A New Great Dark Spot on Neptune

A new dark storm on Neptune, the size of the Voyager 2 Great Dark Spot, was discovered in 2018 Hubble data.

- Using the storm's measured eastward motion of 270 m/s (~600 mph), precursor cloud features could be identified as far back as 2015, using the yearly Hubble OPAL monitoring data.
- The long formation timescales indicate an origin deep in the planet's atmosphere, while the spot's size and shape can be used to infer vertical wind shear and vorticity.
- Properties of Neptune's atmosphere cannot be directly measured, but Neptune-sized exoplanets are common in the galaxy. By studying the properties of dark spots and how they form on Neptune, more can be learned regarding circulation patterns and energy transport below the clouds in this class of planet.

Simon, Wong and Hsu (2019) GRL



