

The Polar 400, remotely piloted air vehicle (RPAV)

Successful first operational demonstration

By Mick Jolley

Guardian Flight Systems (GFS), formerly Blackwater Airships, successfully completed the first operational demonstration of the Polar 400 remotely piloted air vehicle (RPAV) on Friday, 7 November 2008. GFS conducted the demonstration flight for the U.S. Air Force Research Lab and the Office of the Secretary of Defense's Advanced Systems and Concepts group. The nearly flawless demonstration of the RPAV and its capabilities capped a two-year rush from a simple idea to a state-of-the-art, remotely piloted airship.

The demonstration called for the Polar 400 to complete 5 take-off and recovery evolutions, each including a hot refuel, via remote control. Each recovery had to be complete, with full capture at the mooring/docking station (or "mast" in airship parlance). Additionally, each evolution demonstrated the airship's advanced propulsion capabilities and vector control system. The GFS crew also made use of a new winching system developed in-house, which combined with the innovative propulsion system, cuts the traditional footprint for recovery of an airship to the mast from 10-14 personnel to only four.

The ship and crew performed as advertised, surpassing expectations to the delight of the government representatives and various VIPs in attendance. The first four recovery-refuel-re-launch operations were so well executed, and so consistent in time and execution, the government customer waived the fifth iteration as completely unnecessary!

The GFS Airship is a true evolutionary leap forward in lighter-than-air technology and operational capabilities, and represents the company's ability to offer a persistent, cost effective surveillance and communications relay solution to support operations anywhere in the world. Easily deployable and sustainable, GFS airships can operate as single, multi-intelligence/communications platforms or as part of a multi-layered intelligence/surveillance/reconnaissance (ISR) solution supporting operations and battle space management.

The Polar 450 (the production version of the Polar 400 prototype) is designed to carry 400+ lbs. of payload for two to five days at altitudes of up to 15,000 feet (above most ground-based anti-aircraft threats). GFS engineers can assist with sensor and communications integration and with ample power and hard points for mounting sensors or other technical equipment, the Polar 450 will be capable of performing wide area surveillance, day-night EO and IR missions, communications intercept or relay in a variety of configurations—all tailored to the unique needs of the customer.

GFS Airship's Polar 450 embodies the American entrepreneurial spirit and is a throwback to the past, when American ingenuity and industry supported the military with short time solutions to long term problems.