The Tropical Atmosphere Ocean (TAO) Triangle Trans-Ocean Network (TRITON) Array in the Central Pacific Ocean has been an important component of the El Nino – Southern Oscillation (ENSO) forecast system and climate research for more than twenty-five years. Devised and implemented by the Pacific Marine Environmental Laboratory, following the strong 1982-1983 El Nino, the seventy-buoy array stretches from New Guinea in the west to the Galapagos Islands in the east. The Japan Agency for Marine-Earth Science and Technology assumed responsibility for the fifteen buoys in the western portion of the array in 2000. NDBC assumed responsibility for maintaining and servicing the remaining fifty-five buoys and quality controlling and disseminating the data in 2006. In order to replace obsolescent sensors with commercial sensors, a joint plan was formulated to test the Refresh sensors and moorings to insure that the Ten Climate Principles are observed. NDBC deployed Refresh moorings with the new sensors alongside Legacy moorings to determine the reliability of the data and insure the maintenance of the climate record. Sensors compare very well, but the temporal and spatial variability of the ocean present challenges to the analysis of high temporal resolution (10 minute) data. The first replacement of a Legacy TAO mooring with a Refresh TAO mooring will occur during summer 2011. The completion date for the transition is 2015.