



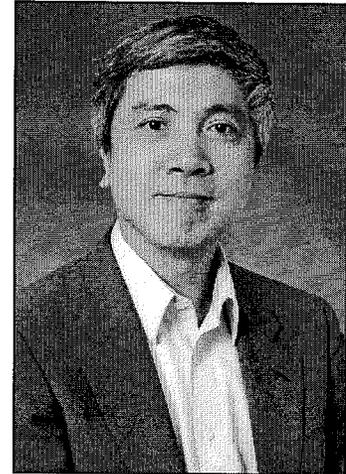
System Exploration Programs

Fuk Li
Deputy Director

June 13, 2002

New Frontiers Program

- FY03 NASA budget submitted to Congress; a new Planetary Exploration Program is included, called New Frontiers
 - Competed missions with expected mission costs <\$650M
- NASA has requested that the National Academy of Sciences conduct a Decadal Survey of planetary exploration
 - Identify high priority planetary exploration science objectives
 - Expect the results of Decadal Survey to set the focus of the New Frontiers missions
 - Decadal Survey results expected in mid-summer 2002
- JPL plans to support PIs to pursue New Frontiers missions
 - With PI leadership, formulate integrated industry/JPL team to capitalize on the competitive edges of the team members
- Anticipate NASA's Announcement of Opportunities to be issued late summer/fall 2002 for first New Frontiers mission



Fuk Li

Deputy Director

Solar System Exploration Programs Directorate

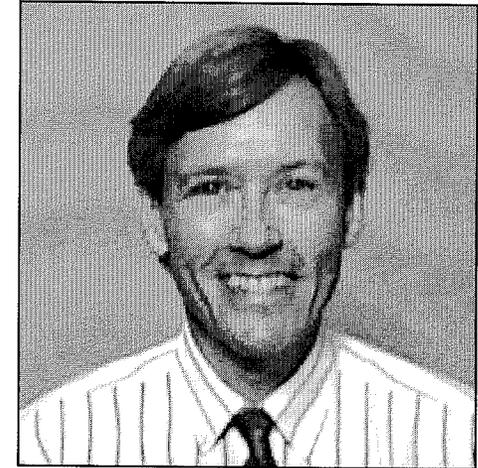
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Office of Competed Missions and Science Instruments



- For the Office of Competed Missions and Science Instruments program, there is one potential industry procurement, and that is for planetary spacecraft
- Opportunities over the next 3-5 years include:
 - Discovery 2002
 - Time frame: between late summer 2002 and spring 2003
 - Discovery 2004
 - Time frame: calendar 2004 TBD
 - Mars Scout 2006
 - Time frame: calendar 2006 TBD
 - Discovery 2006
 - Time frame: calendar 2006 TBD



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NOTE: TBD indicates that farther term opportunities will depend upon the schedule for the near term opportunities for Discovery 2002.

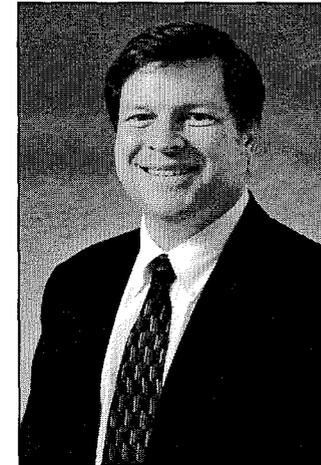
Life Detection Science & Technology Program



Office Focus: Development of unique devices, and in situ sensors and instruments through advanced micro-, bio-, and nano- technology

NASA Technology Teaming Opportunities:

- Office of Space Science Research
Announcements for astrobiology technology development
- Office of Aerospace Technology Research
Announcements for advanced sensors and nanotechnology
- Office of Biological and Physical Research
Research Announcements on environmental monitoring and biomolecular systems



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Non-NASA Teaming Opportunities:

- Targeted funding opportunities with DARPA, FAA, NIH, and other agencies that are synergistic with the office focus on physical, chemical, and biological sensing methods

Space Exploration Technology Program

Briefing for
INDUSTRY
Business Opportunities with the
Jet Propulsion Laboratory

Office Focus: Develop technologies to meet the needs of the Solar System Exploration Programs, in the following areas:

