

Press Release

SPACE SYSTEMS

Airbus-built Aeolus successfully passes all tests in Liège (Belgium), and has arrived in Toulouse for final checks

ESA's wind sensing spacecraft Aeolus will be the first satellite capable of performing global wind-component-profile observation on a daily basis in near real-time.

Stevenage, 12/02/2018 - Aeolus, the European Space Agency's wind sensing satellite, has left Liège in Belgium having successfully completed an extensive thermal and functional performance test campaign under in-orbit conditions. It will now undergo final checks at InteSpace test centre in Toulouse, France, before being shipped to French Guiana in the summer ready for launch on a Vega launcher.

The 1.4-tonne spacecraft, primed by Airbus, features the LIDAR (Light Detection And Ranging) instrument called Aladin, which uses the Doppler effect to determine the wind speed at varying altitudes.

Aladin fires a powerful ultraviolet laser pulse down through the atmosphere and collects backscattered light, using a large 1.5m diameter telescope, which is then analysed on-board by highly sensitive receivers to determine the Doppler shift of the signal from layers at different heights in the atmosphere.

The data from Aeolus will provide reliable wind-profile data on a global scale and is needed by meteorologists to further improve the accuracy of weather forecasts and by climatologists to better understand the global dynamics of Earth's atmosphere.

Aeolus will orbit the Earth 15 times a day with data delivery to users within 120 minutes of the oldest measurement in each orbit. The orbit repeat cycle is 7 days (every 111 orbits) and the spacecraft will fly in a 320 km orbit and have a lifetime of three years.

About Airbus

Airbus is a global leader in aeronautics, space and related services. In 2016, it generated revenues of € 67 billion and employed a workforce of around 134,000. Airbus offers the most comprehensive range of passenger airliners from 100 to more than 600 seats and business aviation products. Airbus is also a European leader providing tanker, combat, transport and mission aircraft, as well as one of the world's leading space companies. In helicopters, Airbus provides the most efficient civil and military rotorcraft solutions worldwide.

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