UPDATES TO THE CEOS/WMO DATABASE
In response to CGMS Permanent Action 02

NOAA-WP-24 provides an up-to-date-record of the US satellite missions, instruments and frequencies. The information presented in the document is accurate for the period ending October 27, 2006.
UPDATES TO THE CEOS/WMO DATABASE

1. Introduction

The US continues to provide updated information for the CEOS Database. The WMO requested revisions to the database manual tables, describing the geophysical parameters, in order to include them with the next version of the database in October 2006.

2. Update to the CEOS/WMO Database

### Agency and Its Missions

<table>
<thead>
<tr>
<th>Satellite</th>
<th>Launch Date</th>
<th>Status</th>
</tr>
</thead>
<tbody>
<tr>
<td>GOES 10</td>
<td>April 25, 1997</td>
<td></td>
</tr>
<tr>
<td>GOES-11</td>
<td>May 2006</td>
<td></td>
</tr>
<tr>
<td>GOES-M</td>
<td>July 23, 2002</td>
<td></td>
</tr>
<tr>
<td>GOES-N</td>
<td>May 2006</td>
<td></td>
</tr>
<tr>
<td>GOES-O</td>
<td>April 2008</td>
<td></td>
</tr>
<tr>
<td>GOES-P</td>
<td>February 2009</td>
<td></td>
</tr>
<tr>
<td>GOES-R</td>
<td>April 2012 (? new series)</td>
<td></td>
</tr>
</tbody>
</table>

NOAA-L is now NOAA-16. Status: currently being flown. Launch date: September 21, 2000
NOAA-M is now NOAA-17. Status: currently being flown. Launch date: June 24, 2002
NOAA-N is now NOAA-18. Status: currently being flown. Launch date: May 25, 2005
NOAA-N' Launch date: March 2009

DMSP S16 is now DMSP F16. Status: Currently being flown. Launch date: October 18, 2003
DMSP S17 (will be DMSP F17 after launch). Launch date: November 2006
DMSP S18 (will be DMSP F18 after launch). Launch date: As needed
DMSP S19 (will be DMSP F19 after launch). Launch date: As needed
DMSP S20 (will be F20 after launch). Launch date: As needed

National Polar-orbiting Operational Environmental Satellite System (NPOESS)
NPOESS Preparatory Project (NPP)

<table>
<thead>
<tr>
<th>Satellite</th>
<th>Launch Date</th>
<th>Equatorial Crossing Time</th>
</tr>
</thead>
<tbody>
<tr>
<td>NPP</td>
<td>September 9, 2009</td>
<td>1330 (Ascending)</td>
</tr>
<tr>
<td>NPOESS-C1</td>
<td>January 1, 2013</td>
<td>1330 (Ascending)</td>
</tr>
<tr>
<td>NPOESS-C2</td>
<td>January 1, 2016</td>
<td>1730 (Ascending)</td>
</tr>
<tr>
<td>NPOESS-C3</td>
<td>January 1, 2020</td>
<td>1330 (Ascending)</td>
</tr>
<tr>
<td>NPOESS-C4</td>
<td>January 1, 2022</td>
<td>1730 (Ascending)</td>
</tr>
</tbody>
</table>
Mission and Associated Instruments

NPOESS instrument payloads by orbit are listed in the following table:

