

President's FY 2007 Budget Request (Dollars in Millions)

Stratospheric Observatory for Infrared Astronomy (SOFIA)	FY2005	FY2006	FY2007	FY2008	FY2009	FY2010	FY2011
FY 2007 PRES BUD	71.5	48.0					
Changes from FY 2006 Request	20.6	-0.3	-57.1	-59.4	-60.2	-60.4	

Overview

SOFIA has been under development as an astronomical observatory consisting of a 2.5-meter aperture telescope permanently installed in a specially modified Boeing 747 aircraft. The aircraft, to be attached with an open-port telescope provided through a partnership with the German Aerospace Center (DLR), was designed to provide routine access to of the visual, infrared, far-infrared, and sub-millimeter parts of the spectrum.



The case for compelling "Great Observatory" science from SOFIA assumed a minimum 12-month overlap with Spitzer for complementary science observations and a minimum one year of operations prior to the launch of the Herschel mission. Due to a two year slip over the last year, SOFIA will have little if any useful overlap with Spitzer. In addition, even if the Herschel launch slips, the benefit of SOFIA results in science planning for Herschel will not be lost.

Artist's rendition of SOFIA's internal and external concept design.

As a result of ongoing cost growth due to technical and schedule problems, NASA will conduct a review of the SOFIA project in early 2006 and coordinate the Agency's analysis and position on SOFIA with the German Aerospace Center (DLR) according to the Memorandum of Understanding between the two agencies. This review will allow NASA to determine the best course of action, given the project's status as well as competing science requirements.

Plans For FY 2007

The agency may adjust the SOFIA budget in FY 2007 in future operating plans and budget requests based on the outcome of the review and consultation with DLR.

Changes From FY 2006

- A review will be held in early 2006 to determine the best course of action for this project.

Program Management

ARC is responsible for SOFIA project management. NASA and ARC Program Management Councils have program responsibility.

Theme: The Universe
Program: Stratospheric Observatory for Infrared Astronomy (SOFIA)

Technical Parameters

The SOFIA observatory was designed as a highly-modified 747SP aircraft with a large open-port cavity aft of the wings, housing a 2.5-meter telescope optimized for infrared/sub-millimeter wavelength astronomy. The Science and Mission Operations Center would include facility-class science instruments, principal investigator labs, data archives, science/mission planning systems, the main hangar, and supporting equipment to provide operations at a sustained rate of ~155 flights (960 science hours) per year.

Technical Specifications	FY 2007 President's Budget	Change from Baseline
Effective aperture of telescope	2.5 meters	None
Operational capability	Operate in observing configuration for 6 hours or more at altitudes of at least 41,000 feet.	None
Telescope elevation range (unvignetted)	20 - 60 degrees	None
Telescope wavelength range	0.3 to 1600 microns	None

Implementation Schedule:

Project	Schedule by Fiscal Year							Purpose	Phase Dates	
	05	06	07	08	09	10	11		Beg	End
SOFIA								A project review will be held in early 2006.	Tech Form Dev Ops Res	Mar-96 Apr-06
<p> ■ Tech & Adv Concepts (Tech) ■ Formulation (Form) ■ Development (Dev) ■ Operations (Ops) ■ Research (Res) ■ Represents a period of no activity for the Project </p>										

Strategy For Major Planned Acquisitions

- N/A

Key Participants

- An agreement with the DLR provides the telescope assembly and support during operations in exchange for 20 percent of science observation time.

Risk Management

- RISK: Utilization of existing project assets. MITIGATION: In the event of termination, work with the German Aerospace Center (DLR) in a manner consistent with the SOFIA Memorandum of Understanding to seek mutual agreement on the disposition and potential utilization of SOFIA program elements.