

Press release: UK-France space agreement delivers device to ocean satellite

A device built in the UK by Honeywell, which will form a vital part of the mission to make the first global survey of the world's surface waters and oceans, has been delivered to Thales Alenia Space in France.

The Surface Water and Ocean Topography, or SWOT, mission is led by CNES (the French Space Agency) and NASA with support from the UK Space Agency and the Canadian Space Agency. The UK Space Agency and CNES signed a joint statement in January 2018 during the UK-France Summit in Sandhurst to step up co-operation in space, building on 2014's Brize-Norton framework arrangement.

The warming of Earth's climate may profoundly alter the movement of freshwater resources from lakes to rivers to reservoirs, resulting in significant societal impact. The SWOT satellite will use radar technology to measure the features of oceans, coastlines, rivers and lakes across the globe to improve understanding of changes over time and their impact on farming, industry and human populations.

The UK-built device, known as a duplexer, is a vital component that routes radar signals around the satellite and can transmit at a power of 1,500W – a level never before seen in this kind of device.

Speaking in Brussels at the Committee on Earth Observation Satellites Plenary, UK Space Agency Director of Growth Catherine Mealing-Jones said:

Satellites play a major role in understanding our home – planet Earth. Using great British technology, the SWOT mission is a great example of how satellites can take measurements of our environment from the unique vantage point of space, in this case, giving us the first global survey of one of our most precious resources – water. The UK and France are leading space powers in Europe and the delivery of the duplexer for the SWOT mission is a significant milestone in our partnership, which continues to go from strength to strength.

It will now be integrated into a Radio-Frequency Unit by Thales Alenia Space before NASA engineers add it to their KaRin instrument developed at the Jet Propulsion Laboratory (JPL) in California. The satellite is due to launch 2021.

CNES is supplying the RFU (Radio-Frequency Unit), which is co-funded with the UK Space Agency UKSA. As well as the duplexer, Thales Alenia Space is developing the 'hyperbox' in Toulouse which will create the radar pulse and receive radar echoes.

Hailing this new milestone, CNES President Jean-Yves Le Gall said:

This new step forward for the SWOT mission is a product of the close relationship between our space agencies and industries. The joint statement signed by CNES and UKSA in 2018 during the UK-France Summit in Sandhurst is being effectively applied and France and the United Kingdom are pursuing their successful space cooperation.

The UK and France are also teaming up on the MicroCarb programme to monitor and map sources and sinks of carbon gases, as well as supporting the implementation of a Space Climate Observatory, which was set out in the Paris Declaration on Climate Change.

This week is [Green Great Britain Week](#), which is showcasing the leading role of the UK's academic and business communities in tackling climate change while generating economic growth.

Green GB Week celebrates the tenth anniversary of the UK's ground-breaking Climate Change Act. The UK has played a leading role in delivering clean growth – growing the economy by more than two thirds while reducing emissions by over 40% since 1990.

[Clean growth](#) is central to the Government's modern Industrial Strategy, and Green GB Week includes 100 events across the country promoting the opportunities from clean growth and raising awareness of how businesses and the public can contribute to tackling climate change.

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