Recent Updates to the
NPOESS Space Segment and Sensor Manifest

Hal Bloom

NOAA/NESDIS
Silver Spring, MD USA

The National Polar Orbiting Operational Satellite System (NPOESS) is the next generation US weather satellite system. NPOESS is a combination of the US Department of Defense Meteorological Satellite Program (DMSP) and the US Department of Commerce Polar Orbiting Environmental System (POES). NPOESS is a transition from 1970’s technology to state of the art technology. Along the way, we solved numerous technical challenges trying to make the new technology feasible for space remote sensing applications. The paper will detail the issues that the program faced and the lessons learned. This presentation will be focused on two distinct parts within the space segment; part I the major development sensors with an early look at test data, and part II; the NPOESS spacecraft. The sensors discussed in this paper are the Visible Infrared Imaging Radiometer Suite (VIIRS), Advanced Technology Microwave Sounder (ATMS), Cross Track Infrared Sounder (CrIS), and Conical Microwave Imager Sounder (CMIS) and Ozone Mapping and Profiler Suite (OMPS). VIIRS, follow-on to MODIS collects visible and infrared radiometric data of the Earth's atmosphere, ocean, and land surfaces. CrIS in conjunction with ATMS is follow-on to AIRS/AMSU provides global observations of temperature and moisture profiles at high temporal resolution. CMIS, follow-on to AMSR/SSMIS/WINDSAT collects global microwave radiometry and sounding data to produce microwave imagery and other meteorological and oceanographic data. OMPS follow-on to TOMS/SBUV collects total and profile ozone products. Finally, part two of the presentation will discuss aspects of the common NPOESS spacecraft and subsystems.
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