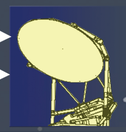
NPOESS SENSOR FAMILY TREE

NPOESS — Northrop Grumman • Raytheon • DoD • DOC • NASA

CMIS
Conical Scanning Microwave

- Electrically Scanning Microwave Radiometer (ESMR) — Nimbus-5, 12.10.72
- Multispectral Radiometer (MSR) — MOS-1, 2.19.87
- Scanning Microwave Spectrometer (SCAMS) — Nimbus-6, 6.12.75
- Advanced Microwave Scanning Radiometer (AMSR) — ADEOS-2, 12.14.02
- Scanning Multi-frequency Microwave Radiometer (SMMR) — Nimbus-7, 10.24.78
- Advanced Microwave Scanning Radiometer for EOS (AMSR-E) — Aqua, 5.4.02
- Special Sensor Microwave Imager (SSM/I) — DMSP F-8, 8.13.91
- WindSat — WindSat/Coriolis 1.6.03
- Special Sensor Microwave Imager/Sounder (SSMIS) — DMSP F-15, 12.12.99
- Special Sensor Microwave Temperature Sounder (SSM/T-1) — DMSP F-4, 6.6.79
- Special Sensor Microwave Temperature Sounder (SSM/T-2) — DMSP F-11, 11.28.91
- TRMM Microwave Imager (TMI) — TRMM, 11.27.97

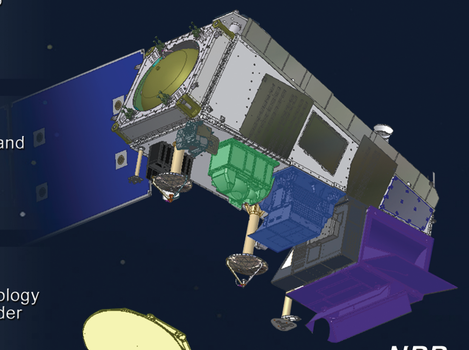


CMIS Conical Scanning Microwave

OMPS
Ozone Mapping and Profile Suite

- Backscatter Ultraviolet (BUV) — Nimbus-4, 4.8.70
- Solar Backscatter Ultraviolet Spectrometer (SBUV) — Nimbus-7, 10.24.78
- Total Ozone Mapping Spectrometer (TOMS) — Nimbus-7, 10.24.78
- Shuttle Solar Backscatter Ultraviolet Spectrometer (SSBUV) — STS-34, 10.18.89
- Rayleigh Scattering Attitude Sensor (RSAS) — STS-72, 1.11.96
- Shuttle Ozone Limb Scattering Experiment (SOLSE) — STS-87, 11.19.97
- Solar Backscatter Ultraviolet (SBUV/2) — NOAA-15, 5.13.98
- Limb Ozone Retrieval Experiment (LORE) — STS-87, 11.19.97

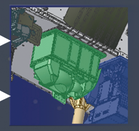
OMPS Ozone Mapping and Profile Suite



NPP

ATMS
Advanced Technology Microwave Sounder

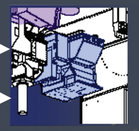
- Nimbus-5 Microwave Spectrometer (NIMS) — Nimbus-5, 12.10.72
- Microwave Sounding Unit (MSU) — TIROS-N, 10.13.78
- Advanced Microwave Sounder Unit-A (AMSU-A) — NOAA-15, 5.13.98
- Advanced Microwave Sounder Unit-B (AMSU-B) — NOAA-15, 5.13.98
- Microwave Humidity Sounder (MHS) — NOAA-18, 5.20.05



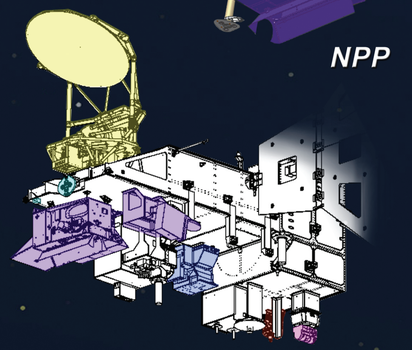
ATMS Advanced Technology Microwave Sounder

CRIS
Cross-track Infrared Sounder

- High Resolution Infrared Sounder (HIRS) — Nimbus-6, 6.12.75
- Very High Resolution Radiometer (VHRR) — NOAA-2, 10.15.72
- Atmospheric Infrared Radiation Sounder (AIRS) — Aqua, 5.4.02
- Infrared Atmospheric Sounding Interferometer Radiometer (IASI) — METOP-1, 2010



CRIS Cross-track Infrared Sounder



1330

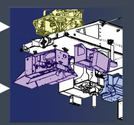
ERBS
Earth Radiation Budget Sensor

- Earth Radiation Budget Experiment (ERBE) — ERBS, 10.10.84
- Clouds and the Earth's Radiant Energy System (CERES) — TRMM, 11.27.97

