Boeing Part of NASA Team to Develop Proposed Railway Space Observatory

The Boeing Company [NYSE: BA] is part of a NASA-led team of university and industry partners developing a preliminary design for the Space Infrared Interferometric Telescope (SPIRIT), with components that will move along a structural beam in space like railway cars on a track.

Boeing is contributing its technology in several areas. The company is exploring options for integration and test of this observatory (including an option for in-space assembly and test), providing technology roadmapping for the team and exploring how existing technologies developed for the International Space Station might be used to move optical elements along the SPIRIT structure.

SPIRIT will consist of an array of telescopes on a structure at least 30 m in length and will provide views of planet, star and galaxy formation in unprecedented detail while examining the atmospheric chemistry of giant planets around other stars. The telescopes will combine their images using interferometry techniques to achieve image resolution a hundred-fold better than that of NASA's Spitzer Space Telescope. SPIRIT will examine the universe in far-infrared and sub-millimeter wavelengths of light.

"The work we are doing on the SPIRIT study could have a significant impact on the options available to designers of space-based telescopes as they relate to the Vision for Space Exploration," says Ed Friedman, Boeing Company Technical Fellow.

Boeing's work on the study is being done in California and Colorado and is funded by the company's research and development program. The team report is due to the NASA Origins Roadmap Committee in April 2005.

This summer Boeing joined two university-led NASA Vision Mission Study teams to provide robotic and human in-space assembly and servicing options for two other proposed space-based observatories: the Single Aperture Far Infrared Observatory (SAFIR) and a one kilometer Far-Infrared and Sub-millimeter (FIR/SMM) Interferometer known as the Submillimeter Probe of the Evolution of Cosmic Structure (SPECS). SAFIR would be used to study the formation of planetary systems inside our Milky Way galaxy, and SPECS would search for the first stars to form in the universe, study galaxy formation, and image nascent planetary systems. SPIRIT is intended by the infrared astronomical community as a precursor to the much larger SPECS interferometer.

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