- Power
- Propulsion
- Avionics
- Mobility

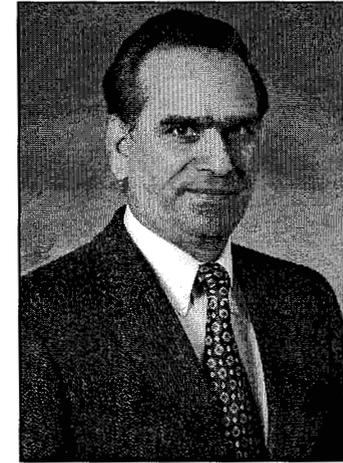
NASA Technology Teaming Opportunities:

Opportunities exist to team up with JPL to respond to the following NASA Office of Space Science (Code S) solicitations:

1. New Millennium Program
2. In-Space Propulsion Technology Program
3. Nuclear Systems Initiative
4. Long-Range Mars Technology Program

Non-NASA Technology Teaming Opportunities:

Opportunities exist to team up with JPL and jointly respond to non-NASA prospects in the above mentioned technology areas.



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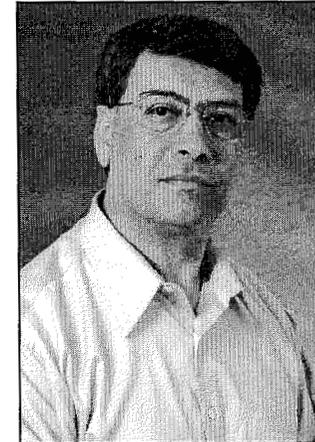
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Mars Technology Program



Office Focus: Develop technologies to meet the needs of NASA's Mars Exploration Program

- Mars Entry, Descent, and Landing
- Mars Regional Mobility and Subsurface Access
- In-situ Experiments
- Mars Proximity Communications
- Mars Planetary Protection
- Mars Sample Return Technologies
- Technologies for Low-Cost Missions



Samad Hayati

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NASA Technology Teaming Opportunities:

Opportunities exist to respond to the following NASA Office of Space Science (Code S) solicitations:

- Rover Technologies
- Subsurface Access Technologies
- Mars Science Instrument Development Technologies
- Telecommunication and Navigation Technologies
- Planetary Protection technologies
- Advanced Entry, Descent, and Landing Technologies
- Low-Cost Mission Technologies

Mars 2009 Smart Lander



- Likely to be a next generation Mars rover
- Currently in pre-phase A
- Industry opportunities
 - Technology Program (FY 2003 to 2005)
 - Descent propulsion components (Viking-based)
 - Solar Array (if not a nuclear powered system)
 - Long life motors, gear boxes
 - Electronics suitable for 1000 Martian diurnal thermal cycles
 - Mission (FY 2004 to 2008)
 - Batteries
 - Flight computer
 - Cruise stage system
 - Propulsion system
 - Aeroshell
 - Parachutes
 - Launch Vehicle (via KSC)



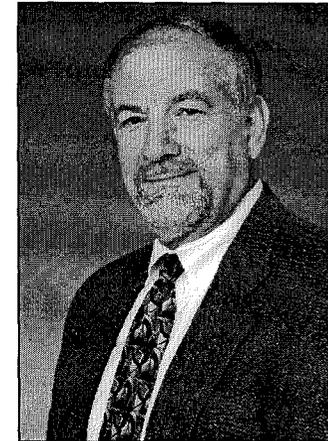
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New Millennium Program



A cross-Enterprise program to identify and flight validate breakthrough technologies that will significantly benefit future Space Science and Earth Science missions.

- **Technology -Focused Projects**
- **Breakthrough Technologies Requiring Flight Validation**
- **Multi-Mission Technology Benefits**
- **Partnership/Shared Launches**



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Integrated System and Subsystem Experiment Validation Projects

Opportunity	Solicitation	Launch
Space Technology 8 (subsystem)	08/02 – Technology Providers	early 2006
Space Technology 8 (spacecraft)	09/03 – Spacecraft Procurement	early 2006
Space Technology 9 (system)	07/03 – System Concepts 10/03 – Technology Providers	late 2007 late 2007
Space Technology 10 (subsystem)	04/04 – Technology Providers	early 2008
Space Technology 10 (spacecraft)	05/05 – Spacecraft Procurement	early 2008
Space Technology 11 (system)	07/05 – System Concepts 10/05 – Technology Providers	late 2009 late 2009
Earth Observing 4	06/04 – System Concepts	mid 2008