Science Mission Directorate

Science in the Vision for Space Exploration

A.V. Diaz
Associate Administrator

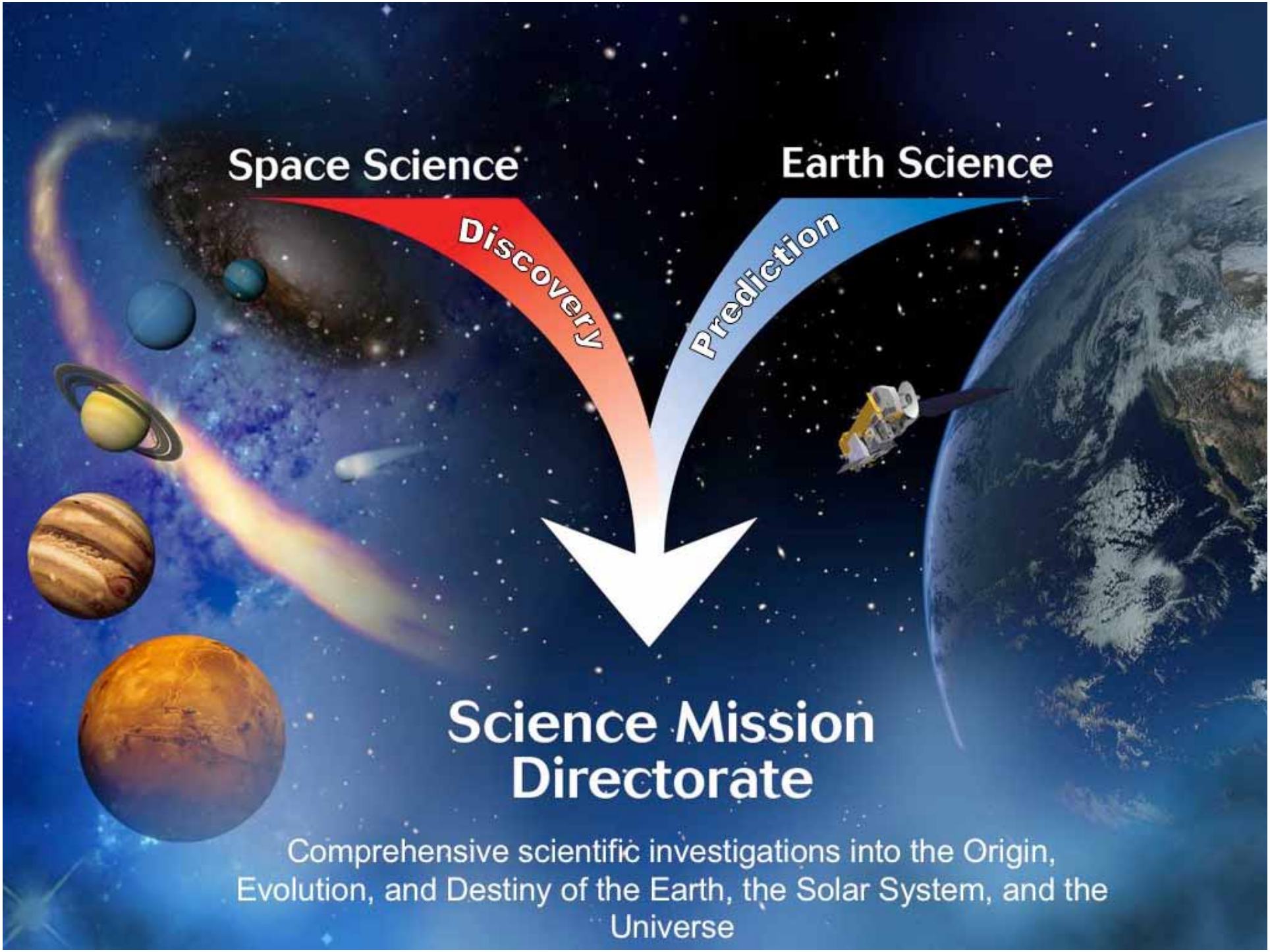
Science Mission Directorate Fully Supports NASA's Mission

Understand and Protect Our Home Planet by using our view from space to study the Earth system and improve prediction of Earth system change

Explore the Universe and Search for Life by continuing scientific investigations into the origin, evolution, and destiny of the universe and our solar system, and by applying our scientific understanding of the Earth system to the identification and study of Earth-like planets around other stars

Inspire the Next Generation of Explorers by providing Earth and Space science content and training to educators, and by sponsoring the education and early careers of Earth scientists, astronomers, physicists…


The Advance of
Science at NASA
WE WILL BE...
WE ARE...
WE WERE...


