



## 2018 ANTELOPE VALLEY BOARD OF TRADE

### NASA SOFIA (Stratospheric Observatory For Infrared Astronomy)

SOFIA is a joint collaboration between NASA and the German Aerospace Center (DLR). Mounted in a highly modified Boeing 747SP is a 100 inch (2.5m) effective diameter infrared telescope which is German built. With this telescope and a suite of cutting edge instruments, SOFIA collects data in the infrared spectrum flying in the altitude range of 39,000 to 45,000 feet which is above water vapor in the Earth's atmosphere that blocks infrared light at lower altitudes. SOFIA is designed for a 20 year lifespan. The platform will test new technologies and instrumentation that will be useful in Earth and space scientific research and should contribute towards future space missions.

When NASA's proposed FY 2015 budget was publicly unveiled in March 2014, it was proposed to eliminate the Program; however the Congress restored funding to continue formal airborne science operations.

SOFIA met all the technical requirements for full operational capability on February 21<sup>st</sup>, 2014, a full 10 months ahead of its scheduled milestone, after an investment of approximately \$1.2B to achieve such.

SOFIA Program has always been scheduled to end Calendar Year 2034 based on 20 years of world class science. The Omnibus Appropriations Bill included language that **further clarifies that NASA shall not undertake any activities during fiscal year 2018 in preparation for any fiscal year 2019 senior review of this program.** The agreement notes that "SOFIA, which began its prime mission in 2014, has a prime mission lifetime of 20 years."

SOFIA is also important to California and other regions economically. SOFIA directly employs 120 people at NASA's Neil A. Armstrong Flight Research Center in California's Antelope (commonly referred to as Aerospace) Valley and 135 at NASA's Ames Research Center in the state's Silicon Valley. Many more positions across the US

support SOFIA, particularly at Maryland's Goddard Space Flight Center where several of the present day instruments onboard SOFIA missions were built.

The contributions of SOFIA to STEM education will be far-reaching and immeasurable as long as operations are permitted to continue. SOFIA is the first major research observatory designed from the beginning to incorporate a robust, hands-on education and outreach component that will directly involve thousands of educators and educational assistants. The Airborne Ambassadors program has already yielded positive results flying educators on missions. The returns in our classrooms, our homes, and the workplace will be realized significantly by future generations of Americans inspired by, and pursuing, an education and careers in scientific, engineering, and technical fields.

The scientific data gathered by SOFIA should prove irrefutable and stand on its own merit provided the Program is able to continue operations, and such data is subjected to a scientific review after enough operational time has gone by to provide for meaningful results.

- It is recommended that any credible senior scientific review not occur prior to 2019.

***The AV Board of Trade urges our Congressional Members to actively, continually engage and support the SOFIA Program; to support a scientific review (not before 2019) where SOFIA can stand on its own merits and properly be assessed and evaluated based upon past performance and future promise. We also seek full funding for SOFIA's continued research through the 17 years it is slated to remain operational.***