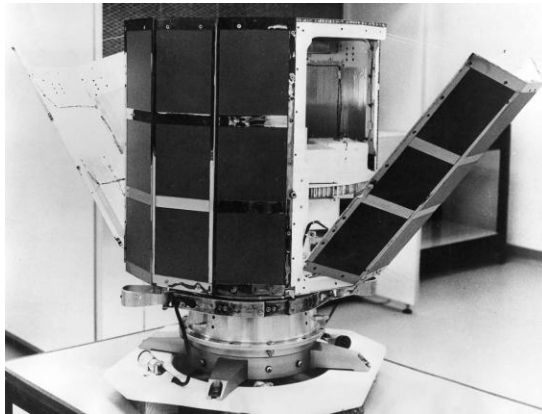


INTASAT: A pioneering achievement in Space Exploration

Spain made Space History with its first artificial satellite

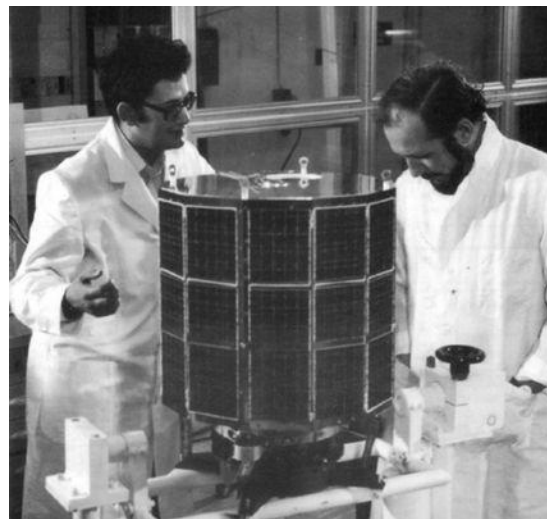
20.02.2025. – Spain entered the history of space exploration by launching its first artificial satellite into orbit in November 1974 from the Vandenberg Air Force Base in California.

Named **INTASAT**, it was a remarkable feat that placed the country among the few players in the then-emerging space sector.



The program equipped both private companies and **INTA** (National Institute of Aerospace Technology) with expertise in space technologies. **INTASAT** carried an ionospheric beacon that observed irregularities and scintillations in the ionosphere, as well as a second experiment to test the effects of radiation on the threshold voltage of CMOS circuits, which were the most advanced circuits of that time.

The **INTASAT** satellite was a prism-shaped structure with twelve faces, 41 centimeters, topped by a truncated hexagonal pyramid, and weighing 24.5 kilograms. It was equipped with a beacon and four telemetry antennas. Its orientation was controlled using a magnet that interacted with Earth's magnetic field. Power was supplied by 12 nickel-cadmium batteries recharged by solar panels covering all its faces.





The satellite did not have effective telecommand capabilities; all its operations were preprogrammed on the ground. This included deploying its antennas and beacon 10 seconds after release, initiating experimental activities, and shutting down after two years of the mission.

INTASAT was placed in a sun-synchronous orbit, with noon as its nodal crossing time and an altitude of 1,450 kilometers. The instrument data were encoded onboard and downloaded to ground reception stations, such as El Arenosillo (Huelva). The spacecraft's timer system turned it off between October 5 and 6, 1976, two years after its launch.

INTASAT is Spain's space pioneer, training and equipping teams of engineers who worked with passion and enthusiasm to pave the way for future generations.



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