

Goddard

SPACE FLIGHT CENTER

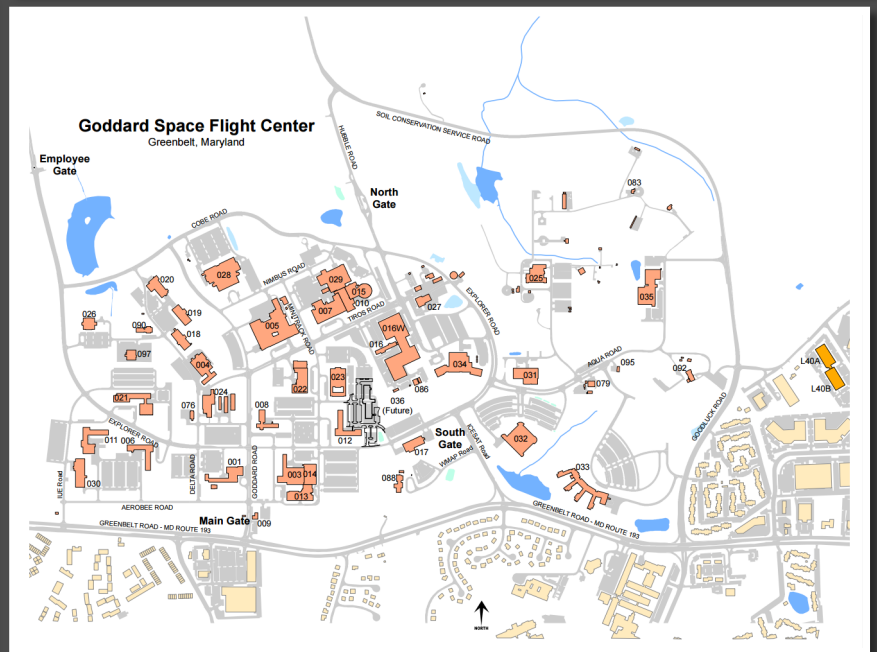
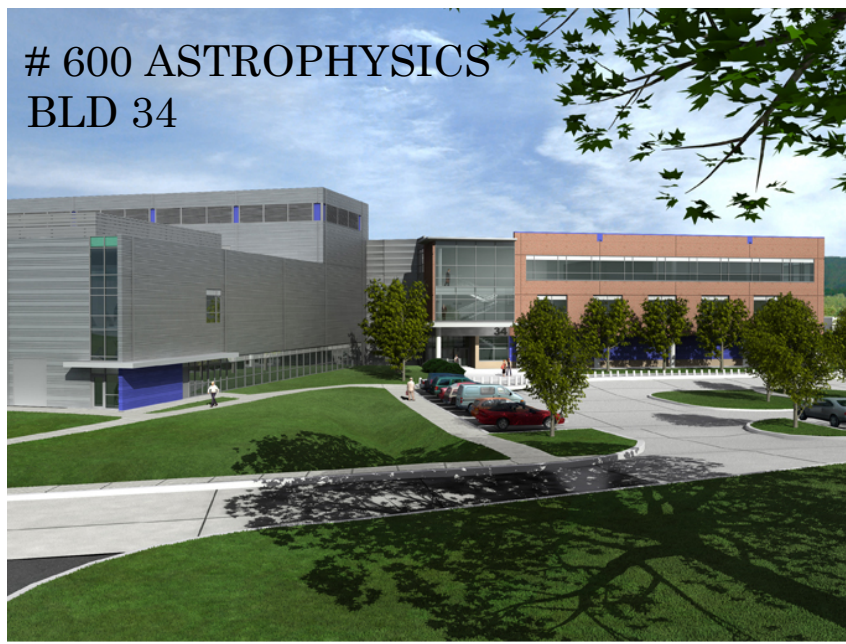
8800 Greenbelt Rd. , Greenbelt , MD 20771 , USA
founded 1959



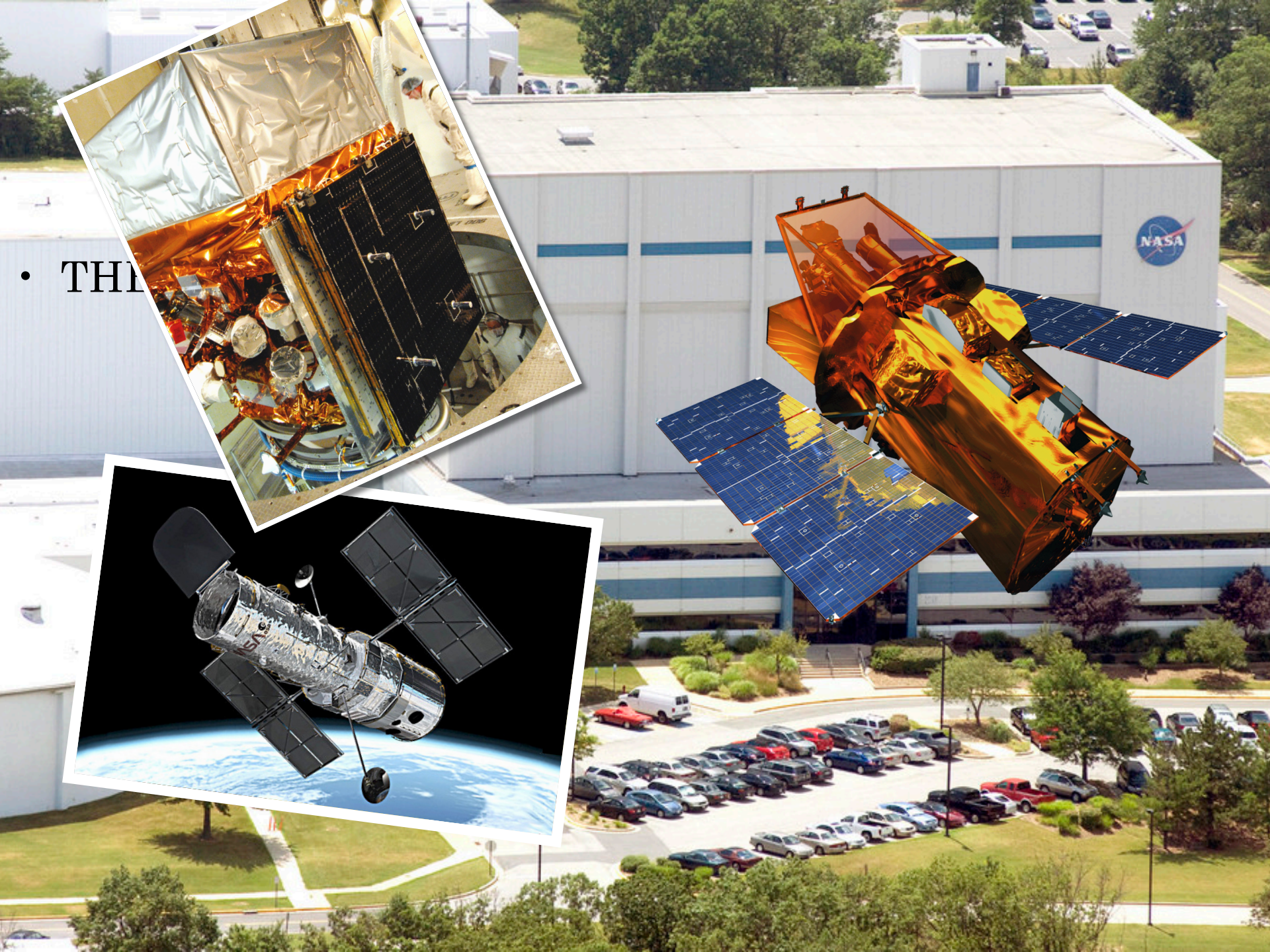
70.000 metri quadrati
37 buildings
18.000 persone