Space Science
Earth Science
Discovery
Prediction
Science Mission Directorate
Comprehensive scientific investigations into the Origin, Evolution, and Destiny of the Earth, the Solar System, and the Universe

2004 Science Mission Highlights

Aura Launched!

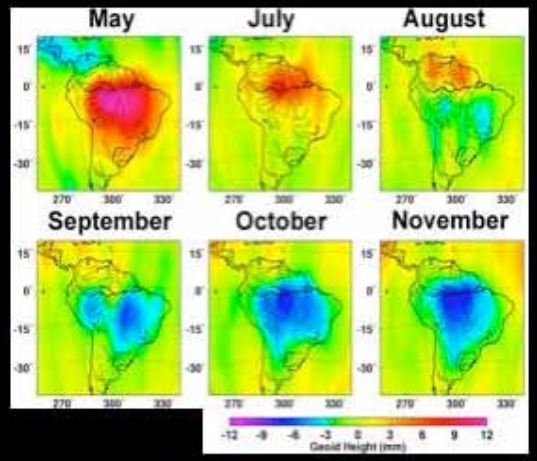
Messenger Launched!

Deep Impact Launched!

Genesis samples returned

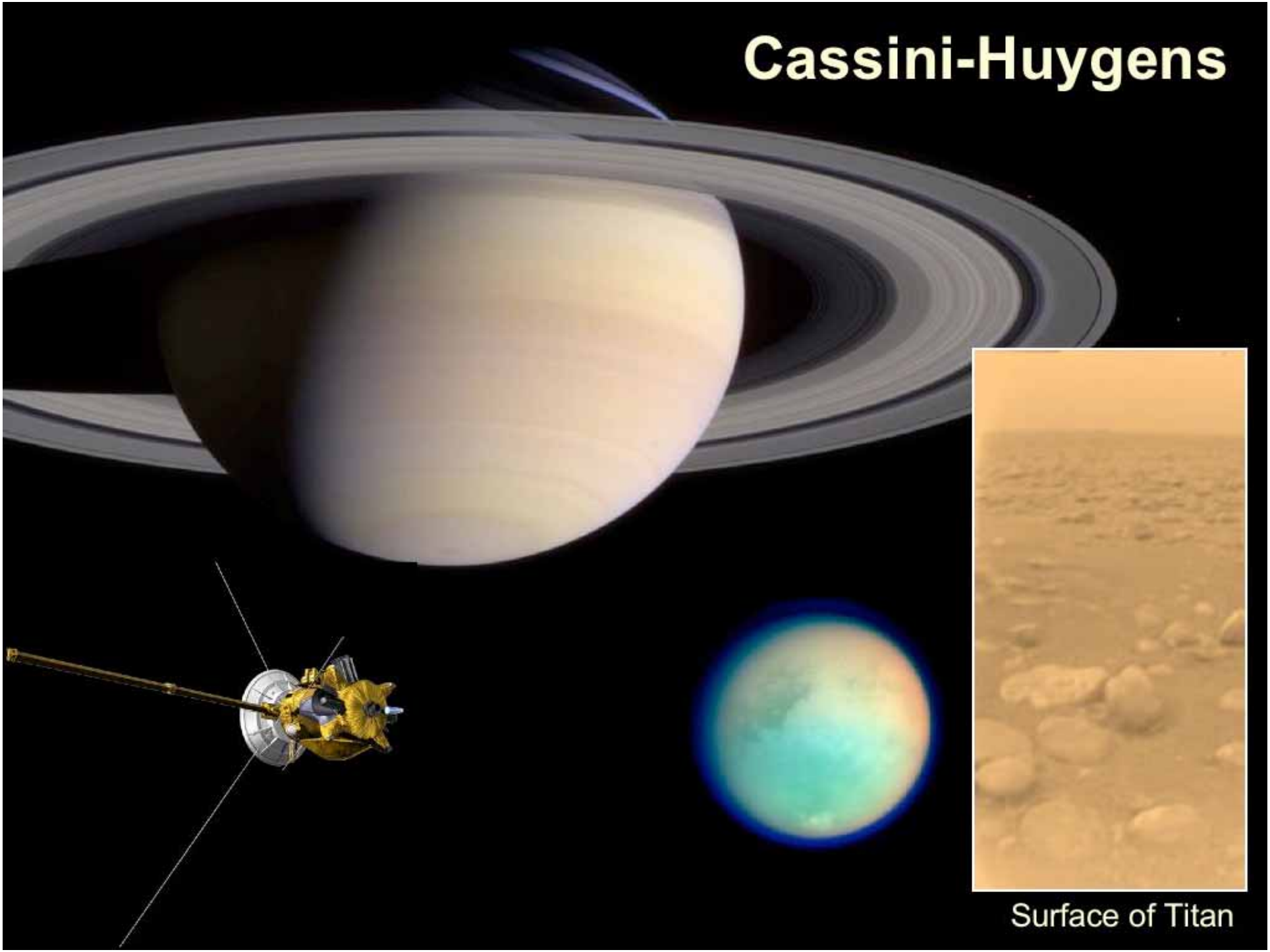
Stardust encounters Comet Wild 2

Spitzer lifts the veil on the dark and cold universe



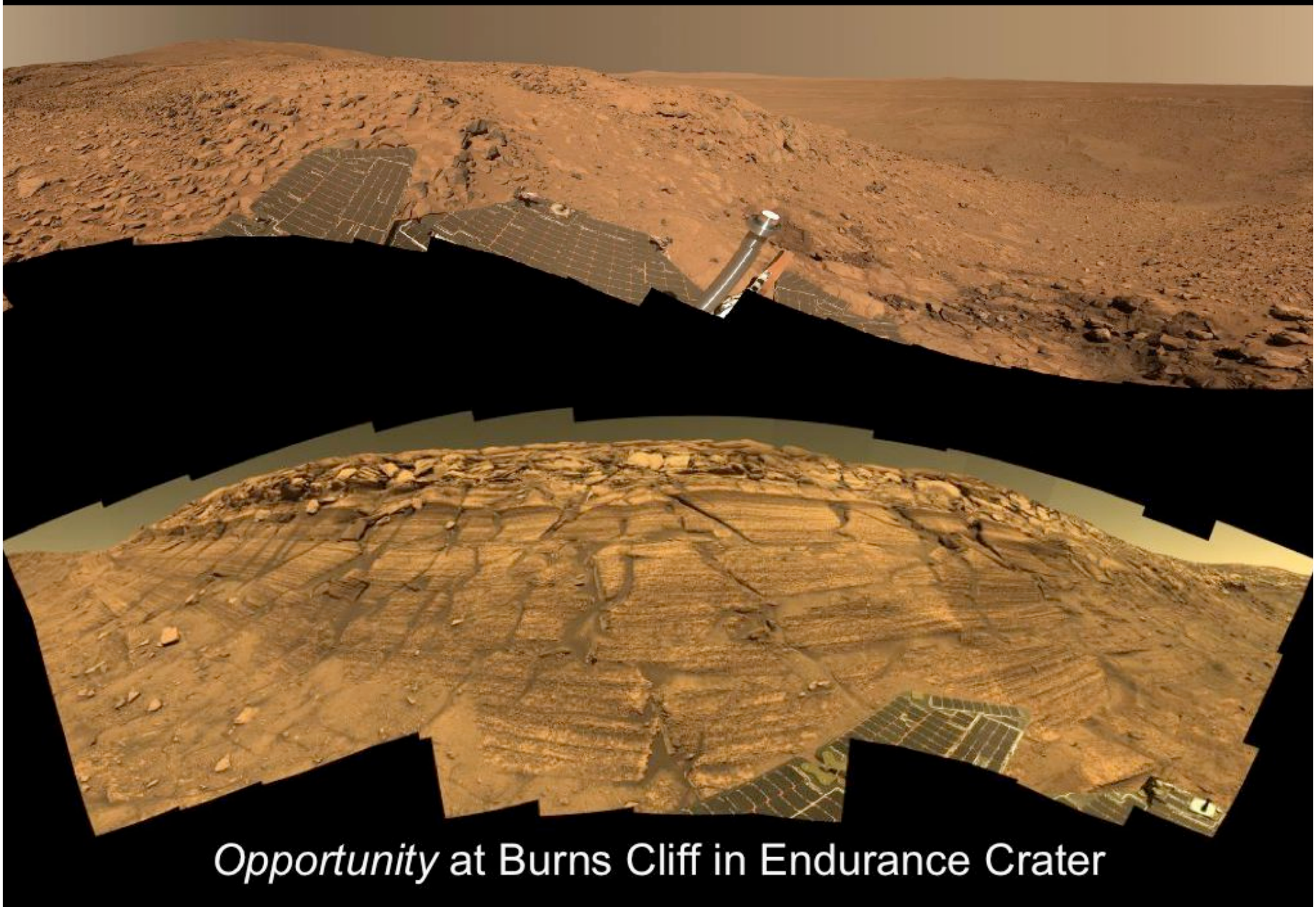
GRACE: Finding Water from Space

Cassini-Huygens



Surface of Titan

Spirit at the Columbia Hills

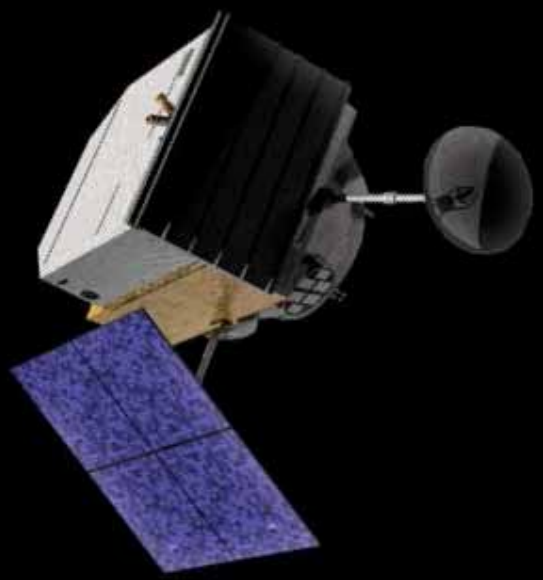


Opportunity at Burns Cliff in Endurance Crater

- Instruments selected for 2009 Mars Science Laboratory
