

# NASA's Stratospheric Observatory For Infrared Astronomy

## Airborne Astronomy Ambassador (AAA) Program

SOFIA is a 747SP aircraft carrying a 2.5 meter-diameter telescope dedicated to astronomical research. The telescope, associated equipment, and observing team are in the pressurized main cabin. AAA program participants will fly on overnight missions, at altitudes of up to 45,000 feet, in the main cabin. The 8 – 10 hour flight experience will be similar in environmental conditions (temperature, seating, turbulence) to a regular commercial airline flight, although interior noise level will be somewhat higher. Participants must be able to walk up a steep and narrow stairway unassisted, sit for an extended period of time in a pressurized cabin and carry flight materials unassisted. AAA program applicants and members must be a US Citizen or legal resident teaching in a U.S. school.

### *SOFIA AAA aims to-*

- Enhance Science, Technology, Engineering, and Math education in communities across the U.S.
- Support NASA's goal of inspiring the next generation of explorers.
- Contribute to general public understanding of the value of scientific research.
- Foster national and international visibility of the SOFIA program's achievements and discoveries.
- Help the SOFIA scientific staff promote SOFIA to the astronomy research community.

### *SOFIA AAA Cycle 1 educator team members each commit to-*

- Flying on overnight observing mission(s) aboard SOFIA during the science flight season, Mid-2012 through Mid-2013.
- Participating in a pre- and post-flight trainings and meetings associated with the flight and scientific research.
- Traveling to SOFIA's base in Palmdale, CA (near Burbank, CA) on a Monday and departing the following Friday afternoon or Saturday. Please note, this means leaving your classroom / work site for a week.
- Regular communication with program staff and scientists prior to arrival at Dryden Aircraft Operation Facility (DAOF), in Palmdale, CA.
- Developing or modifying existing materials and Implementing a SOFIA-based classroom curriculum component / informal education curriculum component and design of their choice.
- Planning and implementation of a SOFIA-based outreach component of their design and choice.
- Participating in the online course Astronomy For Teachers, (administered by Montana State University and the National Teacher Enhancement Network (NTEN)). Course will be held from February 6 – May 11, 2012. This requires approximately 8 – 12 hours per week.
- Active participation in the formative evaluation process.

### *SOFIA offers to educator Ambassador teams*

- A unique and special opportunity to be an active and important part of formative program processes.
- Access to NASA scientists and educational information via electronic communications.
- Active Astronomy Kit for each team member
- Support materials for education and outreach, ie SOFIA lithos, bookmarks, brochures, stickers and PowerPoint files.

### *SOFIA AAAs will become-*

- Better informed regarding no the process of conducting frontier scientific research.
- Better informed regarding the breadth and depth of contemporary astrophysics research.
- Better prepared to advise students on careers in science and technology.
- Members of the SOFIA AAA educator network, contributing to continued program development and supporting communications and opportunities via electronic communications and social networking.

### *Flight Dates-*

- Mid-2012 through Mid-2013, specific dates TBD. Most teams will be scheduled on science flights during the school year. SOFIA's science flight schedule will not be determined until after the application deadline and subject to change up to the actual flight date.
- Tentatively, a given AAA team will fly twice during their week's stay in Palmdale, CA.

### *Support-*

- Travel expenses, housing, and meals for required pre-flight meetings, flight, and required post-flight

- meetings.
- Online training course registration fee and graduate course credit.
- Substitute teacher costs reimbursed to the school district.
- Letter certifying additional hours of professional development in pre- and post- flight, and flight hours.

*Two- Person Team Eligibility and Composition-*

- One member must be a full-time science teacher (formal educator), grades 6-12.
- The second member may be a grade 6 – 12 formal science, math, or technology educator, elementary educator, or informal (museum, science center, planetarium, etc.) educator.
- Complete application (including essays and support letters) received in electronic form by the deadline **(November 15, 2011)**.

*Selection Process-*

- Applications received by **November 15, 2011**, via website. No faxed applications will be accepted. No mailed applications will be accepted.
- Both team members must submit the application and attachments.
- Teams will be selected based on the information in the application and in the essays.
- Selections will be announced by mid-January 2012.

*For further information or questions, please contact-*

Pamela Harman (SETI Institute Education and Outreach Manager) via email at: [pharman@seti.org](mailto:pharman@seti.org) or (650) 960-4523

## AAA Cycle 1 Application Process

We recommend that you prepare have all documents ready for upload before starting the process. The application will not be complete without all fields and all uploads completed. The system will not allow you to partially complete the process and return later.

### *A. Complete the web application.*

### *B. Personal Essay and Team Outreach Plan - upload your 2 page maximum document*

#### *One page maximum for items 1. and 2.*

1. Describe your teaching (formal or informal): how you bring new ideas and concepts into your classroom/facility; how you integrate science with other disciplines; how you connect your classroom/facility to the real world; and how you promote educational excellence in your school and community.
2. Describe the particular needs of your classroom/school or informal education venue. For example, informal educators should include the nature and amount of astronomy exhibits, the proportion of school/ teacher visits that are elementary, middle or high school. Describe how you think your participation in the SOFIA AAA Program will help meet those needs.

#### *1 page maximum for item 3. (Note: this response can be the same as your teammate's)*

3. Outline a plan to use the knowledge and resources received during the SOFIA AAA program and flight experience for community outreach effort (e.g. astronomy club, science center, museum, youth organizations, professional development for informal/formal educators). Define your role in the team and how team members will collaborate.

*C. Signature Page – sign, scan and upload the Signature Page*

*D. Upload Letter of Support-*

1. Your administrator or supervisor will read, initial, and sign the Administrator/Supervisor Letter of Support. Please scan and upload the document.

*E. Upload Letter of Reference -*

A letter should be from an individual who can describe your teaching skills and Abilities and/or your contribution to education programming and efforts at your facility.

*Additional materials will not be considered and will not be returned.*