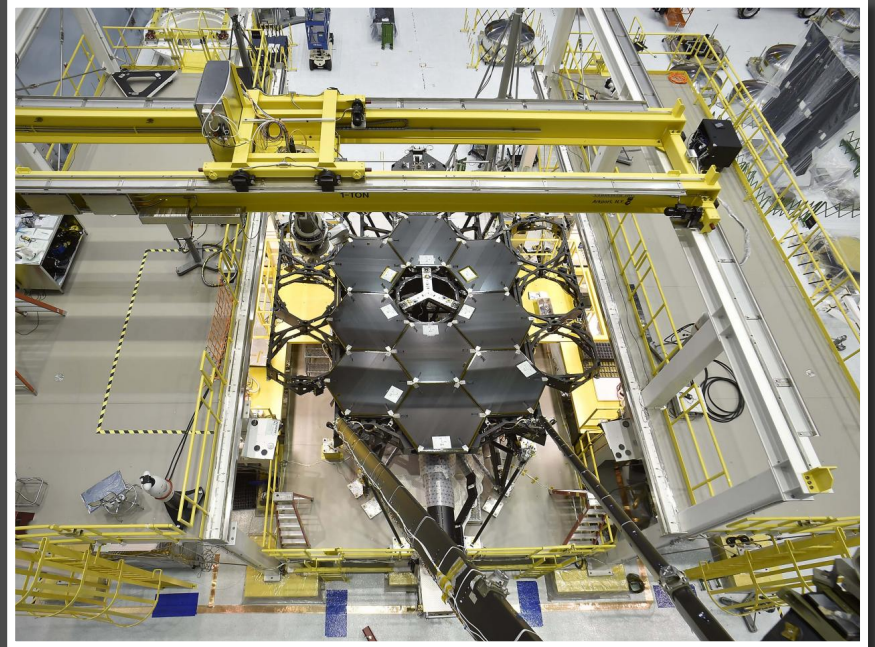
600 ASTROPHYSICS
BLD 34



• THE



THE FACTORY





National Aeronautics and
Space Administration

Goddard Space Flight Center

Wallops Flight Facility



National Aeronautics and
Space Administration

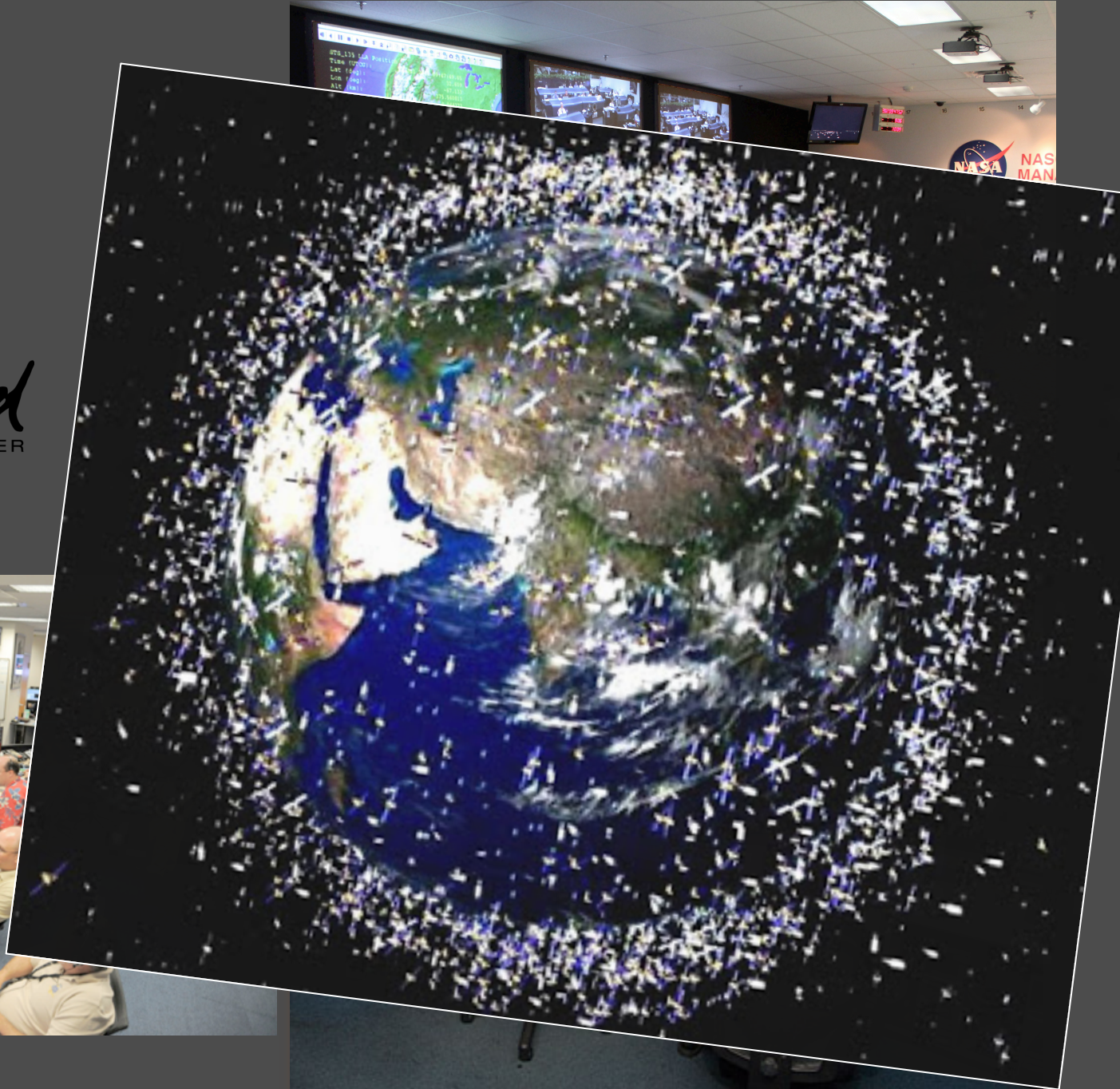
Goddard Space Flight Center

Wallops Flight Facility





Goddard
SPACE FLIGHT CENTER







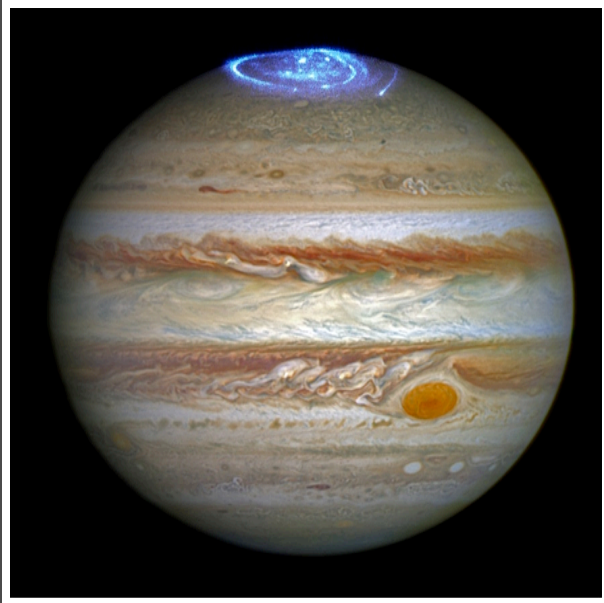
Goddard
SPACE FLIGHT CENTER

BUDGET 2017 3.8 MLD USD

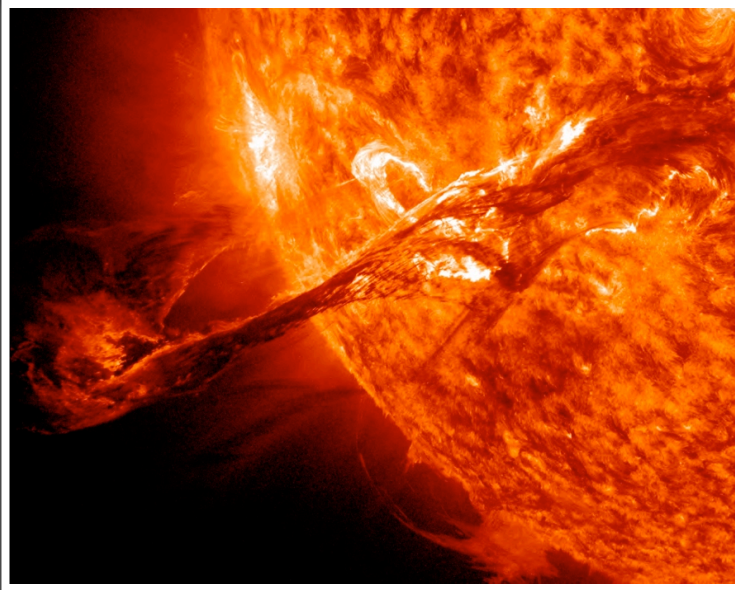
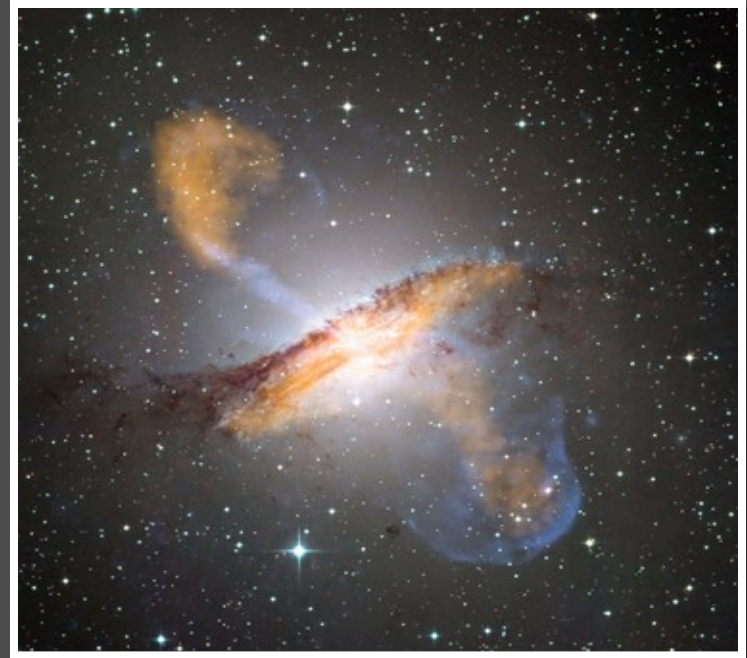


