# Update: UAVOS flight tests HAPS ApusDuo in unstable atmospheric conditions

**Date Posted:** 12-Oct-2020

**Author:** **Pat Host**, Washington, DC

**Publication:** Jane's International Defence Review

UAVOS recently reached a milestone in its solar-powered High-Altitude Pseudo Satellite (HAPS) ApusDuo development by flying the aircraft in unstable atmospheric conditions, according to a company statement.

UAVOS performed a series of flight trials in July with the ApusDuo in Belarus at altitudes up to 62,336 ft. The company tested a unique control system, which UAVOS said allows HAPS aircraft with a large wing elongation similar to the ApusDuo to fly in unstable atmospheric conditions.

*UAVOS' solar-powered High Altitude Pseudo Satellite ApusDuo. The company recently achieved a milestone by flying the aircraft in unstable atmospheric conditions. (UAVOS)*

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The ApusDuo coped with turbulence, actively changing the bend of the wings, the company said on 5 October. UAVOS will perform another test in October with the ApusDuo reaching 62,336 ft altitude.

UAVOS said on 7 October that the ApusDuo is controlled by a special version of the company's autopilot. This system comprises three synchronised autopilots that control the ApusDuo by changing the platform's geometry.

The UAVOS control system does not require the installation of wing mechanisation, which results in reducing the aircraft's weight by 30% or more. It also improves reliability and reduces manufacturing costs by simplifying wing production.

The ApusDuo weighs about 43 kg and is launched by a winch. The aircraft has two wings that are each 14 m long built on the principle of tandem, where the two wings are located one after another with little elevation.

The ApusDuo is designed to linger at an altitude of roughly 60,000 feet for months at a time for surveillance or to provide a temporary boost to communications.

*This article, first published on 12 October, has been updated with imagery.*

**Comment**

UAVOS recently became a member of the HAPS Alliance, an industry association that includes companies from the telecommunications, technology, and aviation industries. These companies share a common goal of accelerating the commercial adaptation of HAPS technologies.