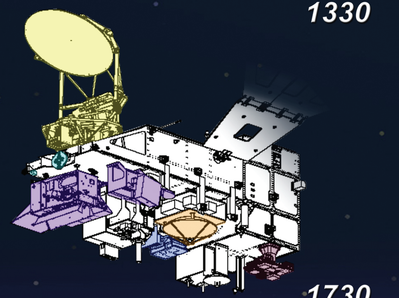
ERBS Earth Radiation Budget Sensor

VIIRS
Visible Infrared Imaging Radiometer Suite

- Scanning Radiometer (SR) — ITOS-1, 1.23.70
- Very High Resolution Radiometer (VHRR) — NOAA-2, 10.15.72
- Advanced Very High Resolution Radiometer I, II, III (AVHRR) — TIROS-N, 10.13.78; NOAA-7, 6.23.81; NOAA-15, 5.13.98
- Sensor Aerospace Vehicle Electronics Package (SAP) — DSMP P35-23, 2.11.70
- Operational Linescan System (OLS) — DMSP F-1, 9.11.76
- Coastal Zone Color Scanner (CZCS) — Nimbus-7, 10.24.78
- Landsat Thematic Mapper — Landsat-4, 7.16.82
- SeaWIFS — SeaStar, 8.1.97
- Moderate Resolution Imaging Spectroradiometer (MODIS) — Terra, 12.18.99



VIIRS Visible Infrared Imaging Radiometer Suite



1730

ALT
Radar Altimeter

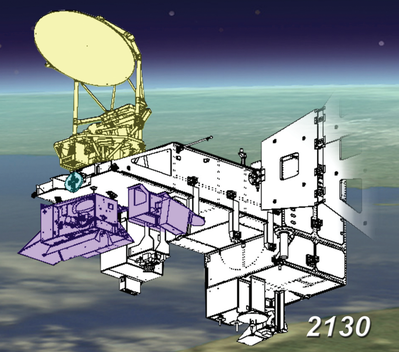
- S-193 — Skylab, 5.14.73
- GEOS-3 Radar Altimeter — GEOS-3, 4.9.75
- Seasat Radar Altimeter (SRA) — Seasat, 6.27.78
- Geosat Radar Altimeter (GRA) — Geosat, 3.12.85
- Radar Altimeter — TOPEX, 8.10.92
- GFO Radar Altimeter (GFO-RA) — Geosat, 2.10.98
- Poseidon-2 — Jason-1, 12.7.01
- Poseidon-3 — OSTM, 6.30.05

ALT Radar Altimeter

TSIS
Total Solar Irradiance Sensor

- Active Cavity Radiometer Irradiance Monitor I, II, III (ACRIM) — Solar Maximum, 2.14.80; UARS, 9.12.91; ACRIMSat, 12.21.99
- Solar/Stellar Irradiance Comparison Experiment (SOLSTICE) — UARS, 9.12.91
- ERBE Nonscanner — ERBS, 10.10.84
- Total Irradiance Monitor (TIM) — SORCE, 1.25.03
- Spectra Irradiance Monitor (SIM) — SORCE, 1.25.03

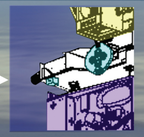
TSIS Total Solar Irradiance Sensor



2130

SESS
Space Environment Sensor Suite

- Special Sensor/D (SSD) — DMSP F-4, 6.6.79
- Special Sensor Ultraviolet Spectographic Imager (SSUSI) — DMSP F-16, 10.18.03
- Global Ultraviolet Imager (GUVI) — TIMED, 12.7.01
- Cosmic Ray Nuclear Composition (CRNC) Telescope — IMP-8, 10.26.73
- SEM-2 — NOAA-15, 5.13.98
- Special Sensor for Ions and Electrons (SSI/E) — DMSP F-2, 6.5.77
- Special Sensor-Ions, Electrons, & Scintillation I, II, III (SSIES) — DMSP F-8, 8.13.91; DMSP F-11, 11.28.91; DMSP F-16, 10.18.03
- SSJ — DMSP Block 5B
- SSJ/1 — DMSP Block 5B
- SSJ/2 — DMSP Block 5B
- SSJ/3 — DMSP F-1, 9.11.76
- SSJ/4 — DMSP F-6, 12.20.82
- SSJ/5 — DMSP F-15, 12.12.99



SESS Space Enviromnment Suite Sensor

Spacecraft and dates represent first flight of each sensor.

1960's: ITOS-1, DMSP P35-23, Nimbus-4, DMSP 5B F-1, NOAA-2, Nimbus-5

1970's: Skylab, IMP-8, GOES-3, Nimbus-6, DMSP F-1, DMSP F-2, Seasat, TIROS-N, Nimbus-7, DMSP F-4

1980's: Solar Maximum, NOAA-7, Landsat-4, DMSP F-6, ERBS, Geosat, MOS-1, STS-34 (Atlantis), DMSP F-8, UARS, DMSP F-11

1990's: TOPEX-Poseidon, STS-72 (Endeavour), SeaStar, STS-87 (Columbia), TRMM, Geosat Follow-on, NOAA-15, DMSP F-15, Terra, ACRIMSat

2000's: Jason-1, TIMED, Aqua, ADEOS-2, WindSat/Coriolis, SORCE, DMSP F-16, NOAA-18, OSTM

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