LA RICERCA

SOLAR SYSTEM



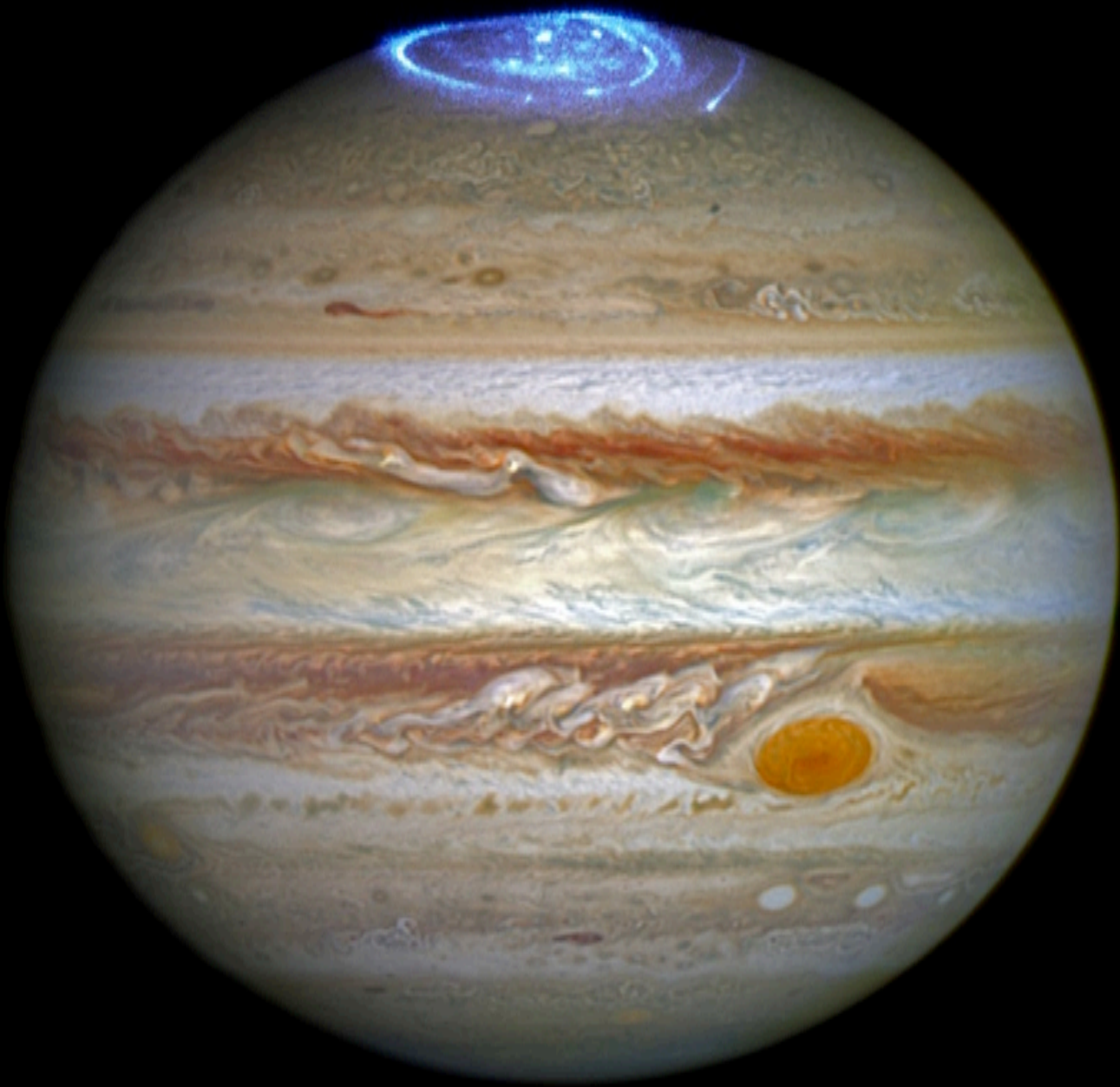
ASTROPHYSICS



HELIOPHYSICS



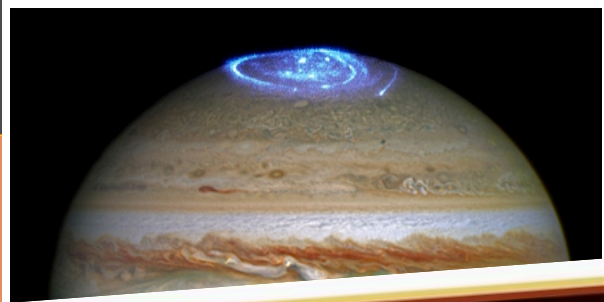
EARTH SCIENCE



ON

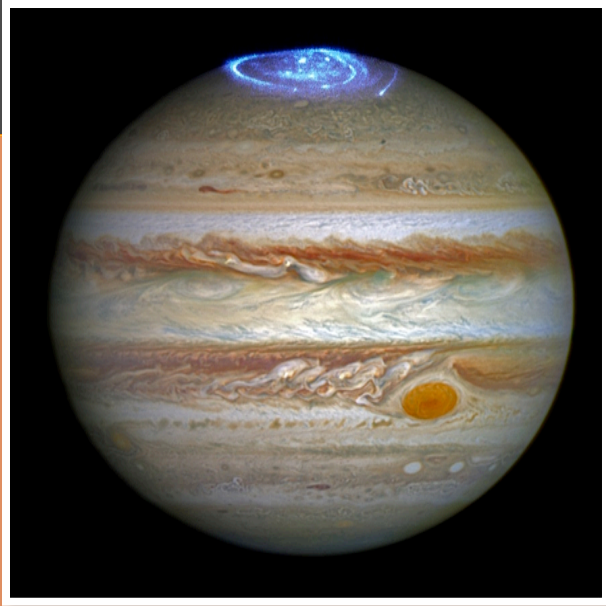
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SOLAR SYSTEM DIVISION Current Missions

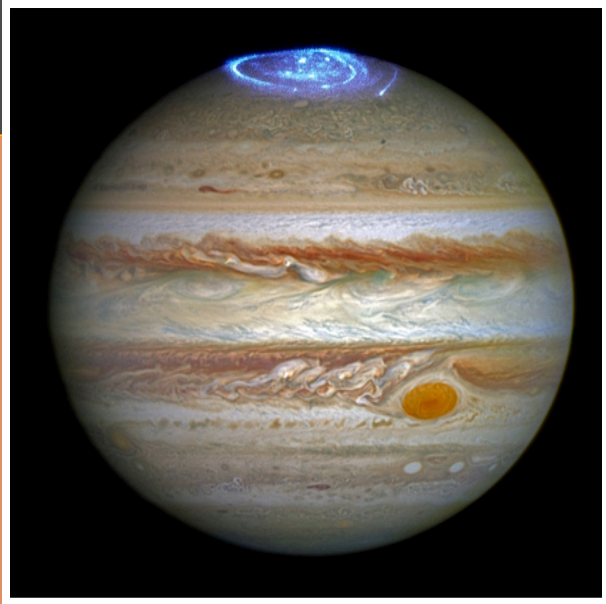
OSIRIS
MAVEN
LRO
CASSINI
SAM Curiosity
JUNO
VOYAGER
HUBBLE



