Astronomy and Physics Directorate

Larry Simmons
Director

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Major Projects (Page 1 of 4)

Disturbance Reduction System (DRS) *
- DRS is a New Millennium ST-7 technology demonstration of precision spacecraft control.
- Launch is planned for 2006

Galaxy Evolution Explorer (GALEX)
- Earth orbiting ultraviolet telescope to measure history of star formation.

HERSCHEL
- Sub-millimeter observatory to determine how the structure of the Universe emerged from the big bang. Instrument contribution to ESA mission.

PLANCK

* Indicates potential significant contracting opportunities
Laser Cooling and Atomic Physics (LCAP)

Laser Interferometer Space Antenna (LISA) *

Low Temperature Microgravity Physics Facility (LTMPF)

Mid-Infrared Instrument (MIRI) for Next Generation Space Telescope (NGST) *

* Indicates potential significant contracting opportunities

- Laser cooling and Rubidium clock microgravity experiment for Space Station.
- Three spacecraft constellation for the detection of gravity waves. A NASA/ESA effort.
- Space Station microgravity facility.
- Facility infrared camera in the 5-27 micrometer range.
- Phase A study initiated. Launch scheduled 2010.
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- Space Interferometry Mission (SIM)
  - Earth orbiting optical interferometer to determine accurately distances to stars and probe these for earth sized planets.
  - In formulation phase. Launch planned for 2009.

- Space Infrared Telescope Facility (SIRTF)
  - Infrared telescope to study the early universe, young galaxies, and forming stars.

- Terrestrial Planet Finder (TPF)*
  - Detection and characterization of Earth-like planets around as many as 150 stars up to 45 light-years away.

* Indicates potential significant contracting opportunities
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- Two 10 meter plus 4 1.8 meter telescopes for direct detection of brown dwarfs and warm Jupiters plus study of zodiacal clouds.

- Space interferometry technology development program in support of Terrestrial Planet Finder mission.
- Testbed development in progress.

* Indicates potential significant contracting opportunities