



## Airbus Defence and Space selected by CNES to build MERLIN - the first Franco-German Earth observation satellite

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Airbus Defence and Space, the worlds second largest space company, has signed a contract with the French space agency (CNES) to build the platform and carry out final integration of the MERLIN (MEthane Remote sensing Lidar missioN) satellite. From 2020 MERLIN will measure methane (CH4), one of the main greenhouse gases, in the Earths atmosphere. MERLIN is the first joint Earth observation satellite programme between the French (CNES) and German (DLR) space agencies.  
"We are happy to run the first Franco-German Earth observation satellite programme and we will build the spacecraft on both sides of the Rhine," said François Auque, Head of Space Systems. "Thanks to this contract, our new satellite platform AstroBus-S has its second order (after Perusat-1), proving its competitiveness in this range of small Earth observation satellites on the global market."  
MERLIN is one of the European satellite programmes designed to study greenhouse gases and the phenomenon of global warming. Using its LIDAR (Light Detection And Ranging) instrument, MERLIN will "probe" the atmosphere to determine the varying concentrations of methane, which, together with carbon dioxide (CO2), is one of the main contributors to the greenhouse effect.  
Airbus Defence and Space has already been selected by DLR as prime contractor for early development phases (O-B) of the MERLIN payload. The LIDAR instrument shines a laser at two different wavelengths through the atmosphere, and measures their reflections off the Earths surface or the cloud tops. As one wavelength is absorbed by the methane and the other is not, this difference can be measured and the methane content in the atmosphere determined. Being an active instrument with its own light source on board, the MERLIN LIDAR instrument does not have to rely on Sun illumination of the observed areas and can therefore operate day and night.  
MERLIN is the first institutional programme to be based on the new AstroBus-S platform, developed by Airbus Defence and Space in partnership with CNES, as part of the French Investment for the Future Programme (Plan d'investissements d'Avenir - Myriade Evolutions). AstroBus-S will form the basis of the Airbus Defence and Space range of 400 kg class Earth observation satellites for imaging, climatology and science missions. AstroBus-S complements the current AstroBus range, which has underpinned commercial export successes for more than 15 years (Chile, United Arab Emirates, Kazakhstan, Peru, etc.) and been the technological spearhead of the most emblematic institutional missions (MetOp-SG, Spot, etc.).  
The MERLIN programme will be carried out under the aegis of CNES and DLR. On behalf of CNES, Airbus Defence and Space in France (Toulouse) will be responsible for the satellite, its platform and its integration with the instrument. The LIDAR instrument will be designed and built by Airbus Defence and Space teams in Germany (Friedrichshafen, Ottobrunn) on behalf of DLR.  
Airbus Defence and Space is a division of Airbus Group formed by combining the business activities of Cassidian, Astrium and Airbus Military. The new division is Europes number one defence and space enterprise, the second largest space business worldwide and among the top ten global defence enterprises. It employs more than 38,000 employees generating revenues of approximately 13 billion per year.  
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