

INDRA FINISHES IMPLEMENTATION OF MAIN CENTER FOR PAZ SATELLITE

- **The INTA Space Center in Torrejón de Ardoz is now ready to manage the satellite and process any sent data**
- **Indra is carrying out final testing of the joint operation of the three centers which comprise the ground segment**

Madrid, July 15, 2015.- Under a contract with INTA, Indra has successfully led the implementation of the main management center for Paz, the earth observation satellite which Spain will launch into space later this year. This center, in the INTA (Instituto Nacional de Técnicas Aeroespaciales) space center in Torrejón de Ardoz, is ready to begin operations.

This step represents the successful completion of the main ground segment element. This ground segment includes two other centers: a backup center at the Maspalomas space center in the Canary Islands (also subordinate to INTA); and a center which will be deployed in the Torrejón de Ardoz airbase and service the Spanish Ministry of Defense.

These two additional centers are also fully implemented in the INTA space center in Torrejón de Ardoz. At Torrejón de Ardoz, Indra is validating the full system by checking the interconnected and joint operation of all three centers before their final deployment and installation in the Torrejón airbase and in Maspalomas.

These validation tests simulate the satellite's behavior and reproduce a summary of the information sent by the sensor. They also include an analysis of the satellite's response to contingencies and its operation under maximum workload.

The main center is divided into two different sections. The first section is the Flight Operation Segment (FOS) which comprises the control and command systems, mission planning and data monitoring and reception equipment. The second element is the Payload Data Ground Segment (PDGS) which will process data to generate images and answer requests from scientists and other civilian users. Indra has integrated both sections and complemented them with the horizontal support services which the three centers will share.

The ground segment architecture is extremely flexible both in terms of satellite and instrument control and data reception and processing. The three centers offer redundancy and, as such, ensure the mission's high reliability.

The first of two satellites

The Paz satellite will be equipped with an X-band radar sensor, and its images will be processed using synthetic aperture techniques (SAR) for high resolution.

The information provided by the satellite will be extremely useful for countless purposes: map creation, surveillance and monitoring, tactical support to international missions, maritime surveillance, detection of spills into the sea, forest control, fire tracking and land-use control, etc.

This demanding project adds to the company's experience in implementing the ground segments of the Helios 1 and Helios 2, Pleiades and SMOS satellites, and implementing the control centers for the satellites of the Hispasat operator. Indra has also deployed different types of stations for Europe's global navigation satellite system Galileo and Eumetsat's polar station (serves METOP satellites).

Indra's key role in the Spanish National Earth Observation Program strengthens its position to be able to compete in the international market and win new implementation projects for control centers, processing centers and full satellite ground segments. Indra has 25 years of experience in the space sector, and over half of its revenue comes from the international market. Its activity focuses on satellite communications, control stations, satellite navigation systems and Earth observation applications and systems.

Indra

Indra, overseen by Chairman & CEO Fernando Abril-Martorell, is one of the world's largest consultancy and technology multinationals, a leader in Latin America and Europe. The company provides business solutions, IT services and comprehensive systems to clients all over the world. Indra has a standout business model based on proprietary solutions (representing close to 65% of 2014 revenue), that serves leading clients in numerous countries. In 2014 it posted revenue of 2,938 million euros and had 39,000 employees, a local presence in 46 countries and projects in 149 countries. The company groups its solutions and services into the vertical markets of Energy and Industry, Financial Services, Telecom & Media, Public Sector & Healthcare, Transport & Traffic and Security & Defense.