SOLAR SYSTEM DIVISION

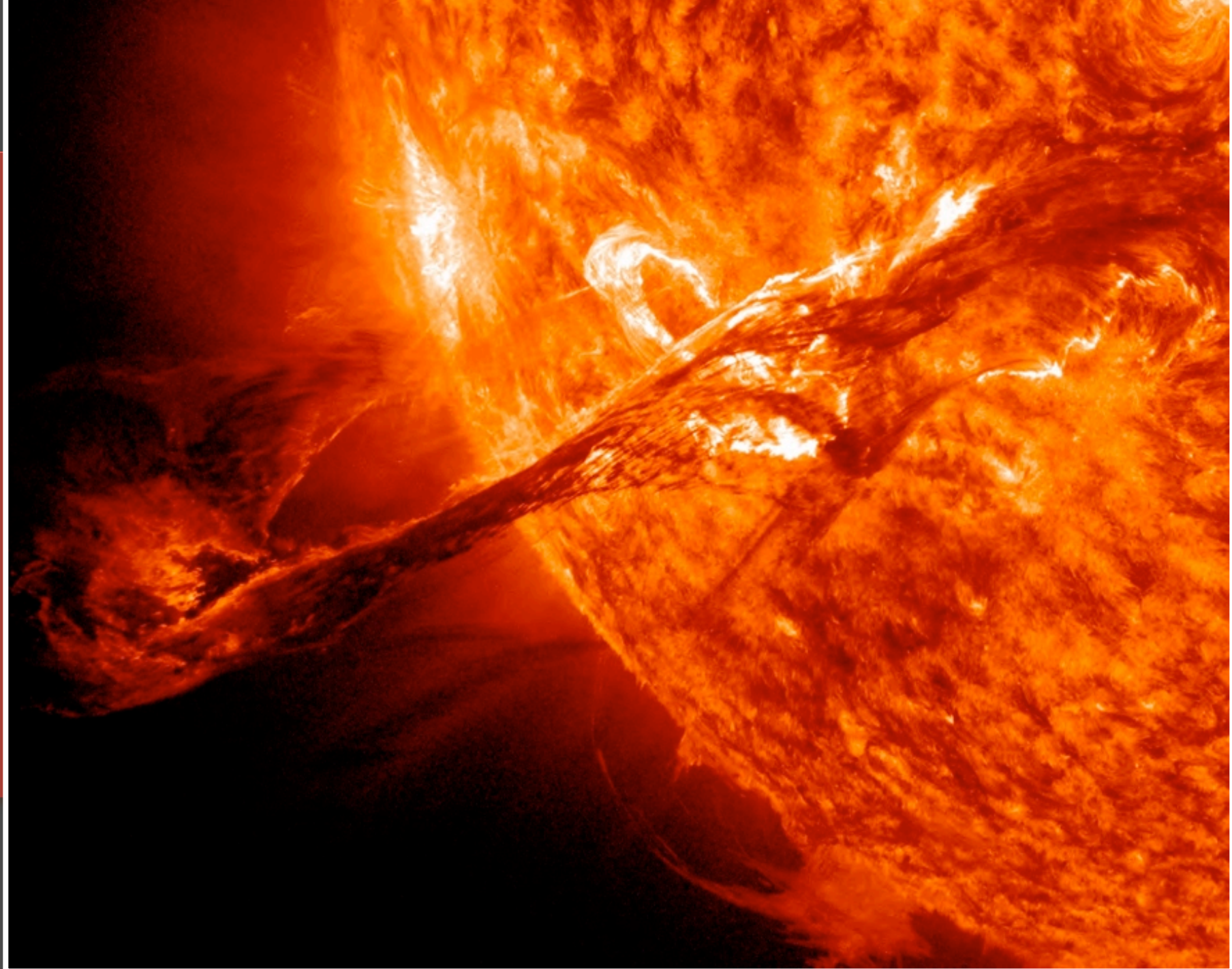
In development

GEDI _ Climate change (ISS)
DAVINCI Venus atmosph
LUCY Trojan Asteroids



SOLAR SYSTEM DIVISION 10 Years Horizon

**Ocean World Wide
Comet Nucleus
Venus Explorer
Mars Sample Return
Volatile Resources**





ACE

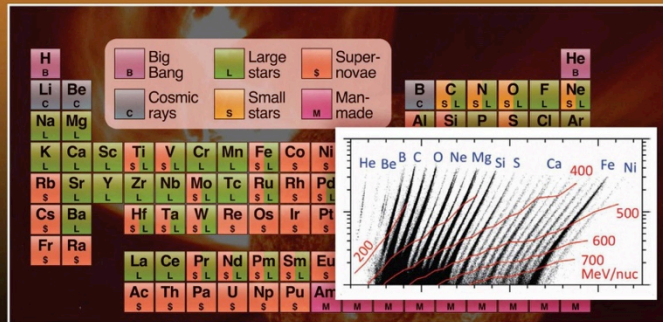
Advanced Composition Explorer

Deciphering the Composition of Matter from the Sun, the Solar Wind, and the Local Galaxy



Launch: Delta II - August 25, 1997

www.nasa.gov



Periodic table and ACE/CRIS energy loss matrix identifying elements in galactic cosmic rays

