Revised

NOAA Satellite and Information Service Argos-4 HoPS

Background:

The Argos-4 instrument is part of the Argos worldwide data collection system (DCS) dedicated to studying and protecting the environment. NOAA partners with CNES (France), EUMETSAT (Europe), and ISRO (India). The Argos DCS today consists of instruments provided by the CNES on polar-orbiting satellites operated by NOAA, EUMETSAT, and ISRO. The Argos DCS will be transformed in the early 2020s, with Argos-4 launches by ISRO, NOAA and EUMETSAT and twenty-five (25) Argos-4NG nanosat launches by CNES and Kinéis. Argos-4 is polar orbiting and will add to the Argos DCS which tracks over 21,000 active platforms for nearly 2,000 users in more than 100 countries. These platforms will be used for environmental, marine fishery, maritime security, offshore and humanitarian aid applications.

Program-at-a-Glance

Argos-4

Orbit: Polar Orbit

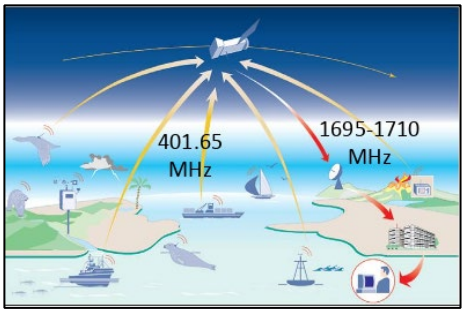
Mission Life: 5 years, 1 optional

Key NOAA Partners: CNES, EUMETSAT, ISRO

Life Cycle Cost: 64 million

Data: Wildlife and ecology studies, meteorological and oceanographic data, commercial fisheries, shipping.

Latency: Continuation of three dedicated polar orbits. System latency 3~ hours.



Impact:

Argos platforms are small (as light as a few grams) and require low power, and Doppler shift calculations can be used to independently locate them anywhere on Earth. The Argos-4 instrument will provide continuity of operations of the Argos system as aging satellites are retired. Argos-4 will provide global coverage with independent locations using Doppler shift. The measurements will aid wildlife and ecology studies, meteorological and oceanographic data, and commercial fisheries/shipping. The users of the data include Australia (125+), Canada (125+), France (100+), Japan (125+), and USA (625+). Of the USA Users: NOAA (40+), U.S. Fish/Wildlife (25+), U.S. Geological Survey (15+), Woods Hole Oceanographic Institution (15+). USA is the largest Argos user, and the Wood Holes Group, Inc. manages new application requests for Argos programs and applications. The website for new applications is: Argos

Trajectories (or tracking data) are made available via a specially designed website, where they are displayed on maps, in tables, or charts. They can also be received automatically by email, directly through mapping software, fax or CD-ROM. The Argos-4 A-DCS instrument, part of Argos, collects, processes, and disseminates environmental data from fixed and mobile platforms worldwide. Each month, this system provides key environmental data from more than 21,000 active Argos platforms globally.

Program Details:

NOAA is acquiring satellite hosting for the Argos-4 instrument in collaboration with CNES, which provides the instrument hardware. The mission will launch in 2022. CNES will provide the instrument and NOAA is acquiring satellite hosting services for the instrument. In addition, ground support and mission operations will be provided by the contractor.

Instrument*	Measurement	Agency/ Manufacturer
Argos-4 Instrument	N/A	French Space Agency CNES - Supplier Thales Alenia Space

Ground Segment Details:

The ground system is the pre-existing Argos L-Band Stations that communicate with two CNES subsidiary companies, Collecte Localisation Satellites (CLS) in Toulouse, France, and in Lanham, Maryland, to process the data and deliver it to the end user.

Revised

The satellite host contractor will provide host satellite command and control through their commercial ground system. French Space Agency (CNES) provided the instrument hardware and will provide support to spacecraft contractor in the event of an anomaly.

Key Milestone Date	**Name of Milestone**
[date]	[any key milestones the "Hill" would need to know about]
September 14, 2020	Flight Payload Delivery to Englewood, Colorado from France
September 15-17, 2020	Flight Payload Acceptance
March 2022	Launch Readiness Date