

SOFIA Community Task Force (SCTF) AAS Splinter Session

SOFIA E/PO and the Airborne Astronomy Ambassadors



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Outline

- *SOFIA's Outreach Programs*
- *Airborne Astronomy Ambassadors*

SOFIA's Outreach Program: Partnerships on Earth and in the Sky



- **Overarching Goals:**
 - 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 Outreach Responsibilities

Education

- FLAGSHIP PROGRAM: research flight experience for educators
- Production of classroom activities & curricula; school visits; educator workshops
- Exhibits in science museums and similar venues (e.g. Ames Visitors Center)
- Summer workshops for college faculty and undergraduates to encourage research

Public Outreach

- SOFIA Science Center Web site content & “new media” presence
- SOFIA mission and E/PO printed materials
- Displays at public events (e.g. air shows, street fairs)

Public Affairs

- News releases and media productions regarding SOFIA achievements
- Support for external media coverage of the SOFIA program
- Support for SOFIA personnel in news media interviews
- Contacts with local government bodies, representatives, & civic groups

Science Outreach (responsibility shared with Observatory science staff)

- SOFIA exhibits, talks, posters and PR materials at scientific conferences
- Graphics arts support for talks & posters by SOFIA scientists and engineers
- Role in definition and management of First Light and Early Science programs

SOFIA - A Unique National Outreach Facility

- SOFIA is the only major research observatory -- ground-based or otherwise -- designed from the start to give members of the public – K-14 teachers, museum educators, undergraduate students, amateur astronomers -- familiarity with the processes of scientific research.
- SOFIA's day-to-day operations are like a high flying ground-based observatory -- but, in terms of its scientific promise SOFIA is more like a space observatory -- requiring a substantial Public Affairs (press & media) function to inform the public that their investment has paid off.

Kuiper Airborne Observatory FOSTER (Flight Opportunities for Science Teacher EnRichment) Program



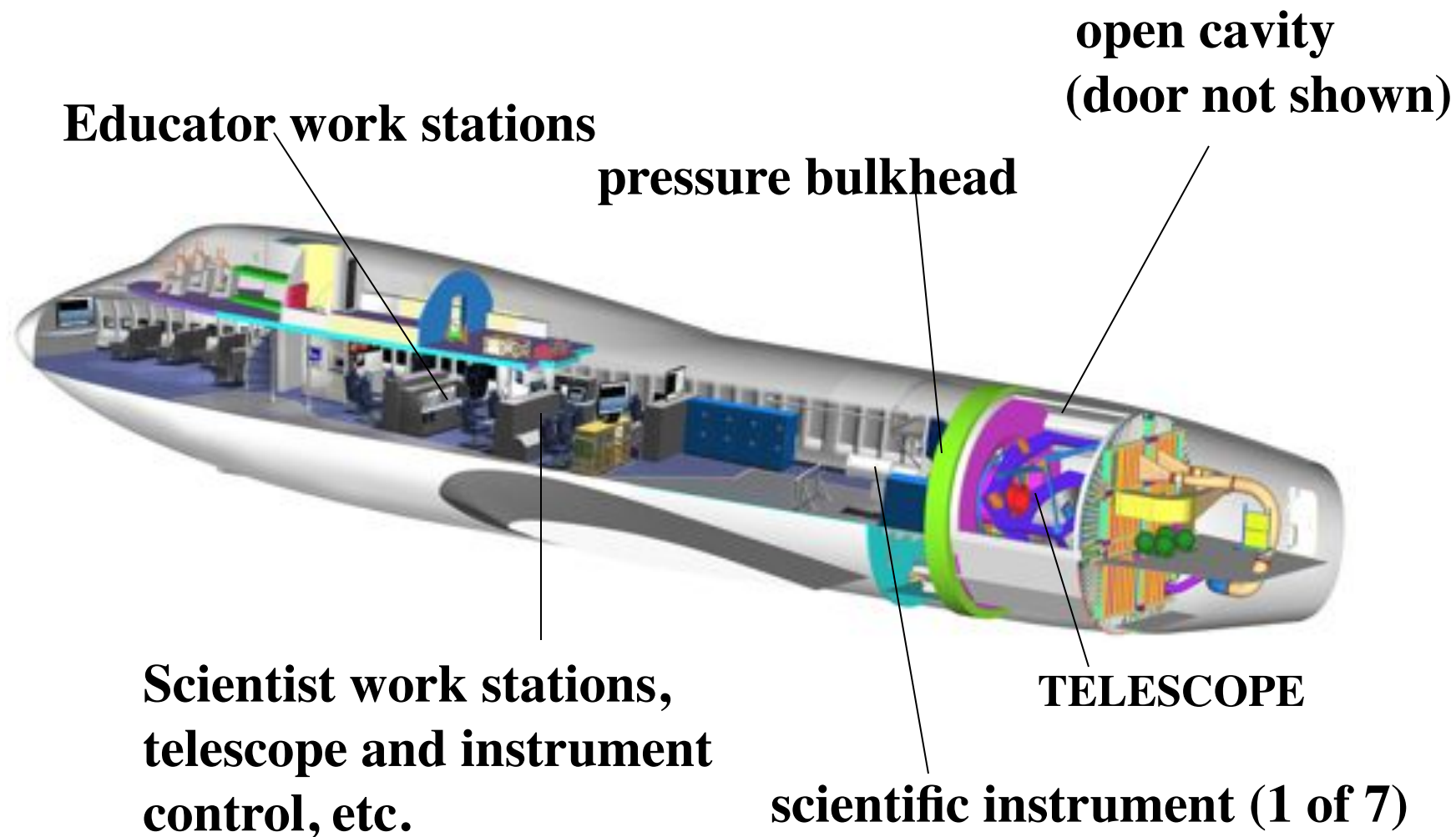
SOFIA Education Programs in Full Operations

