Darkstar Unmanned Aerial Vehicle Completes First High Altitude Flight

The second Tier III Minus DarkStar high-altitude unmanned aerial vehicle (UAV) has completed its first high-altitude flight reaching an altitude of 25,000 feet. Previous flight objectives were accomplished at an altitude of 5,000 feet.

The vehicle took off from the U.S. Air Force Flight Test Center at Edwards Air Force Base, Calif., at 8:46 a.m. (PST) Saturday. During the 2-hour, 37-minute flight, DarkStar achieved its planned altitude and completed all preplanned basic flight maneuvers.

The system successfully executed a fully automated flight from takeoff to landing using differential Global Positioning System (GPS) satellite data. In addition to greatly expanding the operating flight envelope for DarkStar, the flight demonstrated the ability to update the preplanned mission while the vehicle was in flight.

Military exercises and other test flights are scheduled in 1999 to evaluate DarkStar's general flying characteristics and basic system performance, including the high-resolution synthetic aperture radar (SAR) and electro-optical (EO) payloads. The third DarkStar vehicle has completed all ground system checks and will be delivered to Edwards Air Force base this month. DarkStar No. 4 is expected to be delivered mid-February.

Boeing builds DarkStar's wings, provides its avionics and integrates its radar and vehicle management system software. Lockheed Martin Skunk Works, Palmdale, Calif., builds the vehicle's fuselage and integrates the EO sensor and a variety of vehicle subsystems.

DarkStar is a high-altitude, low-observable endurance UAV optimized for reconnaissance in highly defended areas. It will operate within the current military force structure and with the existing command, control communications, computer and intelligence equipment. It will operate at a range of 500 nautical miles and stay on station for eight hours at an altitude greater than 45,000 feet.

The DarkStar program is managed by the U.S. Air Force.

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