- In coordination with ESMD, the Mars Program Office conducted a study on the measurements, technologies, and infrastructure needed for Mars Human Precursor missions at Mars
- Mars Reconnaissance Orbiter will launch in August 2005
  - will deliver hyper-spectral and sub-meter resolution imagery of the Martian surface, telling us where to target future exploration

Robotic Lunar Exploration Program

- The Robotic Lunar Exploration Program will enhance our knowledge of the Moon and increase the safety and exploration value of future human missions.
- The 2008 Lunar Reconnaissance Orbiter provides major scientific and exploration benefit by 2009
- Future mission architecture being developed based on joint Exploration Systems and Science Mission Directorate analysis



LRO instruments competitively selected in December 2004

NASA's Strategic Roadmaps

A coordinated and comprehensive longitudinal strategy, with key decision points identified, that provides a foundation for investment decisions and priorities.

Robotic and Human Lunar Expeditions

Mars Exploration

Solar System Exploration

Advanced Telescope Searches for Earth-like Planets

Exploration Transportation System

International Space Station Assembly and Used

Shuttle Transition to New Exploration Launch Systems

Origin, Evolution, Structure and Destiny of the Universe

Dynamic Earth System

Sun-Solar System Connection

Transform Air Transportation

Educate Students and Public

National Plan for Nuclear Systems