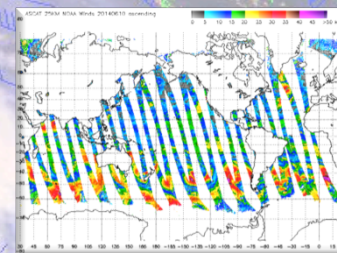
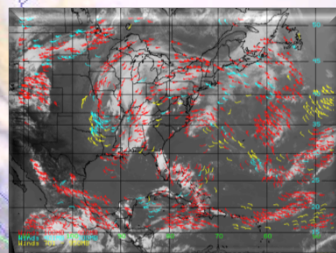
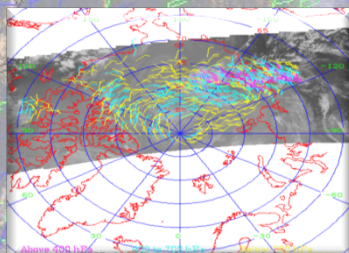




Operational Wind Products at NOAA/NESDIS



Current Status & Updates

Hongming Qi¹, Jaime Daniels²

William Pennoyer¹, Andrew Bailey², Jeffrey Augenbaum¹

1: NOAA/NESDIS/OSPO/Satellite Products & Services Division (SPSD)

2: NOAA/NESDIS/STAR/Satellite Meteorology & Climatology Division (SMCD)

