



Testimony to the President's Commission on Moon, Mars, and Beyond

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on behalf of the
American Astronomical Society



INDIANA UNIVERSITY

4 May 2004



Astronomy and the AAS

A scientific society for professional astronomers

- Encompassing all branches of astronomy
 - *solar physics, planetary/solar system, stellar, galactic, extragalactic, cosmology....*
- Publishing scholarly journals in astronomy
- Teaching astronomy at the nation's colleges and universities
- Contributing to education at K-12

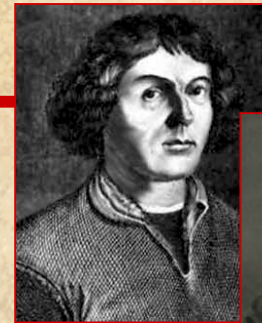
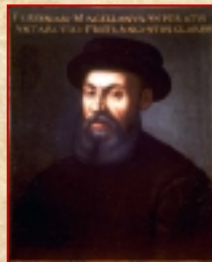
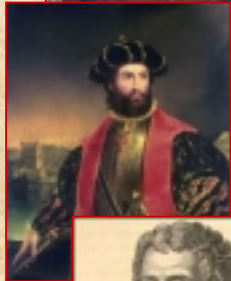


Science and Exploration

American
Astronomical
Society



*It is no coincidence that
throughout history,
exploration and scientific
progress have gone hand
in hand.*



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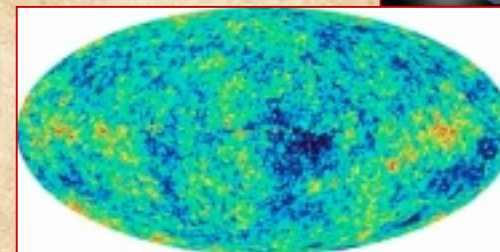
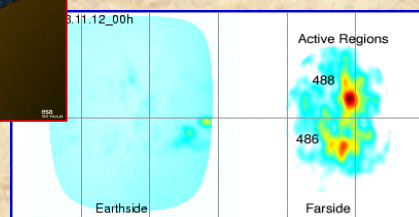
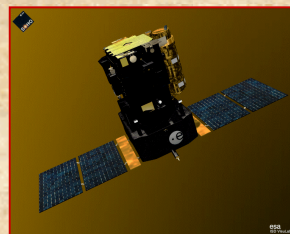
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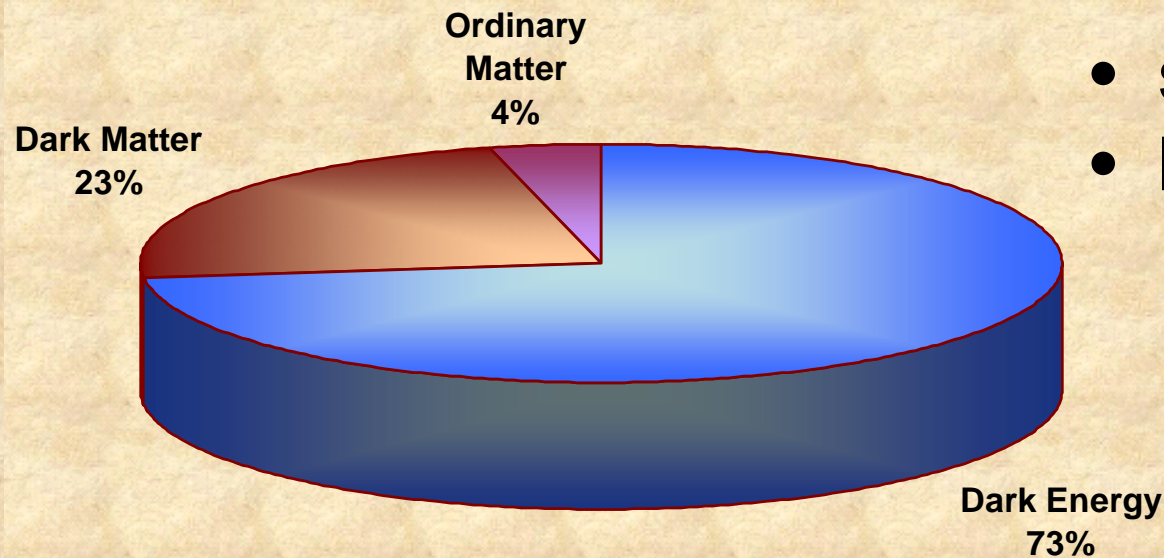
Astronomy and Exploration

- The formation of stars and solar systems
- The origin and evolution of galaxies
- The farthest reaches of time and space
- The physics of the solar-terrestrial environment



The Mysterious Universe

Observatories off the Earth are needed to explore the Universe



- wavelength
- spatial resolution
- background emissions



Balance and Complementarity

- Partnership between science and exploration
- NASA's new vision enhances space infrastructure
- Astronomy benefits with more capable space tools
- Maintain creative tension – both research and exploration benefit.





Assess the Opportunities

Astronomical facilities are not the rationale for going to the Moon, but astronomy can benefit from robust lunar and Martian exploration programs

- We need more information to compare lunar and free-space options for facilities
 - problems
 - costs
 - benefits
- Choices driven by the needs of the science
- Implementation plan should include a path to assess how best to utilize new space infrastructure for research

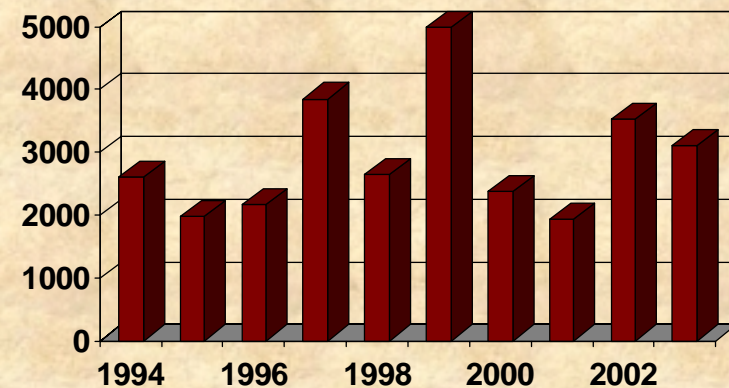




Public Support for Exploration

- 3 million web users per month sustained at the HST websites
- Science News Metric
 - NASA accounts for 7.9% of scientific discoveries worldwide in 2003
 - 6.5% of all discoveries are in space science

HST Media References



**NASA's Great
Observatories program
yielded 2.8% of all
scientific discoveries
worldwide in 2003**





The Case for Space

- It's easy to excite kids
- Target skeptical young adults
- Articulate the economic, social, technical, and intellectual value of exploration





Recommendations

- Science and exploration are partners
- Maintain a balance beneficial to both
- Science should drive decisions about space research facilities
- Articulate economic, social, technical, and intellectual value for space exploration
- Astronomers are ready to help

