



CGMS-34, NOAA-WP-24
Prepared by NOAA
Agenda Item: G.2
Discussed in Plenary

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

GOES 10	Launch date: 4/25/1997	
GOES-11	Status: currently being flown	Launch date: 5/3/2000
GOES-M	Status: currently being flown (SXI)	Launch date: 7/23/2002
GOES-N	Launch date: May 2006	
GOES-O	Launch date: April 2008	
GOES-P	Launch date: October 2009	
GOES-R	Launch date: April 2012 ?	

NOAA-L is now NOAA-16. Status: currently being flown Launch date: 9/21/2000
 NOAA-M is now NOAA-17. Status: currently being flown Launch date: 6/24/2002
 NOAA-N is now NOAA-18. Status: currently being flown Launch date: 5/25/2005
 NOAA-N' Launch date: March 2009

DMSP S16 is now DMSP F16. Status: Currently being flown Launch date: 10/18/2003
 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)

NPP	Launch date: 9/2009	1330 Equatorial Crossing Time (Ascending)
NPOESS-C1	Launch date: 1/2013	1330 Equatorial Crossing Time (Ascending)
NPOESS-C2	Launch date: 1/2016	1730 Equatorial Crossing Time (Ascending)
NPOESS-C3	Launch date: 1/2020	1330 Equatorial Crossing Time (Ascending)
NPOESS-C4	Launch date: 1/2022	1730 Equatorial Crossing Time (Ascending)



Mission and Associated Instruments

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

NPP/NPOESS EQUATORIAL ASCENDING NODAL CROSSING TIMES

<i>NPP 1330</i>	<i>C1 1330</i>	<i>C2 1730</i>	<i>C3 1330</i>	<i>C4 1730</i>
<i>VIIRS</i>	<i>VIIRS</i>	<i>VIIRS</i>	<i>VIIRS</i>	<i>VIIRS</i>
<i>CrIS</i>	<i>CrIS</i>		<i>CrIS</i>	
<i>ATMS</i>	<i>ATMS</i>		<i>ATMS</i>	
<i>OMPS-N</i>	<i>OMPS-N</i>		<i>OMPS-N</i>	
		<i>MIS</i>	<i>MIS</i>	<i>MIS</i>
	<i>SEM</i>		<i>SEM</i>	
	<i>CERES</i>			
	<i>SARSAT</i>	<i>SARSAT</i>	<i>SARSAT</i>	<i>SARSAT</i>
	<i>ADCS</i>	<i>ADCS</i>	<i>ADCS</i>	<i>ADCS</i>

NPOESS Instrument acronym list:

- VIIRS** - Visible/Infrared Imager Radiometer Suite
- CrIS** – Cross-track Infrared Sounder
- ATMS** – Advanced Technology Microwave Sounder
- OMPS-N** – Ozone Mapping and Profiler Suite – Nadir
(incl. Total Column [TOMS like] & Profiler [SBUV like] instruments)
- 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
- Fresh water ice
- 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
- Active fires
- 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 2006]

Environmental parameters allocated to MIS:

- 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