

First journey for Alhabus spacecraft

5 February 2010



The Alhabus Service Module on the turnover trolley just before closure of the container. The spacecraft is lowered vertically on the turnover trolley, tilted horizontally, then the whole assembly is slid into the container and closed. Credits: Thales Alenia Space

(PhysOrg.com) -- The service module of the new Alhabus generation of telecommunication satellites has completed its first journey from Cannes to Toulouse, in France. The three-day trip was completed last Friday.

The exceptional convoy was made up of a 20 m-long lorry carrying the satellite container, several escort cars and a police escort to close off streets and redirect traffic as they passed through urban areas.

This platform will be used for the Alphasat I-XL satellite being built by Astrium for Inmarsat and ESA, allowing an early orbital demonstration and validation of Alhabus. Alphasat will be launched in 2012 using an Ariane 5 from Europe's Spaceport in Kourou, French Guiana. Positioned in geostationary orbit at 25°E to provide extended coverage to Africa, Europe, the Middle East and parts of Asia, Alphasat will supplement the existing Inmarsat satellite constellation and offer new and advanced services.

The Alhabus service module consists of the main structure, central tube, internal deck and other structural elements carrying the chemical [propulsion system](#) with the main apogee boost motor, the pressure control assembly with three helium tanks and the two large propellant tanks inside the central tube, as well as part of the plasma propulsion system and its xenon tanks.

A shipment review was held in mid-January to authorise the delivery of the module from Thales Alenia in Cannes to Astrium in Toulouse.

The last tests on the chemical propulsion system were conducted in December in the explosion-proof facility at Cannes. Preparations are under way for completing the service module at Astrium. The next step is to integrate the electronic equipment before the module is switched on for the first time and functional tests begin.

Other structural elements are also being worked on at Thales Alenia Space in Turin, Italy. The first half of the repeater module structure, fully equipped with electrical harness and thermal control, will be shipped to Astrium, Portsmouth (UK), in early February for payload integration. The second half of the repeater module will be shipped to Portsmouth in March.

Alhabus, the new European high-power telecommunications platform jointly developed by Astrium and Thales Alenia Space and initiated by a partnership between ESA and the French space agency, CNES, is a coordinated European response to the increased market demand for larger telecommunication payloads. A wide range of commercial payloads to provide TV broadcast, broadband multimedia, Internet access and mobile or fixed telecommunication services can be accommodated on Alhabus.

Provided by European Space Agency

APA citation: First journey for Alphaspacecraft (2010, February 5) retrieved 20 January 2022 from <https://phys.org/news/2010-02-journey-alphaspacecraft.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.