AAA = Airborne Astronomy Ambassadors

Goal: Educators will experience and understand the scientific research process

- Teams of 2-4 formal & informal educators
- Teams from K-14, with MS and HS preferred
- Chosen via national call for proposals, broadcast via e-lists etc.
- Aligned with Guest Investigator calls
- Proposal judgment criteria:
 - Quality of plans to enhance local STEM education and public outreach using the SOFIA AAA experience and SOFIA Outreach resources
 - Geographic and demographic diversity
- Proposals evaluated by review panel
- Partnered by SOFIA Outreach with consenting research teams
 - Part of observing program's 2nd-stage definition
- Training (mostly via on-line course) to understand flight research project
- Involved in flight series w/ research partners
- Supported by SOFIA Outreach after flights to fulfill proposed projects
- Participants become a growing on-line support community & outreach network

SOFIA — The Observatory



Airborne Astronomy Ambassadors, cont'

Educator flight scenario in full operations:

- * ~30 Investigator teams flying per year (estimate)
- * Educators (and other Outreach visitors, including journalists) fly on 1/2 to 2/3 of science flight series (estimate)
- * Outreach personnel acting as flight facilitators -- always fly and work with educators and journalists
- * Educator team to fly on multiple flights (2 -3) over a week
- * In communication with astronomer partners, and SOFIA Outreach, before and after flights

IMPLIES: ~ 60 educators fly per year

Education Programs in Full Operations, cont'

EP = Earth Partners (Cycle 1 proposals mid-2012)

Goal: Educators have close mentoring relationship with SOFIA scientists

- Individuals or teams of educators; modeled on ASP Project ASTRO
- Partnered by Outreach with local SOFIA scientists; not trained for flights
- Could serve as prelude to AAA participation

SLEP = Science Literacy and Enrichment Program (2015+)

- For college and university educators not involved in research
- To be mentored by SOFIA scientists and engineers re. front-line research
- Summer workshops managed by Outreach
- Aimed especially at participants from institutions of under-served populations
- Could be in tandem with their students' USRP experience
- Could involve flight experience analogous to AAA program

Airborne Astronomy Ambassadors – 2011 pilot program

- * Convened focus group in February '11 to solidify design of the AAA program.**
- * SOFIA program manager Bob Meyer invited us to fly 6-8 teachers on SOFIA during Basic Science (spring-summer 2011).**
- * Call-for-Proposals narrow-cast March 1 to 3 geographical areas and 3 “in-house” teacher groups**
- * Proposal call closed April 1; recv'd 39 eligible proposals**
- * Selection of 6 U.S. teachers announced May 10; flights during last week of May and first week of June**
- * German SOFIA E/PO has selected 2 teachers, to fly later this summer.**

Looking forward ...

