



**P**acking science instruments onto NASA's New Horizons spacecraft required a complex balance of capabilities, reliability, size, weight, and power extending back to the earliest design phases of the mission. The spacecraft also requires power, communication, and control and data management systems to ensure successful operation from the Pluto system near the outer reaches of the solar system.

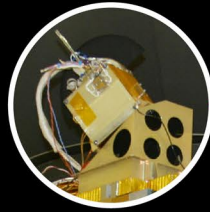
**PLUTO**

The Solar Wind Around Pluto instrument will measure the escape rate of Pluto's atmosphere and how the solar wind interacts with Pluto's upper atmosphere and Charon.



**SWAP**

The Pluto Energetic Particle Spectrometer Science Investigation is designed to measure the composition and density of plasma (ions) that escape from Pluto's atmosphere.



**PEPSSI**

The Radio Science Experiment will measure the atmospheric pressure and temperature of Pluto as a function of altitude. As a bonus, REX also measures the temperature of the bodies it observes, including Pluto and Charon.



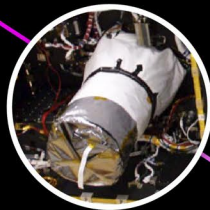
**REX**

Alice is an ultraviolet spectrograph designed to measure the structure and composition of Pluto's atmosphere. It will also look for signs of an atmosphere around the moon Charon and one or more Kuiper Belt objects.



**Alice**  
*(in back)*

The Long-Range Reconnaissance Imager is the visible light camera aboard the spacecraft that will take the best images yet of Pluto, its icy moons, and their geology.



**LORRI**

Ralph is a visible and infrared camera that will image the color and composition of all the bodies in the Pluto system, as well as make thermal maps.

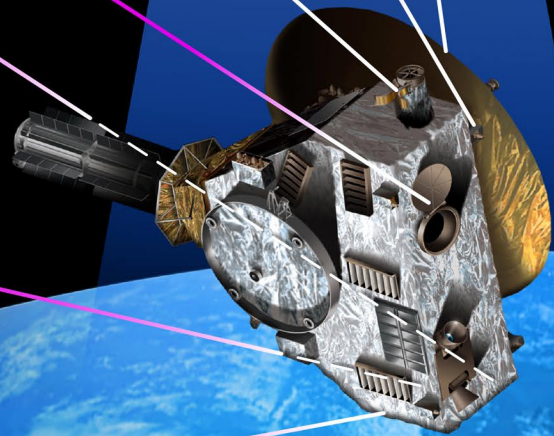


**Ralph**  
*(in back)*

The Venetia Burney Student Dust Counter will measure the space dust along the spacecraft's path from Earth to the outer reaches of the solar system.



**Venetia Burney SDC**



shipping a science lab to Pluto



[www.pluto.jhuapl.edu](http://www.pluto.jhuapl.edu)

[www.nasa.gov](http://www.nasa.gov)