTF Fellowship Program  
SIRTF Science Center  
California Institute of Technology  
Mail Code 220-6  
1200 East California Boulevard  
Pasadena CA 91125 USA

Signature \_\_\_\_\_  
Date \_\_\_\_\_