Hurricanes are one of the most destructive forces in nature.

Accuracy in tracking and forecasting these storms has improved in recent years, but it is still difficult to predict how they will intensify.

A new NASA mission using eight small satellites soon will help meteorologists better understand and forecast how tropical cyclones, typhoons and hurricanes grow.

NASA's Cyclone Global Navigation Satellite System, or CYGNSS, spacecraft are designed to probe the inner core of tropical cyclones providing meteorologists with more precise measurements of ocean surface winds and the strong gusts in and near the eye of hurricanes.

The CYGNSS satellites were developed by researchers at the University of Michigan in Ann Arbor and Southwest Research Institute in San Antonio, Texas.

The eight satellites arrived at Vandenberg Air Force Base in California on Sept. 28,
2016 for preflight processing, with the work taking place in Orbital ATK's Building 1555 at the West Coast launch site.

Final assembly included installation and testing of power-producing solar panels on each of the 61-pound, 5.2-foot-long satellites.

Once each CYGNSS micro satellite was fully checked out, it was installed on a cylindrical deployment module developed by the Sierra Nevada Corporation.

While the CYGNSS satellites were being processed, the Orbital ATK Pegasus XL rocket was being prepared in another part of the same building.

The three-stage, solid-fueled launch vehicle arrived at Vandenberg on April 19, 2016.

When the eight CYGNSS satellites were ready and encapsulated in their payload fairing, the assembly was mated to the 58-foot-long, 50,990-pound Pegasus rocket.

The combined Pegasus XL-CYGNSS combination then was fully checked out and mated to the
bottom of Orbital ATK's L-1011 aircraft known as Stargazer.

On Dec. 2, 2016, the combination was flown cross-country to the launch site, Cape Canaveral Air Force Station in Florida.

On launch day, the L-1011 Stargazer will take off from the Cape's skid strip runway.

The Pegasus rocket will be carried aloft to an altitude of about 39,000 feet.

At launch time, the aircraft will release the Pegasus rocket.

Five seconds later, the solid propellant engine will ignite and boost the eight hurricane observatories to orbit about 316 miles above the Earth.

Once in orbit, the CYGNSS satellites will begin a global study to better understand and forecast how hurricanes intensify.

The improved knowledge will save lives by providing earlier, more accurate warnings of approaching storms.