

Space Science Enterprise 1997 Strategic Plan Missions	SIM	TPP	NGST	FIRST	GLAST	Constellation X-ray	Solar-Terrest	Solar-Polar	Europa Orbiter	Pluto/Kuiper Express	Champion/DS9-4	Mars Surveyor
Technology Need												
Advanced Structures Deployment and Control												
Large Lightweight Nonprecision Structures												
Lightweight Optically Precise Structures												
Advanced Lightweight Materials												
Communications												
Radio Frequency (RF) Microcommunications Systems												
Optical Communication Systems												
High-Rate RF Systems and Components												
Design Tools												
User Interfaces												
Collaborative Design Infrastructure												
Integrated Design and Simulation Tools												
Verification and Validation												
Lightweight Optics												
Large Lightweight Mirrors												
Deployable Telescopes												
Optical Control Systems												
Science Instruments												
Submillimeter and Microwave Instruments												
Ultraviolet, Visible, and Infrared Sensors												
Spectrometer and Radiometer Systems												
High-Energy Instruments												
Active Optical Sensing												
Radar Systems												
In-Situ Systems												
Cryocoolers and Cryogenic Systems												
Metrology												
Laser Metrology												
Precision Active Optics												
Ultrastable Structures												
Sample Acquisition and Return												
Sample Selection and Acquisition Systems												
Sample Preparation and Storage Systems												
Power												
Energy Storage Systems												
Power Conversion												
Photovoltaic Power Systems												
Nuclear Power Systems												
Spacecraft Systems and Intelligence												
Advanced Spacecraft Architectures												
Instrument and Spacecraft Computing Systems												
Guidance, Navigation, and Control Sensors and Actuators												
Autonomous Science Algorithms and Architectures												
Autonomous Operations Components and Algorithms												
Transportation and Mobility												
Onboard Spacecraft Propulsion												
Planetary Rover Systems and Components												
Aeronautics, Aerocapture, Aeroassist Systems												
Planetary and Small Body Ascent Propulsion Systems												

Enabling

Highly Enabling