HELIOPHYSICS Current Missions

MMS

ACE, AIM, ARTEMIS

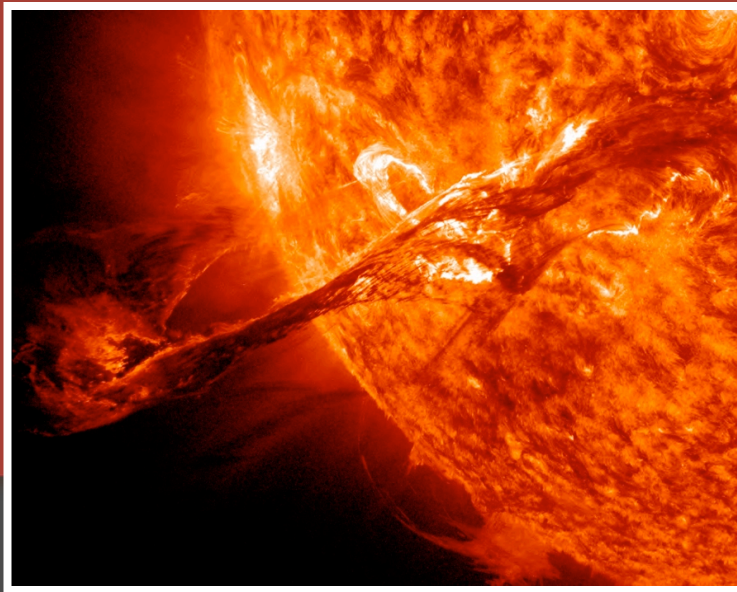
CINDI, IBEX, IRIS

STEREO, SOHO, TIMED

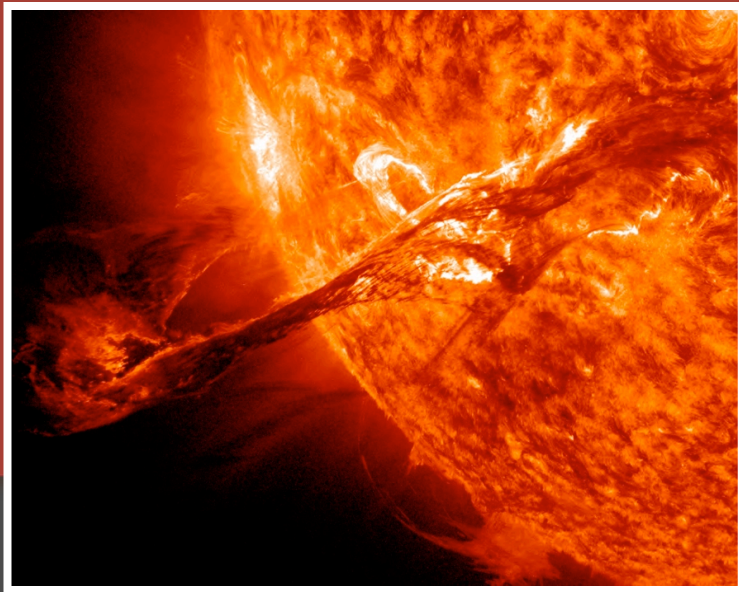
WINS

ed inoltre circa 20 satelliti in
orbita attorno al Sole

HELIOPHYSICS In Development

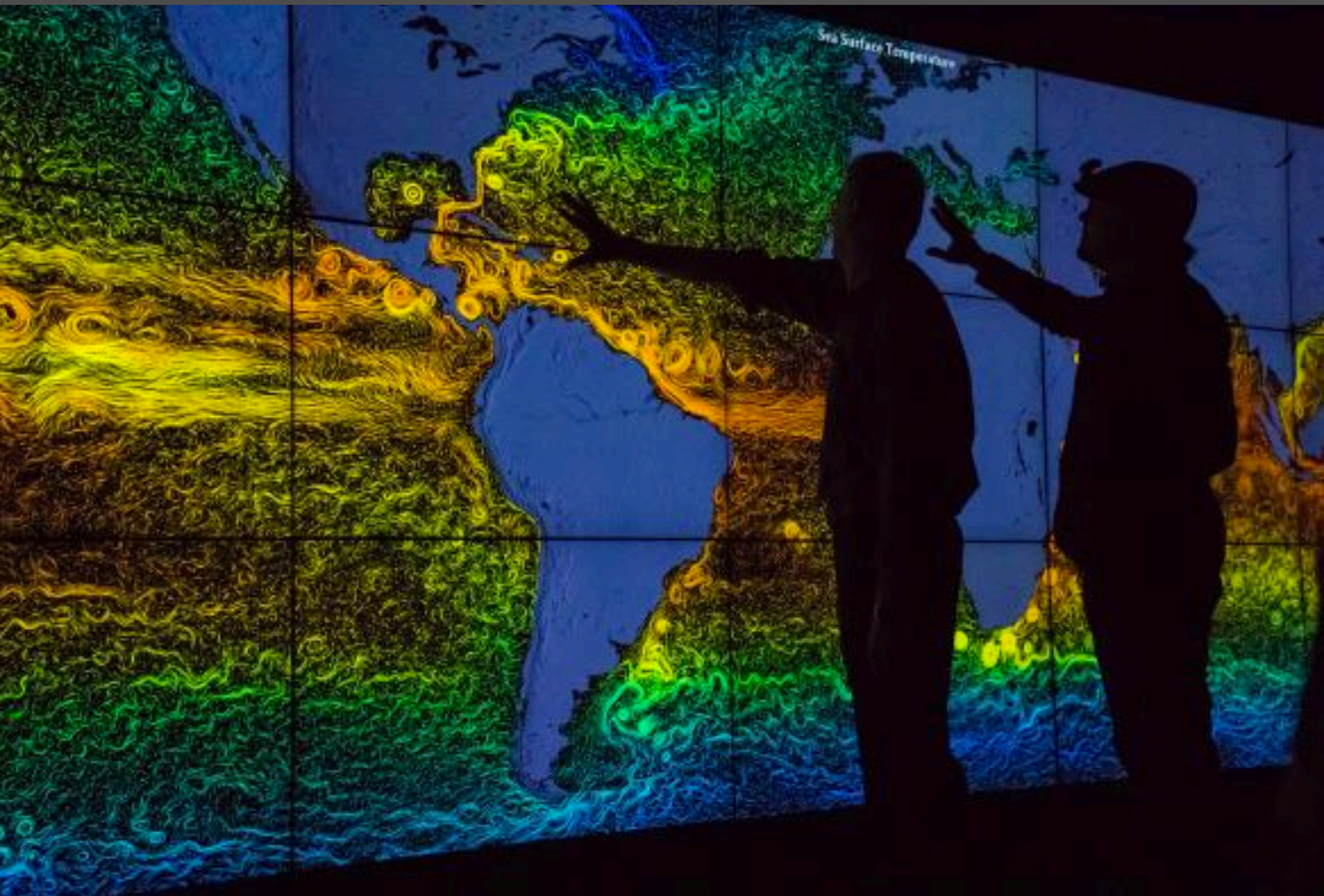


