SMALL SATELLITES & SERVICES INTERNATIONAL FORUM

#SSSIF2024
speaker

INTERVIEW

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SSSIF INTERVIEWER

We are with Fernando Gómez-Carpintero, the CEO of Airbus Crisa. Welcome. Thank you for joining us.

FERNANDO GOMEZ-CARPINTERO

Thank you very much.

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SSSIF has established itself as one of the major European events in New Space and space exploration. What are Airbus Crisa's specific expectations for the 2024 edition?

FERNANDO

This year at SSSIF we will have a very relevant national and international presence, whether we are talking about the industrial sector, academia or space agencies, including our recently launched Spanish Space Agency. It will be an excellent forum for exchange and discussion on the challenges we will face in the future and the technological developments that will allow us to achieve them.

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In fact, the 2024 SSSIF is focused on lunar exploration and cislunar navigation, areas in which Airbus Crisa has proven experience and a leading role.

FERNANDO

Indeed, in the area of lunar exploration we have particularly relevant contributions to the Orion spacecraft and the future Gateway lunar station, both part of NASA's Artemis program.

We have developed the Thermal Control Unit (TCU) of the European Service Module of the Orion spacecraft that made its maiden flight at the end of 2022 in what has been the first mission of THE Artemis program. Orion is a manned vehicle whose primary mission is to carry up to four astronauts into space, beyond the Moon, and return them safely to Earth. Our contribution, the TCU units, are crucial elements of the service module, managing the thermal control of the spacecraft and maintaining the astronauts' life support system parameters in adequate conditions for their survival. For this project, that we started in 2013, we delivered the first TCUs at the end of 2017. Today we have delivered the TCUs for the first three Orion vehicles and we are already working on the following models.

For the future lunar orbital station, Gateway, we are developing two power management and distribution subsystems, one for the HALO module and the other for the iHAB module, one of the European contributions to the station. These subsystems will ensure that the necessary electrical power is available to ensure the operation of the various elements of Gateway and the survival of the astronauts.

We are very proud that technology made in Spain has been present on Artemis since its inception and that we have contributed to the success of the first Orion mission in which our TCUs performed as expected

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Likewise, it seems that, after its participation in Ariane 5, the future of space transportation will not be understood without the critical contributions of Airbus Crisa...

FERNANDO

Ariane 5 has been a very important programme for Airbus Crisa. In fact, it could be said to have been the basis of our initial growth. We have been involved in this program for 35 years, since its inception, providing electronics for critical functions and evolving them according to the needs of the launcher. This experience has allowed us to participate in the different versions of the VEGA launcher, from the very beginning as well. Today we are working on our units for Ariane 6 for which we have the mission of providing the core equipment of the launcher's electrical system, equipment which includes the onboard computer and is also in charge of the power management and communications, as well as the control of the cryogenic engines' electrovalves.

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Another program in which they have contributed key cutting-edge electronic technology is Copernicus.

FERNANDO

Our activities in Copernicus have also been very important for the consolidation of key capabilities in our company, particularly in the area of front-end electronics for optical detectors. We have participated in all the first-generation satellites since Sentinel-2, being one of the Spanish companies with the largest presence in the program. In this new stage of Copernicus, we are particularly proud of our participation in the LSTM (Land Surface Temperature Monitoring) satellite, led by Airbus in Spain as prime contractor, to which we contribute with the Power Conditioning and Distribution unit, the Instrument Control unit and the instrument Front-end Electronics.

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The moon is key to Mars. But beyond Mars, there's Jupiter.... And 'Juice'...

FERNANDO

Airbus Crisa participates regularly in the most important Solar System exploration and science missions. Still, the launch of JUICE last year was a very special milestone for us. Environmental factors such as the extreme radiation level surrounding Jupiter, or its remoteness from the Sun, as well as specific instrument requirements such as the high

level of electromagnetic cleanliness, have posed unprecedented technology challenges to our power subsystem design. Under the premise that for the JUICE's success "each watt matters", we have developed innovative solutions that achieve the most efficient use of the energy available to the spacecraft, in every phase of the mission. This is something we are very proud of and that has allowed us to optimize our subsequent power unit designs with elements such as full digital control.

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Airbus Crisa is one of the major players in space exploration in Spain. What are its challenges in 2024?

FERNANDO

We face the new year with great enthusiasm. In 2024 we are looking forward to two major milestones: the maiden flight of Ariane 6, of great relevance for the space sector in Europe and, in Spanish terms, the launch of the first Spainsat NG, for which Airbus is the prime contractor and to which we are contributing with the active antenna electronics, one of the most innovative technology elements of the satellite.

We will also deliver flight models for various programs, among which I would like to highlight the units we are developing for constellations. We are also planning the launch of two very important projects for our future growth. The first one, the start of operations of our new Test Area in Tres Cantos, a 2500 m2 facility dedicated to the electrical and environmental testing of our flight equipment. The second, the construction of our batteries factory, also in Tres Cantos, designed to provide service to the Ariane 6 program.

SSSIF

That's right, Fernando, we will talk about all this and much more in just a few weeks in Malaga, where we will see each other, so thank you very much for giving us this interview.

FERNANDO

Thanks to you.