12th International Winds Workshop, Copenhagen, Denmark
June 16, 2014



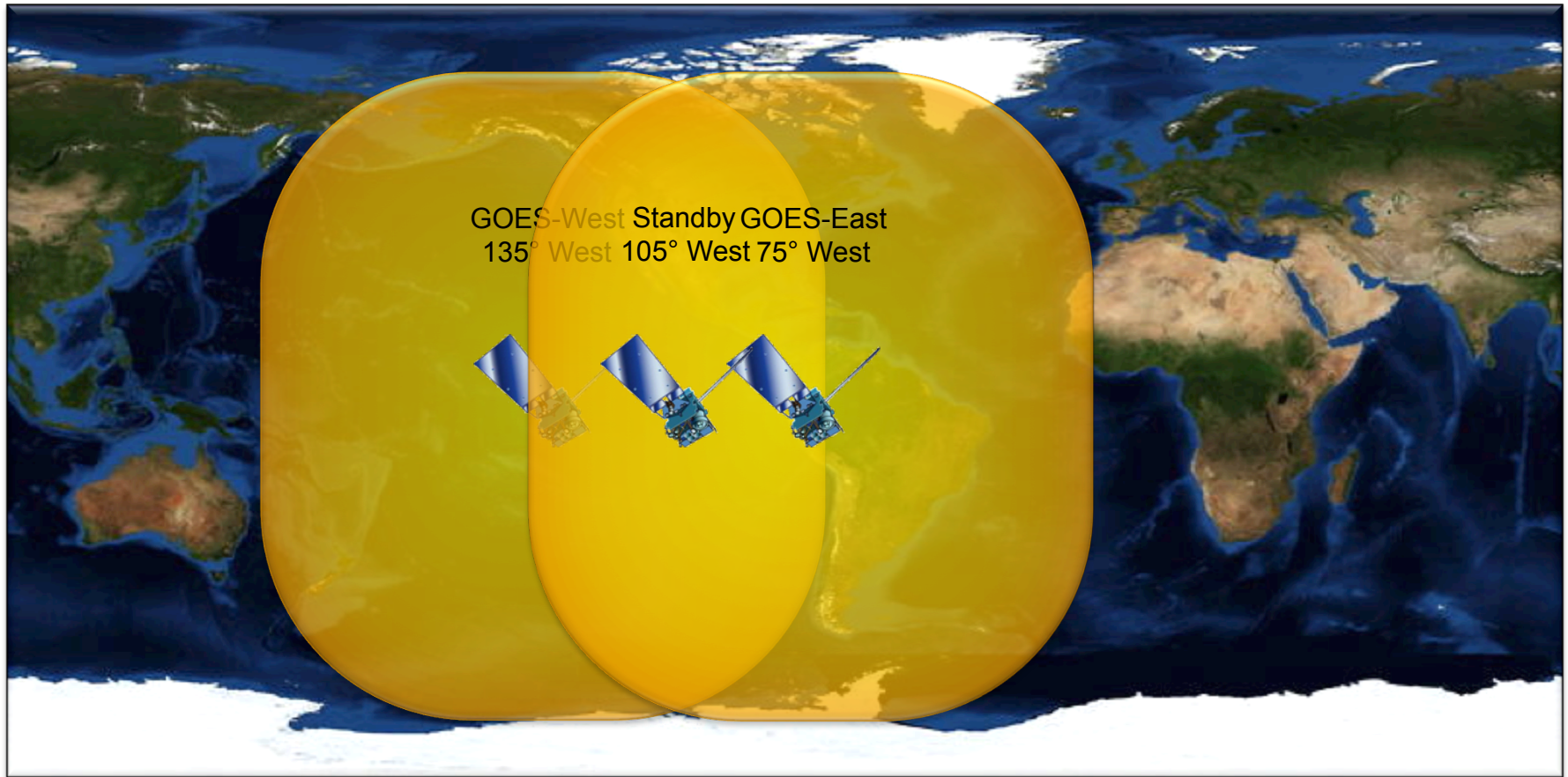
TOPIC

- Status of NESDIS' GOES and POES Satellites
- Operational AMV System and Products
 - AMV System Architectures
 - AMV Products, Monitoring and Distribution
- Operational ASCAT processes and products
- Coming Update on Systems and Products

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Nominal GOES Constellation



- Primary source of data for short term forecasting, especially of severe weather such as tropical storms
- Continuity of Operations since 1974
- GOES 13/14/15 improvements over GOES 10/11/12
 - Spring and fall eclipse outages are avoided by larger onboard batteries
 - Improved navigation and radiometrics

Status of GOES Satellites

Spacecraft	Launched	Status (Effective Date)
GOES-8	04/13/1994	<u>Decommissioned</u> (May 5, 2004)
GOES-9	05/23/1995	<u>Decommissioned</u> (Jun 15, 2007)
GOES-10	04/25/1997	<u>Decommissioned</u> (Dec 2, 2009)
GOES-11	05/03/2000	<u>Decommissioned</u> (Dec 16, 2011)
GOES-12	07/23/2001	<u>Decommissioned</u> (Aug 16, 2013)
GOES-13	05/24/2006	<u>Operational @ 75W</u> (Oct 18, 2012)
GOES-14	06/27/2009	<u>On Orbit Storage @ 105W</u> (Feb 13, 2013)
GOES-15	03/04/2010	<u>Operational @ 135W</u> (December 14, 2011)

Spacecraft	Launch Date
GOES-R	2016

POES Constellation

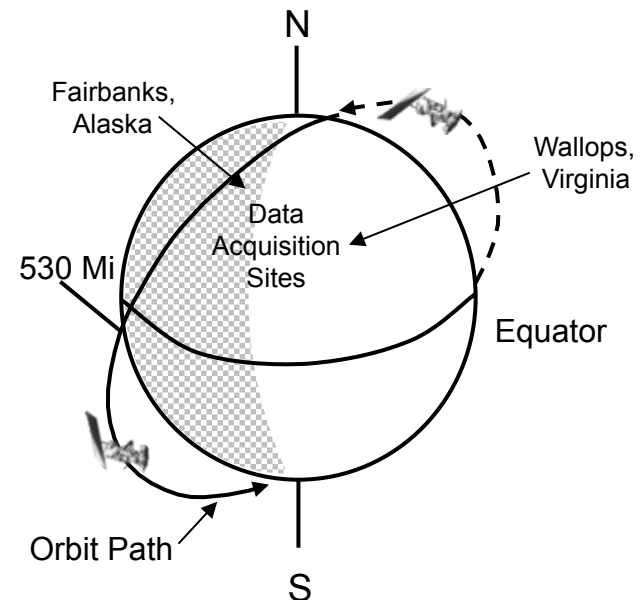
AM Orbit (Metop-B)



PM Orbit (S-NPP)



- Two polar operational satellites; one in morning and one in afternoon orbit. Each orbit is 102 minutes
- Since May 2007, NOAA using EUMETSAT satellite operationally for mid-morning orbit through NOAA/EUMETSAT partnership
- Each satellite provides world-wide coverage every 12 hours (6-hour global sampling for the pair)
- Directly broadcasts data to global users