SET
GOLD,
Solar Probe
Solar Orbiter
STP 5



HELIOPHYSICS
10 Years Horizon

SOLAR SENTINEL
MMS_C





DEEP SPACE CLIMATE OBSERVATORY

DSCOVR

NOAA • NASA • USAF



EARTH SCIENCES
In Development

Weather Satellites

GOES-R

LandSAT 9

ICESat-2

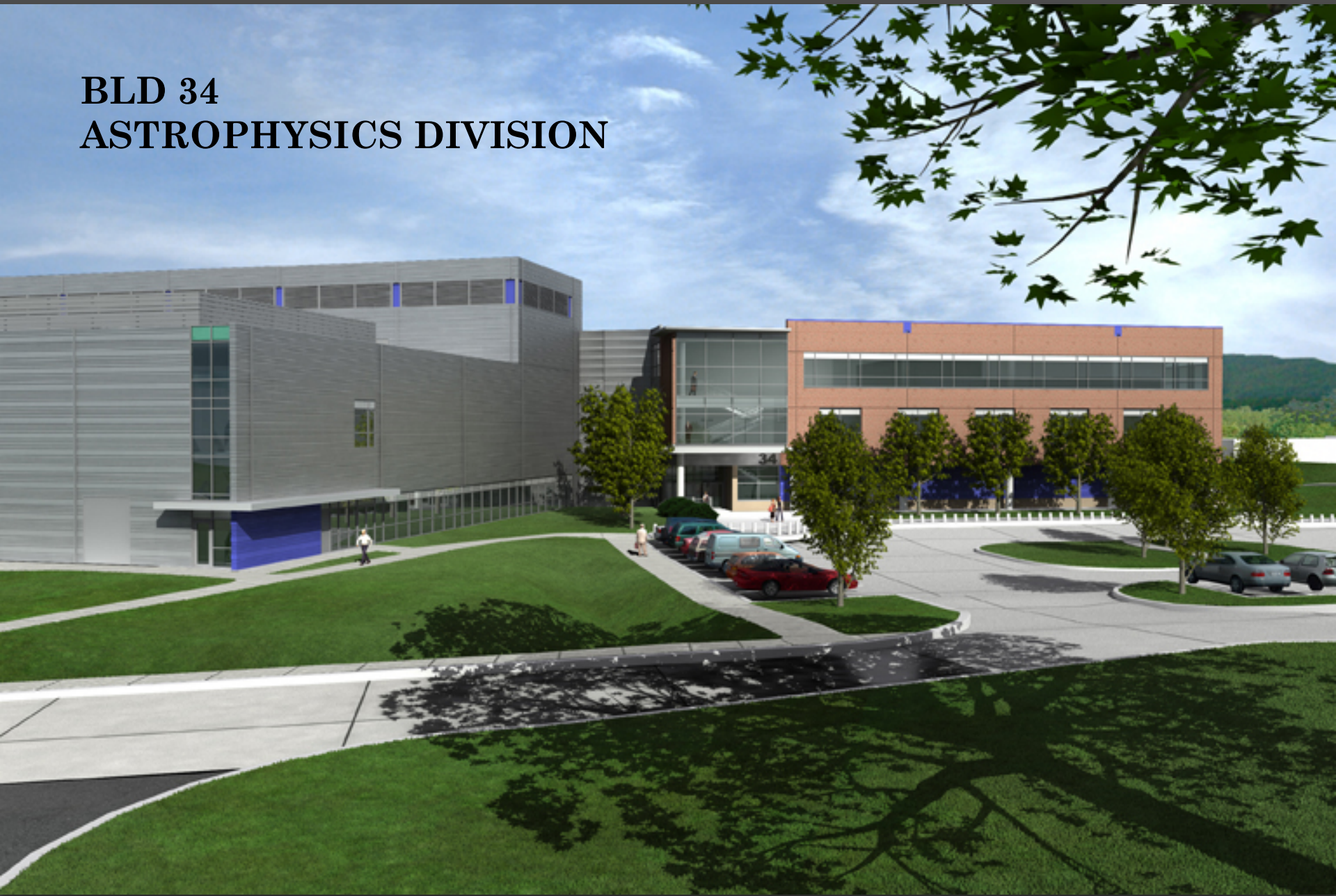
GEDI (ISS)



