

Major Milestones in NSF-Funded Solar Astronomy

NSF has long supported solar astronomy research. This science has helped inform what we know about the sun, other stars and the plasma state of matter (like the sun's corona). This fundamental knowledge is at the crux of space weather, which impacts communication networks and power grids on our own planet. NSF's newest investment, the Daniel K. Inouye Solar Telescope, is poised to collect unprecedented images and data about the sun when it becomes fully operational in 2020.

1953-1954
NSF awards its first grants for solar research.

1958
American scientists with NSF funding observe sun continuously for 12 months for first time in history as part of International Geophysical Year scientific program.

1959-1960
Balloon-mounted solar telescope captures historic photos of sunspots.

November 2, 1962
NSF dedicates McMath Solar Telescope at Kitt Peak National Observatory.

1965
NSF's Kitt Peak National Observatory assists Aerobee rocket launch to capture X-ray images of the sun. Also, NSF coordinates U.S. federal research participation in "International Year of the Quiet Sun" to study sun's corona.

1973
NSF funds the National Center for Atmospheric Research's High Altitude Observatory to develop a coronagraph for Skylab to observe sun from space.

1975
Franz Deubner, using the NSF Dunn Solar Telescope at Sacramento Peak, demonstrates how solar five-minute oscillations are trapped inside the sun, leading to helioseismology.

1983
NSF sends scientific expedition to Indonesia to observe total solar eclipse, including a newly developed special camera to capture the interplay between solar magnetic fields and corona.

1995
NSF funds a Global Oscillation Network Group (GONG) to observe sun continuously as possible and provide space weather data.

2003
Synoptic Optical Long-term Investigations of the Sun (SOLIS) instrumentation is deployed at NSF's Kitt Peak National Observatory to map sun's magnetic field in photosphere and chromosphere daily.

2012
Construction begins on NSF's 4-meter Daniel K. Inouye Solar Telescope, which will be the largest, most powerful solar telescope to date when it comes online in late 2020.

August 21, 2017
NSF funds projects to obtain uninterrupted observation of total solar eclipse as it traverses U.S.; NCAR and Smithsonian Astrophysical Observatory flies along path of totality and NSO leads nationwide citizen science observation project, Citizen Cate.



National Science Foundation

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