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Global Observer unmanned aircraft makes first hydrogen-powered flight

By Noel McKeegan
January 17, 2011

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Global Observer's maiden hydrogen-powered flight (USAF)

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Following on from a successful [maiden flight under battery power](#) in 2010, AeroVironment's high altitude, long endurance ([HALE](#)) Global Observer unmanned aircraft has now taken to the skies using hydrogen-fueled propulsion. The aircraft reached an altitude of 5,000 feet

during the four hour flight on January 11 at Edwards Air Force Base (EAFB) in California. Both the endurance and the altitude of the system will be expanded in further test flights in order to achieve the planned operational altitude of 55,000 to 65,000 feet.

The aim of the Global Observer program is to provide a constant remote imaging, surveillance and communications platform that is far more cost-effective than conventional satellites while covering a greater area than low-flying aircraft – its coverage area is around 600 miles in diameter.

In addition to flying at stratospheric altitudes, the aircraft will be able to remain aloft for up to a week – working in tandem, two Global Observer's "would provide persistent satellite-like coverage over any location on the globe" at 20 percent of the cost of existing solutions according to [AeroVironment](#).

"Global Observer has moved quickly from development and testing toward demonstrating mission-ready, affordable persistence," said Tim Conver, AV chairman and chief executive officer. "Similar to a satellite, Global Observer is the first system designed to provide a 24/7/365 unblinking eye and continuous communications link over any location on the earth's surface for as long as needed."

The aircraft itself is no minnow – it has a wingspan of 175 feet, is 70 feet long, can carry payloads of up to 400 lbs and its liquid-hydrogen propulsion system drives four electric motors.

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Noel McKeegan

Noel McKeegan joined New Atlas as a founding member in 2002 and became Editor-in-Chief in 2007. Throughout New Atlas' long history he has travelled extensively, covering major technology events around the globe and helping build our exceptional editorial team.