- Continuity of operations since early 1960s



Suomi NPP - Mission Status

- Launched (**October, 2011**)
- First visible/reflective images (**November, 2011**)
- First infrared/thermal images (**January, 2012**)
- NPP renamed Suomi NPP (**January, 2012**)
- PM Primary (**May, 2014**)



Status of POES Satellites

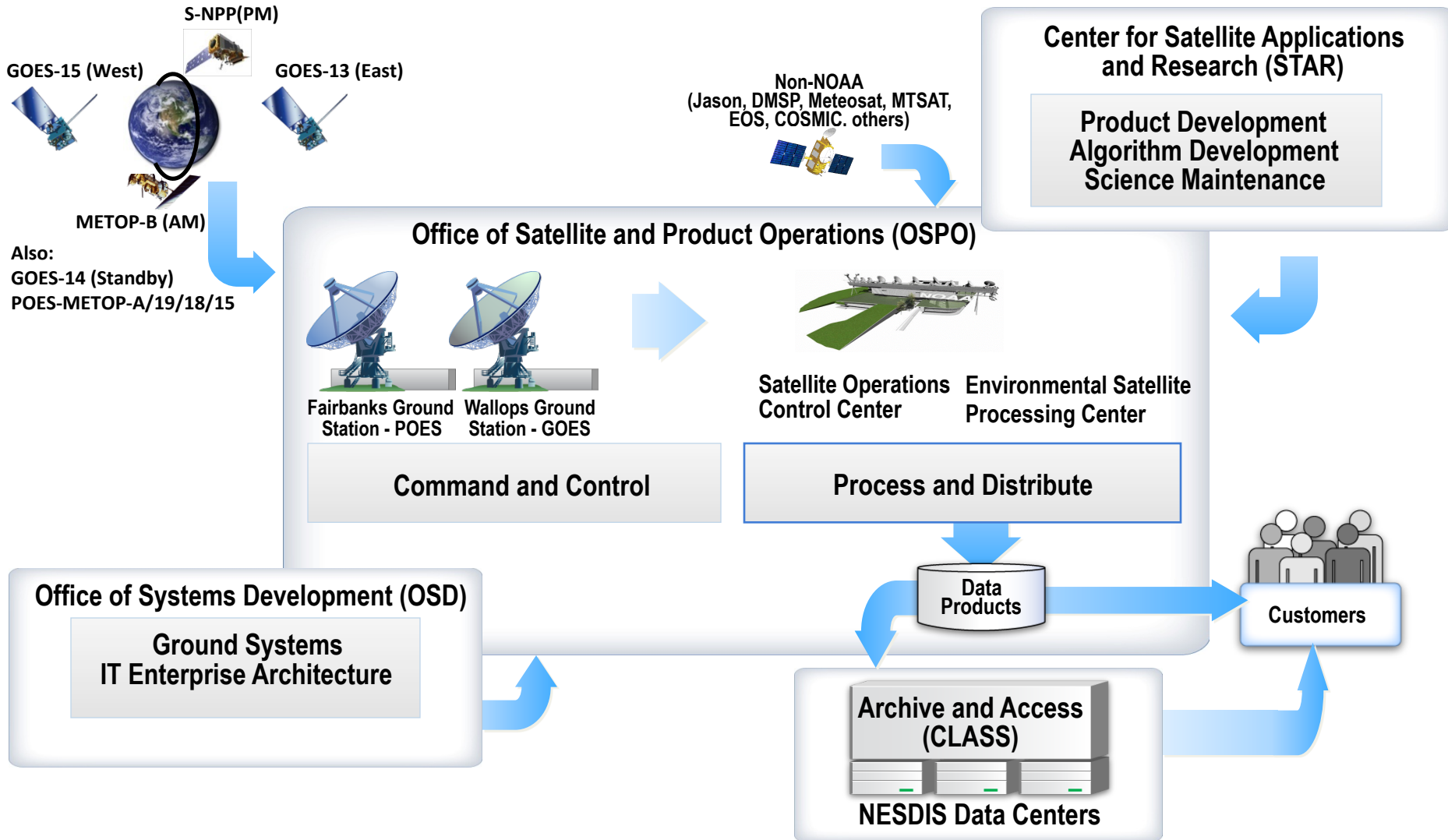
Spacecraft	Launched	Status (Effective Date)
NOAA-11	09/24/1988	<u>Decommissioned</u> (Jun 16, 2004)
NOAA-12	05/14/1991	<u>Decommissioned</u> (Aug 10, 2007)
NOAA-14	12/30/1994	<u>Decommissioned</u> (May 23, 2007)
NOAA-15	05/13/1998	<u>AM Secondary</u> (Dec 15, 1998)
NOAA-16	09/21/2000	<u>Decommissioned</u> (Jun 6, 2014)
NOAA-17	06/24/2002	<u>Decommissioned</u> (Apr 10, 2013)
NOAA-18	05/20/2005	<u>PM Secondary</u> (Aug 30, 2005)
METOP-A*	10/19/2006	<u>AM Backup</u> (May 21, 2007)
NOAA-19	02/06/2009	<u>PM Prime Services Mission</u> (Jun 2, 2009)
SNPP	10/28/2011	<u>PM Primary</u> (May 1, 2014)
METOP-B*	09/17/2012	<u>AM Primary</u> (Apr 24, 2013)

