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CNES and NEXEYA'S ANGELS nanosatellite on course for launch next year

CNES and NEXEYA, who are co-funding and developing ANGELS (Argos Neo on a Generic Economical and Light Satellite), the first series-produced French nanosatellite, have reached a new milestone with the Detailed Design Review (DDR) of the satellite and anechoic chamber testing of its engineering model. The design is now frozen and flight models of systems are in production for the start of satellite integration and testing in May 2019.

The excellent test results have firmed up the development plan and CNES and NEXEYA have therefore decided to accept Arianespace's offer to launch the satellite late 2019 from the Guiana Space Centre (CSG).

The miniaturized Argos Neo instrument on ANGELS will be ten times smaller than the previousgeneration instrument and enable collection and location of low-power signals and messages from the 20,000 Argos transmitters currently operating around the globe. Given the instrument's high sensitivity, which makes it prone to electromagnetic interference, special precautions have been taken and the design of the ANGELS satellite has been specifically adapted to the tight space available. Anechoic chamber testing of the satellite with a full engineering model representative of the flight model has validated these design choices while ensuring that messages from Argos transmitters will be correctly received without interference from other onboard hardware. The integrated CNES-NEXEYA project team and the Thales Alenia Space-Syrlinks-CNES ARGOS Neo project team pulled off this engineering challenge in barely 20 months, a very short time for a space project.

Building on this experience acquired with support from CNES within the integrated project team, NEXEYA and its industry partners are now looking ahead and working on the design of future missions—including constellations—that are set to put the French space community and industry firmly on the NewSpace map.

This project, launched in May 2017, aims to develop a range of commercial satellites weighing less than 50 kilograms designed for radiofrequency-type operational missions like data collection (Argos, AIS, M2M) and spectrum surveillance, as well as for science missions.