

Payload Specifications and Capabilities Form

Complete this form with the values expected if you were to successfully develop your proposed payload. **You will submit your responses in the online entry form. Do not fill in the PDF.**

Payload Title	<i>Example: payload for miniaturized rovers</i>		
Instrument name			
Image, diagram, and/or schematic	<i>Insert small/low-res images/graphics, etc.</i>		
Team	Name	Role/Expertise	
	<i>Jane Doe</i>	<i>Principal Investigator</i>	
	<i>John Smith</i>	<i>Integration lead</i>	
Instrument Characteristics	Dimensions (mm)		
	Mass (gm)	<i>Total mass of payload</i>	
	Power (W)	<i>Continuous and Peak Power</i>	
	Voltage (V)	<i>Required Voltage (6-8V)</i>	
	Thermal (C)	Operating range	<i>What is the allowable temperature range when the payload is operating?</i>
		Unpowered range	<i>What is the survivable temperature range when the payload is powered off?</i>
	Data rate	<i>See Small Lunar Payload User's Guide</i>	
Processing Requirements	<i>Includes requirements for processing data, payload operation, and communication</i>		

	Bandwidth/Resolution	<i>Maximum instrument capability</i>
	Precision/Accuracy	<i>Maximum instrument capability</i>
Instrument Objectives	<i>What is your instrument trying to do?</i>	
Physical measurement conducted by instrument	<i>Actual measurement by instrument (ex. Fluorescence, photon absorption etc)</i>	
Analysis of measurement	<i>What on-board data processing does the instrument perform?</i>	
State of the art Comparison	<i>Compare to similar instruments or other methods of achieving the same information</i>	
Impact to NASA	<i>How will this help NASA learn more about lunar resources and the lunar surface? How will this impact NASA's mission?</i>	
What's the detection limit and over what period of time?	<i>How much time do you need for "sampling", at what resolution?</i>	
Ideal placement on micro-rover	<i>Where should it be placed? Top? Bottom? Side?</i>	
Ideal lunar site	<i>What is the best latitude for the measurements you're trying to make?</i>	
Ideal positioning in environment	<i>Is the instrument looking down? Up? Over the horizon?</i>	
Mechanical Stability requirements	<i>Does the instrument need to be stable for a period of time for the measurements?</i>	
Thermal requirements	<i>How many Watts are you dissipating, and to what temperature does your instrument need to be held, in order to make accurate measurements?</i>	
Mechanical requirements	<i>How would this payload be physically attached to the micro-rover? Bolt holes?</i>	
Environmental hazards	<i>Do you have any special operational precautions?</i>	