Spacecraft	Launch Date
JPSS-1	2017
METOP-C*	2017

<http://www.oso.noaa.gov/poesstatus/>

* Owned and operated by EUMETSAT

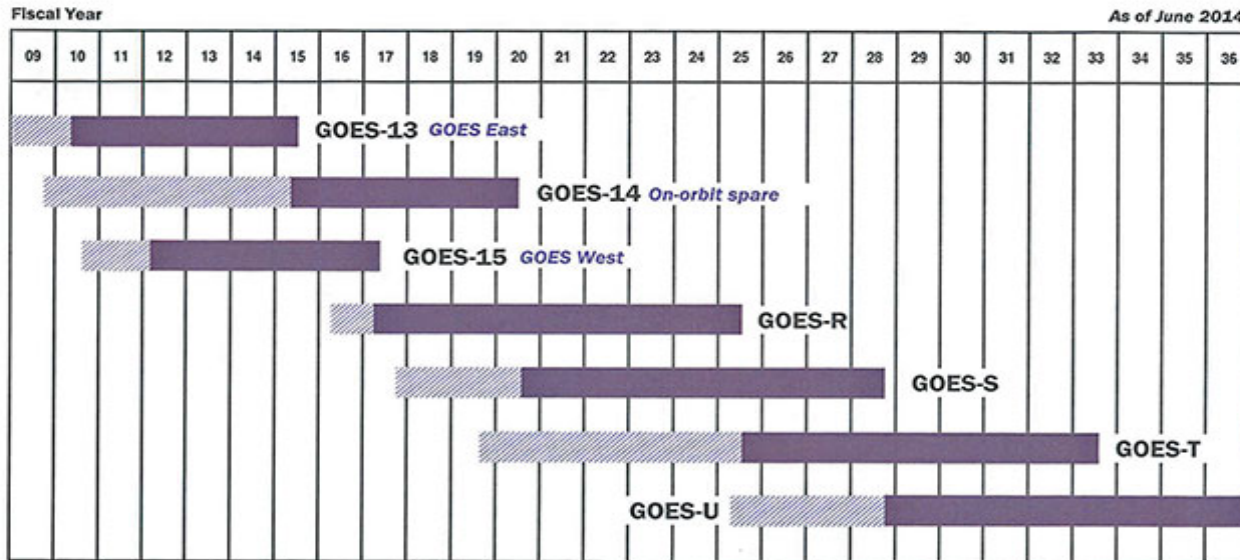
Satellite Information Flow



GOES Flyout Schedule



Continuity of GOES Mission



Approved: Maq E. Kazi JUN 06 2014
 Assistant Administrator for Satellite and Information Services

