Solar-powered two-seat Sunseeker airplane has progress report

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(Phys.org) —Years ago, the idea of an airplane flying "clean" on the sun's energy seemed like wishful thinking and at the most a project for the casual hobbyist to dream on. No longer a dream, the serious-minded company called Solar Flight, which over time has been working on a two-seater solar powered airplane called Sunseeker Duo that can stay up for extended periods. The latest news from Solar Flight talks about its most recent tests that show promise. The company vision of a two-seater solar aircraft for real use is that much closer. "The tricycle landing gear

arrangement, familiar to all pilots, ensures that the Duo will operate normally at any airport in the world and folding wings give the airplane a hanger footprint no larger than a Cessna 172. The airplane can also be quickly disassembled and packed into a custom trailer," said the company's website notes. In recent tests, the team assessed the plane's performance and this month published results."

Over the past months, the flying qualities of the airplane, as well as the performance of the battery system, motor, propeller, folding hub mechanism, and landing gear retraction systems have been explored," said the company site.

"More area and additional solar cells were added to the horizontal stabilizer. "Now the airplane is docile with good control authority in the air and on the ground. The performance is better than the previous airplane in every category; operations are easier because the landing gear and systems are more conventional; and the airplane has enough excess power to carry a passenger and baggage."

As reported in the CAFE Foundation's Cafe Blog earlier this week, with a 25 kilowatt (33.5 horsepower) motor, the Duo, with two people on board, can cruise directly on solar power. The Duo is capable of durations in excess of 12 hours. It makes use of a battery pack in the fuselage to store energy harvested from solar cells lining wings and tail surfaces.

Nick Lavars of *Gizmag* also reported more stats on the plane on Wednesday: The Sunseeker Duo has a wingspan of 22 meters (72 ft) and weight of 280 kg (617.3 lb). He said there are 1,510 solar cells that line the wings and tail. Lavars quoted project leader Eric Raymond as saying "The lithium batteries today have seven times more capacity than the nickel cadmium batteries we used in Sunseeker I."

Looking ahead, "Sunseeker Duo will embark on continental expeditions and attempt to establish multiple official aviation records," according to the company site.

More information: solar-flight.squarespace.com/f … irst-powered-flights
www.solar-flight.com/sunseeker-duo1/