



AMERICAN ASTRONOMICAL SOCIETY

Enhancing and sharing humanity's scientific understanding of the universe since 1899.

NASA, SDO

Decadal Surveys

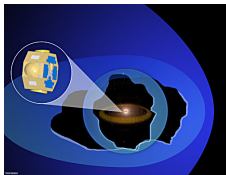


Each decade, the entire community comes together to set priorities for scientific studies in the ten years ahead. Each of the recent decadal surveys recommend **balanced portfolios of large, medium and small projects** as their highest priority, with **robust investment** in each so all can participate in astronomical discoveries. For the U.S. to continue leading the world in the astronomical sciences, we need **revolutionary new flagship projects** in space and on the ground, but we must also maintain support for the **competed research grants** and highly cost-effective **small and mid-scale competed missions**.

Small & Mid-Scale Projects

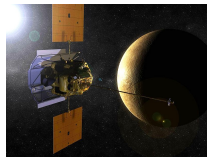


Kepler has opened our eyes to the billions of potentially habitable planets in our Milky Way galaxy.



IBEX is helping us to better understand our place in the galaxy.

Discovery, New Frontiers, and Explorer class missions are revolutionizing our view of the entire universe, from our own solar system to the most distant galaxies. These competed programs broaden participation in space sciences, encourage innovation, and deliver high scientific and technological return on federal investment.



MESSENGER is providing new insights on the inner solar system.

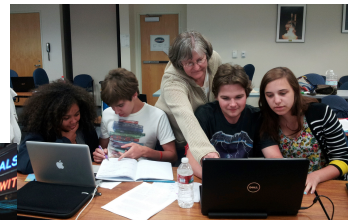
Revolutionary Flagships

Exciting new projects like the Large Synoptic Survey Telescope (LSST), a top decadal survey priority, will revolutionize our understanding of the cosmos, from asteroids to the largest structures in the universe, *and* drive technological innovations with potential commercial applications.



Education & Public Outreach

NASA/IPAC Teacher Archive Research Program (NITARP) Educator Jacqueline Barge works on original astronomical research with her high school students.



Large crowds gathered in Times Square, and many other locations, to celebrate the NASA Curiosity Rover's successful landing on Mars.



Competition Grants

Competition grants are awarded to researchers based on the **merit and breadth of impact** of the proposed scientific research. The suite of astronomical science grant programs at NASA, NSF and DOE Office of Science **award research dollars to scientists and students throughout the country**. Many researchers depend on these programs for their salaries and research expenses.

NASA, JPL-Caltech, MSSS, Mastcam



AMERICAN ASTRONOMICAL SOCIETY

Enhancing and sharing humanity's scientific understanding of the universe since 1899.

Adam Block, Mt. Lemmon SkyCenter, U. Arizona

Astronomical Sciences cut in the FY 2015 President's Budget Request

	FY 2013 Actual	FY 2014 Enacted	FY 2015 Request*	Change FY 15-14 Amount	Percent
NASA	16,865	17,647	17,461	-185.9	-1.1%
<i>Science (SMD)</i>	4,782	5,151	4,972	-179.2	-3.5%
<i>Astrophysics</i>	617	668	607	-60.7	-9.1%

Source: Agency budget justifications. Figures rounded to the nearest million. James Webb Space Telescope (JWST) fully funded toward 2018 launch.

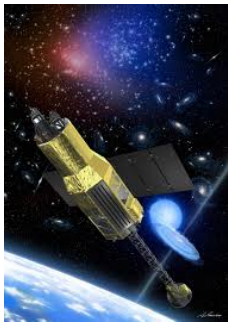
*Does not include funding in the Opportunity, Growth, & Security Initiative.

This request would **cut NASA's Science Mission Directorate** at a time when the scientific community has set out a **strong, prioritized vision for the future.**

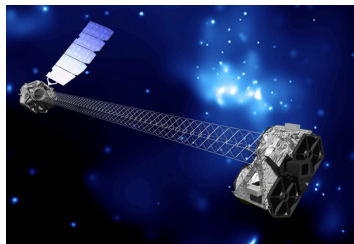
These cuts would result in NASA pulling out of an international collaboration, without scientific community review, **threatening our standing in the global science community.**

Small/mid-scale Projects

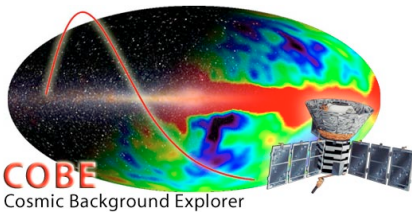
We **applaud** efforts to **increase the cadence** for small-scale Astrophysics *Explorer* missions. This should provide **new opportunities for exciting international collaborations.**



Above: The Astro-H Mission of Opportunity, a collaboration with the Japanese Space Agency (JAXA), will bring unprecedented views on extreme gravity fields.

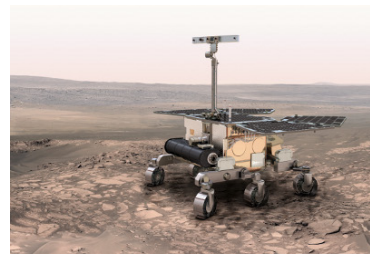


Above: NuSTAR (JPL, Orbital Sciences, UC Berkeley, Sonoma State U), launched in 2012, is opening new windows on some of the most energetic events in the universe.



Left: The leaders of the Cosmic Background Explorer mission (Goddard) won the 2006 Nobel Prize for their work with this mission.

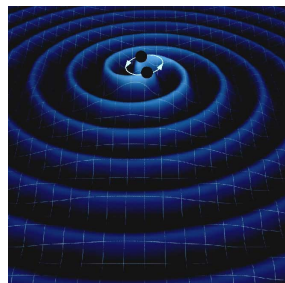
Right: SOFIA, a joint mission between NASA's Astrophysics Division and the German space agency (DLR), has been **proposed for grounding.**



Left: In FY 2013, NASA also **largely pulled out of the ExoMars collaboration with the European Space Agency (ESA).**



Advancing the Frontier Together



The US astronomical community makes huge strides through **international partnerships.** It is **crucial to maintain good standing as a reliable partner.**

Left: Our **best opportunity** to open a whole new window on the universe through gravitational waves is through international partnership on a flagship-class space mission.

Funding Research

Our exciting new missions **need** accompanying research funding to support our **world-leading scientific community** and train the next generation of **global scientific leaders.**

At NASA, these include the Data Analysis and Theory Programs, as well as Guest Observer research funds that accompany missions.

Education & Public Outreach

We **applaud** the improved plan to restructure STEM Education programs at NASA but **keep them within SMD**, but are **worried that total funding for NASA-SMD would drop by 2/3** under this proposal.



Above: Educator Ambassador for the Fermi mission demonstrates the warping of spacetime near a black hole.

Lynn Cominsky