GOES: Geostationary Operational Environmental Satellite

- On-orbit storage
- Operational

http://www.nesdis.noaa.gov/flyout_schedules.html

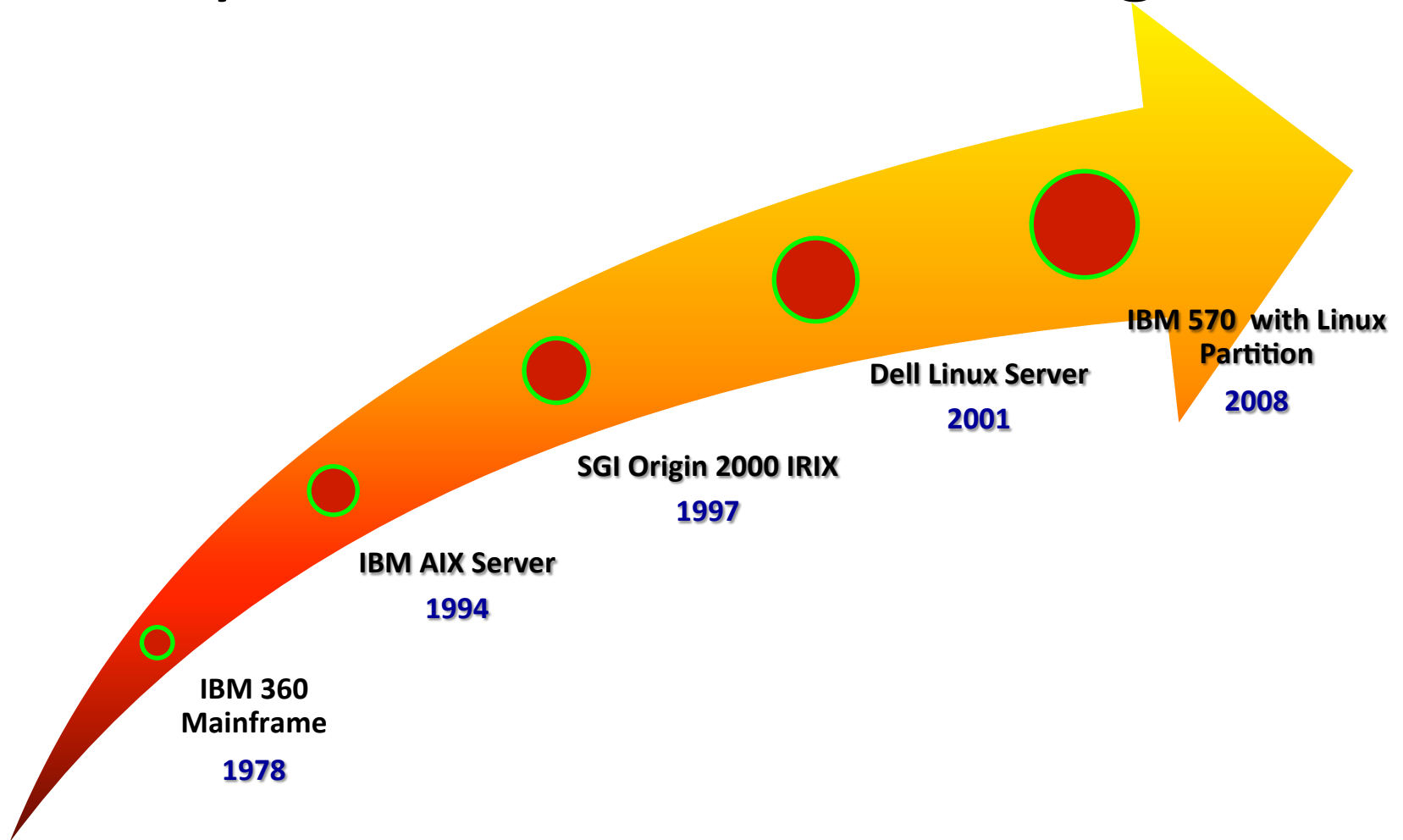
TOPIC

- Status of NESDIS' GOES and POES Satellites
- Operational AMV System and Products
 - AMV System Architectures
 - AMV Products, Monitoring and Distribution
- Operational ASCAT processes and products
- Coming Update on Systems and Products

