

Fly-by to the edge of the solar system

The New Horizons spacecraft makes historic flight past distant dwarf planet after a journey of nearly 10 years

PLUTO

- Discovered in 1930 by Clyde W. Tombaugh
- Classified in 2006 as asteroid 134340
- **Diameter:** 2,390km (Earth: 12,750km)
- **Temperature:** -230°C
- **Rotation:** 153 hrs 17 mins (6.4 days)
- **Sun orbit:** 248 Earth years
- **Atmosphere:** Nitrogen, some methane, carbon monoxide, ethane
- **Distance from Earth:** Between 4.3 billion and 7.5 billion km
- Pluto has five known moons: Charon (the largest, with a diameter just over half that of Pluto), Styx, Nix, Kerberos and Hydra.



NEW HORIZONS

Mission objective

- First mission to Pluto
- Photography, studies of the atmosphere and geology of Pluto
- Observation of its satellite Charon
- Exploration of the Kuiper Belt
- Estimated cost: US\$700 million (S\$949 million)

This image of the dwarf planet provided by Nasa was taken on July 13, when New Horizons was just 768,000km from the surface. The US spacecraft became the first to fly past Pluto. PHOTO: NASA

SWAP (Solar Wind Around Pluto)

Solar wind and plasma spectrometer; measures atmospheric "escape rate" and observes Pluto's interaction with solar wind

LORRI (Long Range Reconnaissance Imager)

Telescopic camera; obtains encounter data at long distances, maps Pluto's far side and provides high-resolution geologic data

Alice (Ultraviolet imaging spectrometer)

Analyses composition and structure of Pluto's atmosphere and looks for atmospheres around Charon and Kuiper Belt objects

SDC (Student Dust Counter)

Built and operated by students; measures the space dust peppering New Horizons during its voyage across the solar system

PEPSSI (Pluto Energetic Particle Spectrometer Science Investigation)

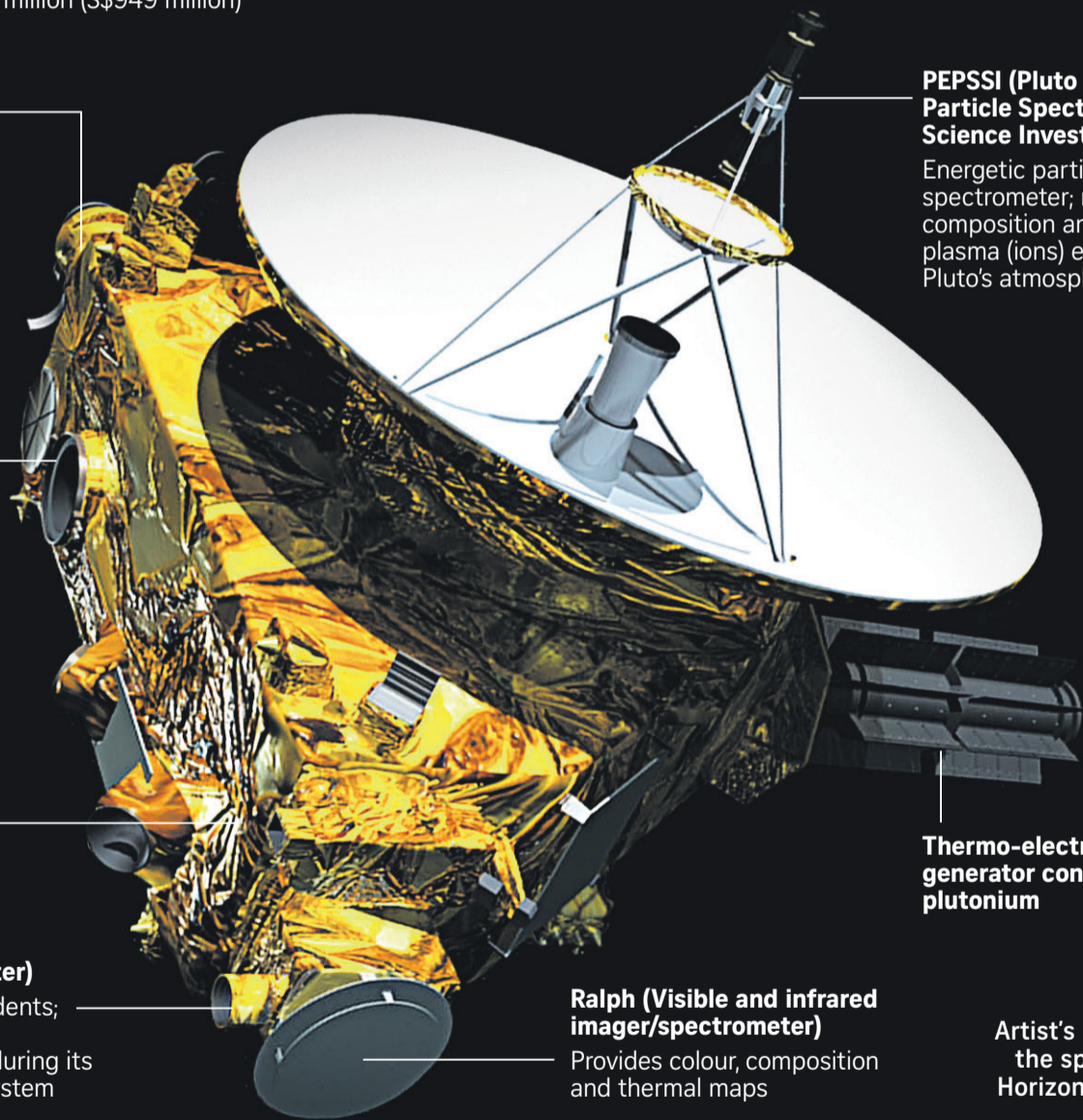
Energetic particle spectrometer; measures the composition and density of plasma (ions) escaping from Pluto's atmosphere

Thermo-electric generator containing plutonium

Ralph (Visible and infrared imager/spectrometer)

Provides colour, composition and thermal maps

Artist's impression of the spacecraft New Horizons. PHOTO: NASA



Man has now explored all seven planets in the solar system and Pluto