EARTH SCIENCES
10 Years Horizon

Carbon Hunters
ASCENDS / USGS
LandSAT 10, 11, 12
NOAA JPSS - 3,4

**BLD 34
ASTROPHYSICS DIVISION**

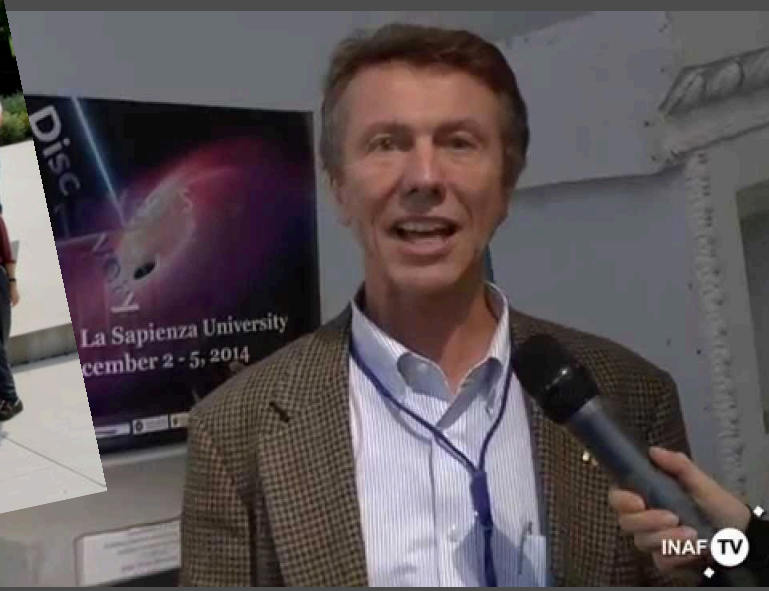




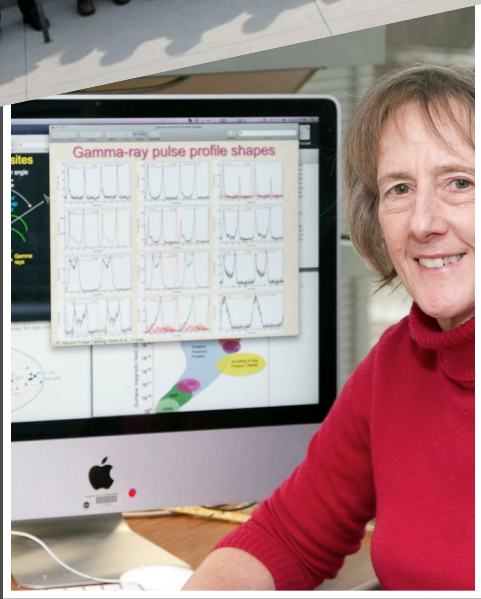
INSIDE, 2 FLOOR







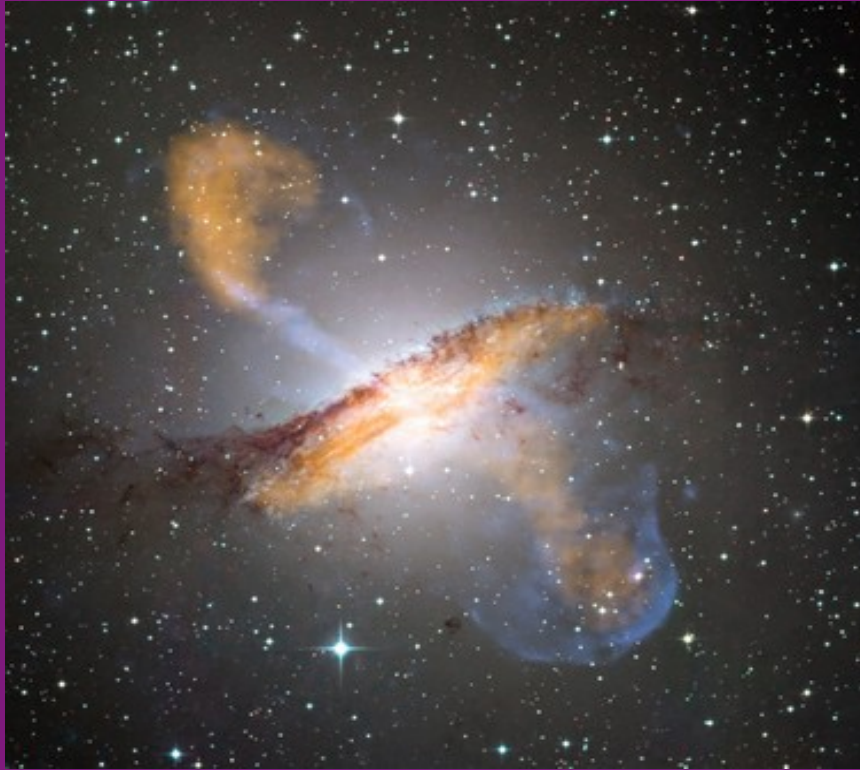
PERSONE





John Cromwell Mather

Nel 2006 vinse il premio Nobel per la fisica in condivisione con George F. Smoot per la scoperta delle anisotropie del corpo nero presenti nella radiazione cosmica di fondo tramite il satellite COBE (Cosmic Background Explorer).




ASTROPHYSICS

Come lavora l'Universo?

Da dove veniamo?

Siamo soli nell'Universo?

People & Organizations 

Missions & Projects

Featured

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ASD Colloquium Series

Research

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Education & Outreach

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Featured Missions & Projects - Astrophysics Science Division (660)

**James Webb Space Telescope (JWST)**

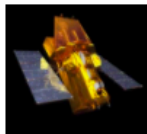
The James Webb Space Telescope (JWST) is a large space observatory that will operate in an orbit some 1 million miles from Earth. JWST will find the first galaxies that formed in the early universe, connecting the Big Bang to our own Milky Way Galaxy. It will also peer through dusty clouds to see stars forming planetary systems, connecting the Milky Way to our own solar System. Webb's instruments will be designed to work primarily in the infrared range of the electromagnetic spectrum, with some capability in the visible range. The observatory is scheduled to launch in 2018.

