



In July 2015, the New Horizons spacecraft conducted the first-ever reconnaissance of Pluto and its five moons, helping us understand the icy worlds at the edge of our solar system.

## Frequently Asked Questions

### What has New Horizons discovered?

New Horizons found evidence of exotic ices flowing across Pluto's surface and unexpected signs of recent geologic activity. Scientists are using enhanced color images to detect differences in the composition and texture of Pluto's surface. These images paint a new and surprising portrait of Pluto in which a global pattern of zones vary by latitude, possibly due to seasonal transport of ices from equator to pole.

### What is the SDC and what does it measure?

The Venetia Burney Student Dust Counter (SDC) is an impact-based dust detector designed to map the size and spatial variability of interplanetary dust during its fourteen-year journey across the solar system. It consists of fourteen polarized detectors that register a charge when impacted by hypervelocity dust grains. Designed, built, tested, and now operated by University of Colorado students, the SDC is the first student-built instrument ever to fly on a NASA planetary mission and is the first dust detector to take measurements of dust distribution beyond 18 Astronomical Units (AU).

### Why is it important to measure dust?

Dust in space gives scientists clues to processes throughout the Solar System and the galaxy. Dust grains are generated by several

## Quick Facts

**Launch date:** January 19, 2006

**Launch location:** Cape Canaveral Air Force Station, Florida

**Launch vehicle:** Atlas V-551

**Mission target:** Flyby of Pluto, its moons, and possibly several other Kuiper belt objects.

**Primary duration:** Ten years to Pluto

**Project description:** New Horizons is designed to help us understand worlds at the edge of our solar system by making the first reconnaissance of Pluto and its five moons.

#### LASP provided:

- The Student Dust Counter (SDC) instrument
- SDC Principal Investigator, Mihály Horányi

#### Other organizations involved:

- Southwest Research Institute
- Johns Hopkins University's Applied Physics Laboratory

processes; studying these grains can give scientists clues about how the solar system was formed billions of years ago and how it works today. These observations will advance our understanding of the origin and evolution of our own solar system, as well as helping scientists study planet formation in dust disks around other stars.

To read more about the SDC instrument, visit:

<http://lasp.colorado.edu/home/missions-projects/quick-facts-sdc>.

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