Giant Ice Volcanoes Discovered on Pluto

New Horizons discovered a large field of ice volcanoes on Pluto that are individually up to 4.5 miles high and 100 miles across.

- These structures are unique in the solar system, geologically young, and enigmatic.
- They require multiple eruption sites and a large volume of icy material to form.
- The eruptions may be episodic, just like volcanic eruptions on Earth. These ice volcanoes could still be active and continue to erupt in the future.
- This result implies more heat is present inside Pluto today than previously expected, and may allow liquid water to be close to the surface.

New Horizon’s view of Pluto’s icy volcanic region, which is roughly the size of Hawaii. The blue-shaded regions represent areas where, at a moment in the past, water-rich icy “lava” might have flowed out from the interior to the surface.

Image credit: NASA / Johns Hopkins University Applied Physics Laboratory / Southwest Research Institute / Isaac Herrera / Kelsi Singer

Singer et al. (2022) Nature Communications