

## **Triton Ocean World Surveyor**

Triton Ocean World Surveyor orbits Neptune and performs multiple flybys of its largest and retrograde orbiting satellite, Triton. Triton is likely a captured KBO and a candidate ocean world with a geologically young surface and active geysers. It has a hazy atmosphere like Pluto's and a uniquely strong ionosphere.

Triton Ocean World Surveyor Proposed Science Objectives:

- Determine whether Triton is an ocean world, ascertain its interior structure, and decide whether Triton's ice shell is in hydrostatic equilibrium and de-coupled from the interior.
- Characterize Triton's surface composition and geology, and look for changes, including plumes and their composition.
- Determine the nature of the moon- magnetosphere interaction at Triton.
- Determine the composition, density, temperature, pressure, and spatial/temporal variability of Triton's atmosphere.

The mission shall address all four objectives.

The recommendation that Triton Ocean World Surveyor be delayed until NF-7 took into consideration launch trajectories, which benefit from a Jupiter gravity assist likely available in the NF-7 timeframe.

The Triton Ocean World Surveyor mission study report is available at:

<https://drive.google.com/file/d/11Q-vGdK53-fcpszFuAMV9dsY4eR8K8oz/view?usp=sharing>