Secret military mini-shuttle lands in California

Irene Klotz, Reuters

(Reuters) - The U.S. military's unmanned X-37B robotic space shuttle returned from orbit at 5:48 a.m. in California (1248 GMT)from a secretive 15-month test flight, Air Force officials said on Saturday.

The miniature space plane, also known as Orbital Test Vehicle-2, or OTV-2, touched down at California's Vandenberg Air Force Base, 130 miles northwest of Los Angeles. It was only the second U.S. vehicle to make an autonomous runway landing from space.

"With the retirement of the space shuttle fleet, the X-37B OTV program brings a singular capability to space technology development," said Lieutenant Colonel Tom McIntyre, X-37B program manager. "The return capability allows the Air Force to test new technologies without the same risk commitment faced by other programs. We're proud of the entire team's successful efforts to bring this mission to an outstanding conclusion."

The military's first X-37B debuted in 2010 and autonomously landed at Vandenberg after 224 days in space. The former Soviet Union's Buran space shuttle, which made a single spaceflight in 1988, was the first ship to make an autonomous landing from orbit.

The military will not disclose what OTV-2 was doing during its 15 months in orbit, but a third mission already is on the calendar for launch this fall. OTV-2 blasted off aboard an unmanned Atlas 5 rocket from Cape Canaveral Air Force Station on March 5, 2010.

Boeing Phantom Works built two of the robotic space planes, which resemble diminutive space shuttle orbiters, as test vehicles.

The military, which took over the program from NASA, says it is using them to learn how to quickly and inexpensively refurbish reusable spaceships for flight. The X-37Bs also serve as orbital test beds for instruments that could be incorporated into future satellites.

It is not known if it carried anything in its cargo bay, which is about the size of a pickup truck bed.

The vehicles look like miniature versions of NASA's now-retired space shuttle orbiters, with a similar shape and a payload bay for cargo and experiments.

They are 29 feet long, compared to the shuttle's 122-foot (37-metre) length, and have a wingspan of 15-feet, compared to the shuttle's wingspan of 78 feet.

Rather than hydrogen-oxygen fuel cells like the orbiters, the X-37Bs are powered by gallium arsenide solar cells with lithium-ion batteries. The vehicles were designed to stay in orbit for up to 270 days. OTV-2 surpassed that milestone by 199 days.

The X-37B due to fly this fall is the vehicle that inaugurated the program in 2010.