

A vibrant space-themed background featuring a large blue circular graphic on the left. Inside the circle, there's a depiction of the Earth's horizon at the bottom, a bright yellow sun, a large blue moon, a ringed planet (Saturn), and a reddish planet (Mars) against a backdrop of colorful nebulae and stars. The right side of the slide is a solid dark blue gradient.

Planetary Technology Programs for TDOs

Discovery Day
March 25, 2020

Carolyn Mercer, PhD

Manager, Planetary Exploration Science Technology Office
Program Executive, Small Innovative Missions for Planetary
Exploration (SIMPLEx)

Planetary Science Technology Development Programs

>170 active tasks

Science Instruments		Instruments and Vehicle Technology	Space Vehicle Technology
MatISSE	TRL 3-6	NASA Provided Lunar Payloads – To TRL 6 by 2020	HOTTech – High temperature systems
DALI	TRL 3-6 (Lunar)	Lunar Surface Instrument and Technology Payloads – To TRL 6 by 2021	
PICASSO	TRL 1-3		
ICEE-2	To TRL 6 by 2022	COLDTech – Surface and sub-surface measurements	SESAME – Ice penetration systems

PIs for MatISSE, DALI, PICASSO, and HOTTech, and COLDTech were informed of the Discovery TDO opportunity. Information about these tasks can be found at the PESTO website:

<https://www1.grc.nasa.gov/space/PESTO>

A vibrant space-themed background featuring a large blue nebula, a bright yellow sun, and several planets including Saturn, Mars, and the Moon. The scene is framed by curved blue and yellow lines.

SMD Rideshare Policy

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SMD Secondary Payloads Rideshare Policy Document SPD-32

October 4, 2019

II. POLICY

- a) It is SMD policy to enable rideshare or launch accommodation opportunities using an ESPA ring as part of the launch service procured for an SMD primary payload.
- b) SMD will determine the potential for excess capacity, as identified by Launch Services Program (LSP), after selection of the primary payload (once launch requirements are known). If excess capacity is identified, SMD will utilize the identified excess capacity on SMD primary payload missions using an ESPA ring, for the launch of SMD-sponsored secondary payloads, either competed or directed, that meet science, technology, and exploration goals.
- c) SMD may solicit science, technology, and exploration investigations as secondary payloads from the private sector, including commercial and non-profit entities and educational institutions through broad agency announcements.
- d) SMD may offer any excess capacity not utilized for SMD investigations to other NASA Mission Directorates (MD), other U.S. Government Agencies, or NASA's International partners in accordance with international agreements for international collaborative efforts relating to science, technology, and exploration goals.

NOTIONAL MILESTONES FOR SECONDARY PAYLOAD INTEGRATION

SPs: SECONDARY PAYLOADS
 SPA: SECONDARY PAYLOAD ADAPTER
 CLA: COUPLED LOADS ANALYSIS
 FDLC: FINAL DESIGN LOADS CYCLE
 FEM: FINITE ELEMENT MODEL

FPB: FLIGHT PLANNING BOARD
 LSIRD: LAUNCH SERVICE IRD
 LSTO: LAUNCH SERVICE TASK ORDER
 PER: PRE-ENVIRONMENTAL TEST REVIEW

★ Key secondary payload deliverables

Launch Vehicle Milestones

Spacecraft Milestones

