

Remote Sensing Payloads Aboard NOAA-N Prime Weather Satellite

ITT Corporation has celebrated the successful launch of the NOAA-N Prime weather satellite aboard the ULA Delta II 7320-10C from Vandenberg Air Force Base in California. The NOAA-N Prime carries three sounding instruments; among them is ITT's High Resolution Infrared Radiation Sounder (HIRS/4). The satellite also boasts two radiometers including ITT's Advanced Very High Resolution Radiometer (AVHRR/3).

The satellite is the last in the Television Infrared Observation Satellite (TIROS) series of NOAA weather satellites that have been serving the nation since 1960. Once fully operational, NOAA-N Prime will provide continued service to collect Earth's weather data regarding atmosphere, surface and cloud cover.

The HIRS/4 is used to obtain measurements determining ocean surface temperatures, total atmospheric ozone levels, cloud height and coverage, and surface radiance. This fourth generation HIRS is a 20-channel sounder that provides improvements over its predecessors with the inclusion of a fifth Internal Warm Target (IWT) temperature sensor and the addition of a tertiary telescope sensor with capabilities to calibrate atmospheric profile data and radiometric data at 40 different atmospheric levels.

The AVHRR/3 is recognised as the operational imager for global weather data. The AVHRR/3 is a six multi-spectral channel radiometer, up from a four-channel in its original form. The additional channels have contributed to improvements in performance and operational capabilities, as well as improved spectral performance such as low light energy detection, snow/ice discrimination and global vegetation index. ITT Space Systems Division developed this third generation AVHRR for NOAA-15, launched in May 1998. The system is also on board MetOP-1, Europe's first meteorological operational polar orbiting satellite.