The Flyby of 2014 MU69 by New Horizons on New Year's Day 2019

Bonnie J. Buratti (Jet Propulsion Laboratory, California Institute of Technology), John Spencer (SWRI/Boulder), Alan Stern (SWRI/Boulder), Hal Weaver (Johns Hopkins/APL), and the New Horizons Science Team

Early investigations of Kuiper Belt Objects focused on discovery. The second round of study centered around physical characterization: colors and composition; size; classification; and evolution. The third stage involved detailed spacecraft studies, with the most detailed investigation being the Rosetta Mission. At present, a small range of objects have been scrutinized: the saturnian moon Phoebe, which is believed to be a captured KBO; Pluto, the largest KBO; Charon, the largest moon of Pluto; and 67P/ Churyumov-Gerasimenko, a Jupiter family comet from the Kuiper Belt. Other comets with an origin in the Kuiper Belt were studied during brief flybys.

On January 1, 2019, the New Horizons Spacecraft will encounter 2014 MU69 (nicknamed Ultimate Thule), which represents a new size of object (~30 km) that has most likely been preserved in a pristine state. This talk is an overview of the flyby by a spacecraft with a suite of cameras, spectrometers, and other detectors. We will also summarize what is currently known about MU69.