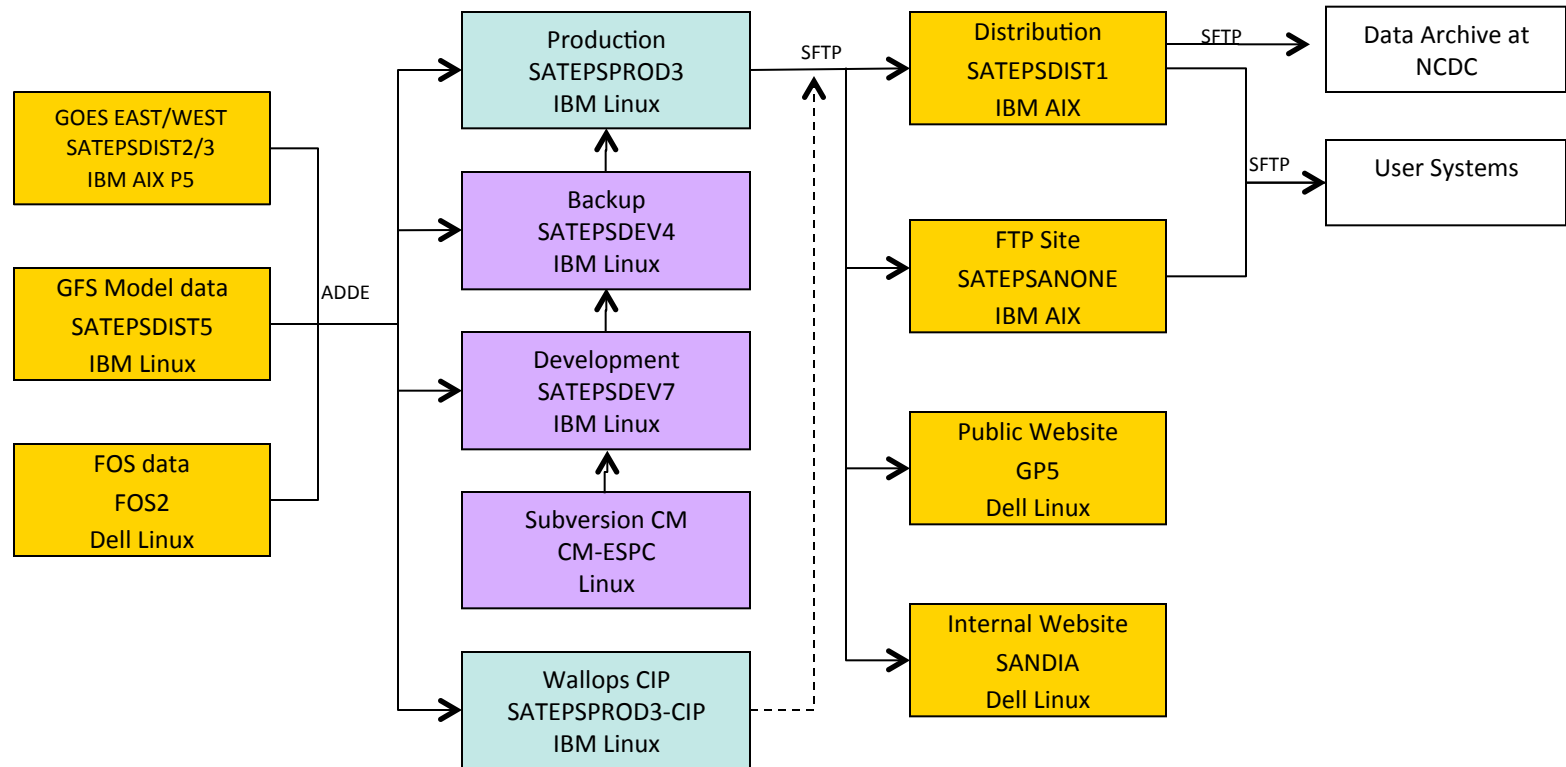
Operational AMV Systems

- GOES and POES AMV System
 - Generate GOES, MODIS, AVHRR and MTSAT-2 AMV products
 - Based on McIDAS
- New NDE system
 - An Enterprise System developed for S-NPP
 - Generate S-NPP VIIRS Polar Winds