**NPP/NPOESS EQUATORIAL ASCENDING NODAL CROSSING TIMES**

<table>
<thead>
<tr>
<th>NPP 1330</th>
<th>C1 1330</th>
<th>C2 1730</th>
<th>C3 1330</th>
<th>C4 1730</th>
</tr>
</thead>
<tbody>
<tr>
<td>VIIRS</td>
<td>VIIRS</td>
<td>VIIRS</td>
<td>VIIRS</td>
<td>VIIRS</td>
</tr>
<tr>
<td>CrIS</td>
<td>CrIS</td>
<td>CrIS</td>
<td>CrIS</td>
<td>CrIS</td>
</tr>
<tr>
<td>ATMS</td>
<td>ATMS</td>
<td>OMPS-N</td>
<td>OMPS-N</td>
<td>OMPS-N</td>
</tr>
<tr>
<td>OMPS</td>
<td>OMPS-N</td>
<td>MIS</td>
<td>MIS</td>
<td>MIS</td>
</tr>
<tr>
<td>SEM</td>
<td>SEM</td>
<td>SARSAT</td>
<td>SARSAT</td>
<td>SARSAT</td>
</tr>
<tr>
<td>CERES</td>
<td>CERES</td>
<td>ADCS</td>
<td>ADCS</td>
<td>ADCS</td>
</tr>
<tr>
<td>SARSAT</td>
<td>SARSAT</td>
<td>SARSAT</td>
<td>SARSAT</td>
<td>SARSAT</td>
</tr>
<tr>
<td>ADCS</td>
<td>ADCS</td>
<td>ADCS</td>
<td>ADCS</td>
<td>ADCS</td>
</tr>
</tbody>
</table>

NPOESS Instrument acronym list:

- **VIIRS** - Visible/Infrared Imager Radiometer Suite
- **CrIS** – Cross-track Infrared Sounder
- **ATMS** – Advanced Technology Microwave Sounder
- **OMPS** – Ozone Mapping and Profiler Suite
- **MIS** – Microwave Imager/Sounder
- **SEM** - Space Environment Monitor
- **CERES** – Cloud and Earth’s Radiant Energy Sensor
- **SARSAT** – Search and Rescue Satellite Aided Tracking
- **ADCS** – Advanced Data Collection System
NPOESS Instrument Data

**VIIRS**

Environmental parameters allocated to VIIRS:

Visible and infrared imagery
Sea surface temperature
Soil moisture
Aerosol optical thickness
Aerosol particle size
Albedo (surface)
Cloud base height
Cloud cover/layers
Cloud effective particle size
Cloud optical thickness
Cloud top height
Cloud top pressure
Cloud top temperature
Ice surface temperature
Land surface temperature
Net heat flux
Ocean color/chlorophyll
Sea ice characterization (ice edge location/ice concentration)
Snow cover/depth
Surface type
Suspended matter
Vegetation index

**CrIS/ATMS**

Environmental parameters allocated to CrIS/ATMS:

Atmospheric vertical temperature profile
Atmospheric vertical moisture profile
Atmospheric vertical pressure profile/surface

**OMPS-N**

Environmental parameters allocated to OMPS-N:

Ozone profile higher stratosphere and mesosphere
Ozone profile lower stratosphere (LS)
Ozone profile total column

**MIS**

[Note: the design of the MIS and the final products allocated to MIS are To Be]
Determined as of October 2008]

Environmental parameters allocated to MIS (note: MIS is in the Concept Development Phase):

- Atmospheric vertical temperature profile
- Atmospheric vertical moisture profile
- Atmospheric vertical pressure profile
- All weather (microwave) imagery
- Sea surface temperature
- Sea surface winds (speed and direction – horizontal)
- Soil moisture
- Cloud base height
- Cloud liquid water
- Cloud ice water path
- Cloud imagery
- Fresh water ice
- Ice surface temperature
- Land surface temperature
- Precipitable water
- Precipitation type/rate
- Sea ice characterization (ice edge location/ice concentration)
- Snow cover/depth
- Surface type
- Sea surface wind stress
- Total water content

**SEM**

The SEM instrument suite produces parameters that are not listed within the CEOS database. These are as follows:

Environmental parameters allocated to SEM:

- Auroral boundary
- Auroral energy deposition
- Energetic ions
- Medium energy charged particles
- Supra-thermal-auroral particles

**CERES**

Environmental parameters allocated to CERES:

- Downward longwave radiation
- Downward shortwave radiation
- Net solar radiation (TOA)
- Outgoing longwave radiation (TOA)
- Net heat flux