Navy Demonstrates Multi-Day Solar UAS Flight



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“This demonstration is a prime example of how NAWCAD partners with industry to deliver what the fleet needs,” said NAWCAD Commander Rear Adm. Todd Evans. “It also reflects the technical depth of our workforce and our ability to translate ideas into capability.”

The 73-hour flight proved Skydweller’s ability to maintain continuous solar-powered operation and demonstrated the feasibility of achieving a positive energy balance to power the aircraft during extended flights. It also validated the system’s communication links, autonomous real-time decision making and ability to adapt to turbulent weather.

“Integrating Skydweller into the Navy’s ISR architecture creates a layered and resilient network that maximizes the capabilities of all our assets,” says NAWCAD’s Special Purpose UAS lead Bill Macchione. “This collaborative approach ensures we have the right platform for the right mission, optimizing our resources and enhancing our overall maritime domain awareness.”

Skydweller’s strength lies in its ability to provide continuous, wide-area surveillance over extended periods, enabling more advanced systems to focus on missions that require such specialized capabilities as rapid response and advanced sensor packages.

NAWCAD began experimentation with Skydweller’s solar-powered UAS capabilities in 2020 to address U.S. Southern Command (SOUTHCOM) operational challenges, including drug trafficking and border security. This technology provides continuous

surveillance over vast areas, enabling the U.S. and its allies to enhance maritime security and disrupt illicit activities.