-/+ Key Staff

**Fermi Gamma-ray Space Telescope**

The Fermi Gamma-ray Space Telescope is opening a wide new window on the universe. Gamma rays are the highest-energy form of light, and the gamma-ray sky is radically different from the one we perceive with our own eyes. Fermi is advancing our understanding of a broad range of topics, including supermassive black holes, dark matter studies, the physics of pulsars and gamma-ray bursts, and the origin of cosmic rays. The mission observes high-energy gamma rays over a broad range of energies as well as more focused gamma-ray bursts. Fermi was launched in 2008.

-/+ Key Staff

**Swift**

The Swift mission observes gamma-ray bursts and probes conditions in the distant (high-redshift) universe. The mission consists of three instruments on a spacecraft that can rapidly reorient itself to observe new targets. Within seconds of detecting a burst, Swift relays a burst's location to ground stations. This enables both ground-based and space-based telescopes around the world to target and observe the burst's afterglow. The spacecraft observes approximately 90 gamma-ray bursts per year. Additionally, it observes other transient sources of many types, such as, supernovae, novae, tidal disruption events, black hole transients, and comets. Swift was launched in 2004.

-/+ Key Staff

**Nuclear Spectroscopic Telescope Array (NuSTAR)**

The NuSTAR mission will deploy the first focusing telescope for imaging the sky with high-energy X-rays. NuSTAR will undertake the first census of supermassive black holes throughout cosmic space and time, map supernova explosions, and study the most extreme active galaxies. The telescope will allow scientists to explore fundamental questions about the universe, such as what happens at the edge of a black hole, the nature of the mysterious "dark energy" pulling apart the universe, and what powered the Big Bang.

-/+ Key Staff

**Hubble Space Telescope (HST)**

The Hubble Space Telescope (HST) is a multi-instrument observatory that has dramatically changed humanity's understanding of the universe for over two decades, with dramatic images of stars, planets, and galaxies. Hubble orbits Earth; its position above the atmosphere, which distorts and reduces the light that reaches the surface, gives it a view of the universe that typically surpasses that of ground-based telescopes. HST's various instruments investigate the universe in the visible, ultraviolet, and infrared portions of the spectrum. HST was deployed from the space shuttle Discovery on April 25, 1990. After that, the telescope underwent five servicing missions to repair or upgrade various instruments and systems.

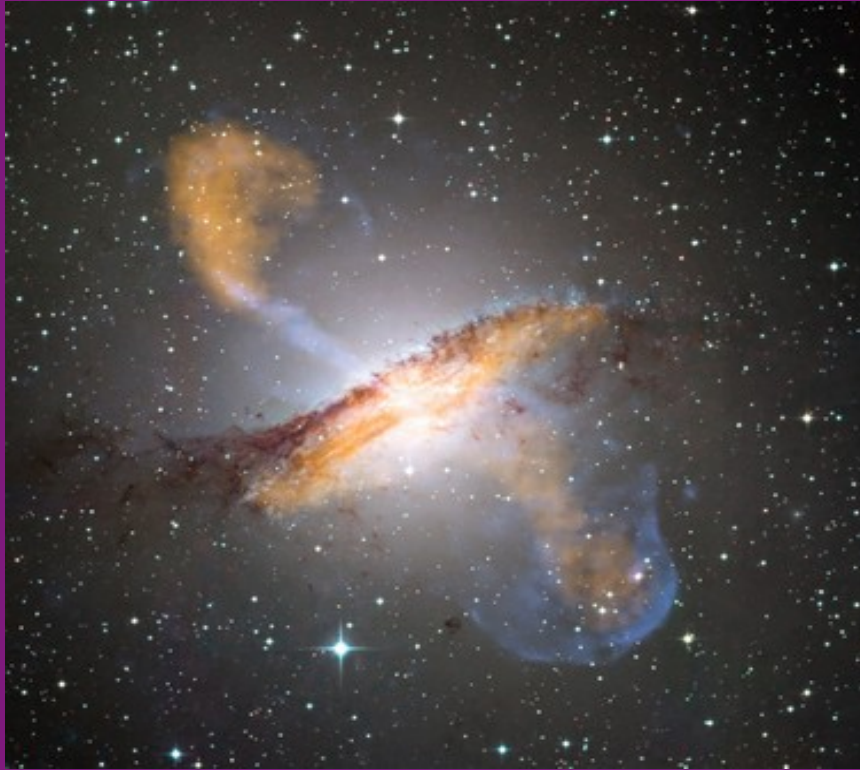
-/+ Key Staff

**High Energy Astrophysics Science Archive Research Center (HEASARC)**

The High Energy Astrophysics Science Archive Research Center (HEASARC) is the primary archive for NASA missions dealing with extremely energetic phenomena, from black holes to the Big Bang. Having recently merged with the Legacy Archive for Microwave Background Data Analysis (LAMBDA), it includes data obtained by NASA's high-energy astronomy missions from the extreme ultraviolet through gamma-ray bands, along with missions that study the relic cosmic microwave background.

-/+ Key Staff

re)
sources)



ASTROPHYSICS

In Development

TESS _ exoplanets

JWST_ IR

WFIRST _ wide field IR

NICER _ Neutron stars

PIXIE _ Cosmo inflation

ETA _ Eta Carinae / binarie

STAR-X _ stelle

AdEPT _ Venere

Goddard Space Flight Center
asd.gsfc.nasa.gov/luvoir/

National Aeronautics and
Space Administration



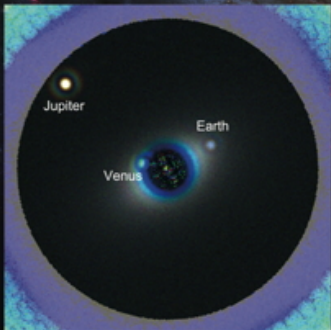
LUVOIR

Large Ultraviolet / Optical / Infrared Surveyor

LUVOIR is a concept for a highly capable, multi-wavelength observatory with ambitious science goals. This mission would enable great leaps forward in a broad range of astrophysics, from the epoch of reionization, through galaxy formation and evolution, to star and planet formation. Powerful remote sensing observations of Solar System bodies will also be possible. LUVOIR will study a wide range of exoplanets in depth, including those that might be habitable – or even inhabited.



Simulated high-contrast image of the Solar System at 10 parsecs



ASTROPHYSICS
10 Years Horizon

LUVOIR _ Large UV/OPT/IR
ATHENA _ X rays



Goddard Space Flight Center
Visitor Center





GRAZIE



