

## Photo Release

### Successful integration of ATLID completes the European set of instruments for EarthCARE satellite

Airbus-built ESA/JAXA mission will improve understanding of Earth's energy budget

Atmospheric lidar ATLID instrument will provide vertical profiles of aerosols and thin clouds

[@AirbusSpace](#) [@ESA\\_EO](#) [@JAXA\\_en](#) [#EarthCARE](#) [#Clouds](#) [#Aerosols](#)



**Friedrichshafen, 17 June 2020** – With the successful integration of the ATLID-Instrument the EarthCARE satellite (Clouds Aerosols and Radiation Explorer) has passed a crucial milestone, as it concludes the "onboarding" of the three European instruments.

EarthCARE is a joint mission of the European Space Agency (ESA) and the Japanese Space Agency (JAXA), with Airbus Defence and Space in Friedrichshafen (Germany) acting as prime contractor to develop and build the satellite, and Airbus Defence and Space in Toulouse (France) supplying the Atmospheric Lidar ATLID.

### Photo Release

The integration sequence was successfully carried out in close cooperation between the Toulouse and Friedrichshafen teams - even under the protective but challenging Covid-19 crisis regulations. ATLID will now undergo a set of functional and performance tests which will then finally conclude the instrument delivery. The next step is the integration of the Japanese Cloud Profiling Radar (CPR).

Once operating in orbit, EarthCARE will advance the understanding of the role that clouds and aerosols play in global climate modelling. For this EarthCARE will draw up vertical profiles of natural and man-made aerosols, register the distribution of water and ice and their transport by clouds, and provide essential input to climate models for more precise forecasting of global warming.

Clouds and, to a lesser extent, aerosols reflect incident solar light back out to space, but they also trap outgoing infrared light. This leads to a net effect of either cooling or heating of the planet. In addition, aerosols influence the life cycle of clouds, and so contribute indirectly to their radiative effect – measuring them will give a better understanding of Earth’s energy budget.

ATLID is one of four instruments of the EarthCARE satellite providing vertical profiles of aerosols and thin clouds. Operating in the UV-range at 355 nm, it provides atmospheric echoes with a vertical resolution of about 100 m from ground to an altitude of 20 km and 500 m from an altitude of 20 km to 40 km. The measurement principle which was retained for ATLID uses the fact that interaction of light with molecules or aerosols leads to different spectra. ATLID is the second European lidar after Aeolus making Airbus a worldwide specialist in spaceborne lidars.

With a launch mass of 2.3 tonnes, the EarthCARE mission is designed to operate for three years in sun-synchronous orbit at 400 km altitude, after its planned Soyuz launch from Kourou, French Guiana.

\* \* \*

#### About Airbus

Airbus is a global leader in aeronautics, space and related services. In 2019 it generated revenues of € 70 billion and employed a workforce of around 135,000. Airbus offers the most comprehensive range of passenger airliners. 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.

#### Media contacts

Jeremy CLOSE  
Mathias PIKELJ

[jeremy.close@airbus.com](mailto:jeremy.close@airbus.com)  
[mathias.pikelj@airbus.com](mailto:mathias.pikelj@airbus.com)

+44 (0)7766 536 572  
+49 (0)162 29 49 666

This and other press releases and high resolution photos are available on: [AirbusMedia](#)