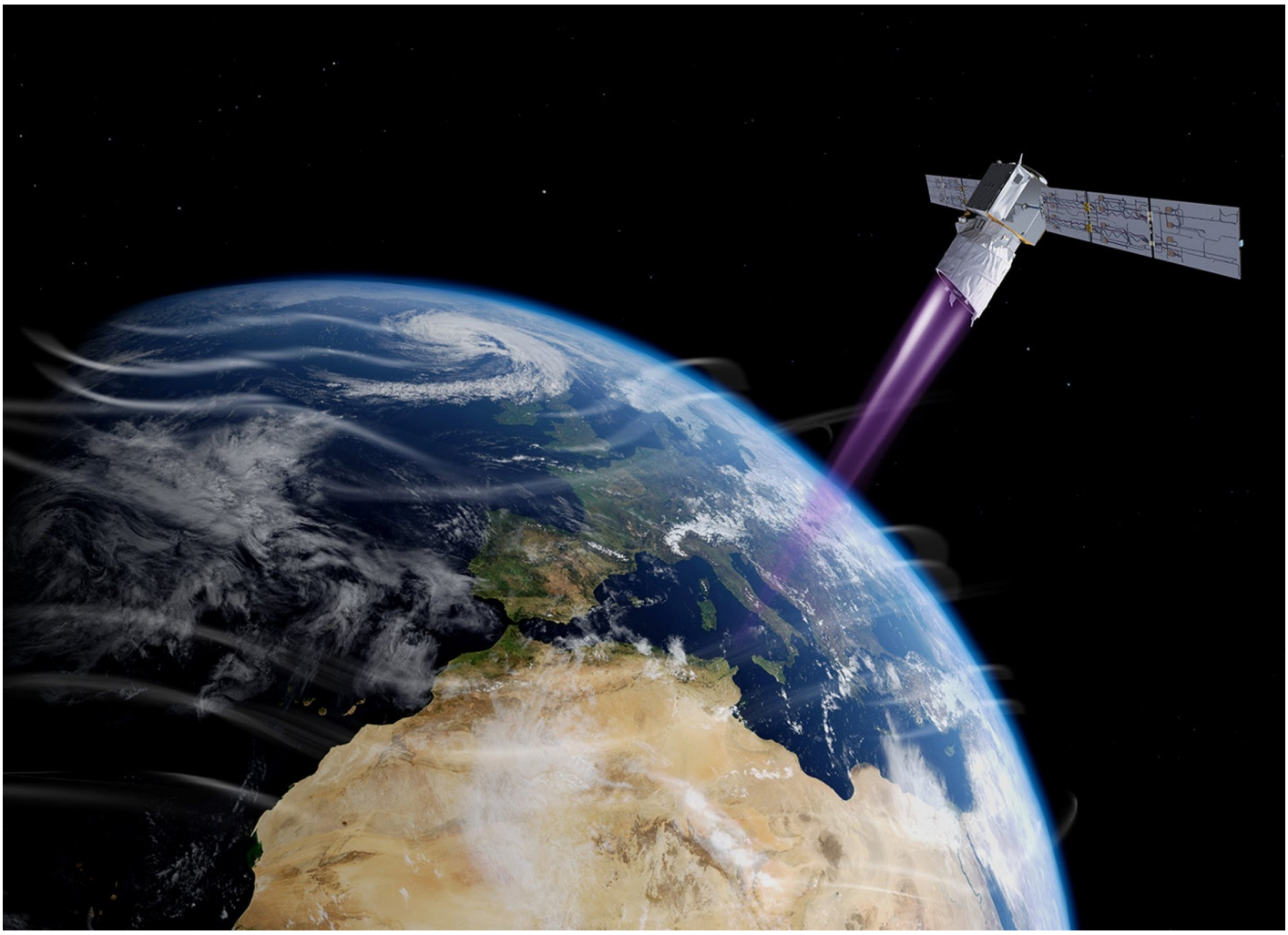
ESA’S AEOLUS WIND SENSING SATELLITE SUCCESSFULLY LAUNCHED FROM KOUROU

News / Manufacturer



Airbus-built Aeolus satellite to map Earth’s wind in real-time

Aeolus, the European Space Agency’s wind sensing satellite, built by Airbus, has been successfully launched from Kourou, French Guiana. The satellite will now undergo a series of tests in its operational orbit at 320km before beginning operations.

Built by Airbus, Aeolus is the first satellite capable of performing global wind-component-profile observation on a daily basis in near real-time.

The 1.4-tonne spacecraft features a 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.

Nicolas Chamussy, Head of Space Systems at Airbus said: "Aeolus is another first for Airbus, delivering a revolutionary Earth observation satellite that will give wind profile data in near real time, improving weather forecasting and helping to bring the benefits of space down to every citizen on Earth."

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 have a lifetime of three years.

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