

SPACE COMMUNICATIONS AND NAVIGATION SYMPOSIUM (B2)
Advanced Satellite Services (4)

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SMALLGEO, THE OHb TELECOMMUNICATIONS SATELLITES

Abstract

OHb System AG's SmallGEO is a versatile geostationary satellite platform, defined by a broad spectrum of possible configurations to adapt to the customer needs (Earth Observation, Telecommunications, and laser-communication applications, hybrid, classic or electrical propulsion). SmallGEO is a 3-ton class satellite suitable for the commercial market, and the first one developed and launched at OHb System AG.

Bearing the name "H36W-1", the first SmallGEO satellite was launched January 28, 2017. It was developed by OHb System AG under the European Space Agency's ARTES (Advanced Research in Telecommunications Systems) program; and in a public-private partnership comprising ESA, Spanish satellite operator HISPASAT and OHb System AG. After being integrated in HISPASAT's fleet of satellites, H36W-1 will orbit at an altitude of 36,000 km, where it will help to supply Spain, Portugal, the Canary Islands and South America with multimedia services. Hispasat 36W-1 features the innovative RedSAT regenerative payload, made up of a processor and an antenna that actively receives reconfigurable beams to provide HISPASAT with greater flexibility in its communication services. This paper will introduce the SmallGEO satellites main characteristics, configurations and performance, a lessons learned and a detailed overview on the H36W-1 mission, and an introduction into the next SmallGEO satellite being built, Electra.

Keywords: SmallGEO, Telecommunications, ARTES, ESA, Commercial, Satellite