Operational GOES/POES AMV System: System Architecture Change



GOES Winds System Architecture and Data Flow



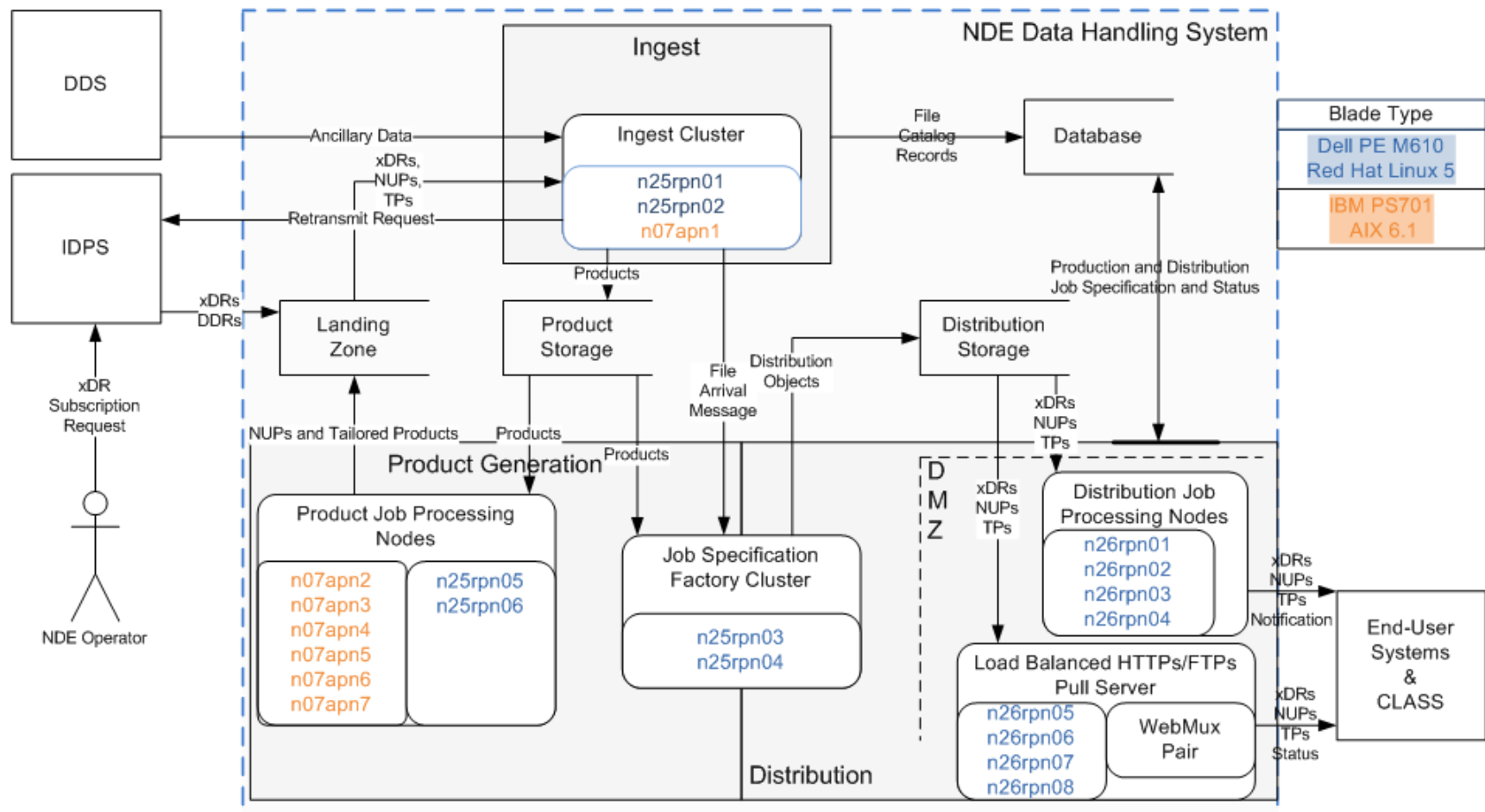
SATEPS Security at ESPC/NSOF

Production Zone
Development Zone
Distribution Zone (DMZ)
External User Zone

New OSPO NDE System

- S-NPP Data Exploitation (NDE) is an enterprise system to generate and distribute the NOAA Unique Products from S-NPP
- NDE Data Handling System (DHS) consists of Ingest, Product Generation, Product Distribution and Monitoring subsystems
- Numerous servers (IBM and Linux) and SAN
- VIIRS Polar Winds is one product from NDE

OSPO NDE System Diagram



Blade Type
Dell PE M610 Red Hat Linux 5
IBM PS701 AIX 6.1

TOPIC

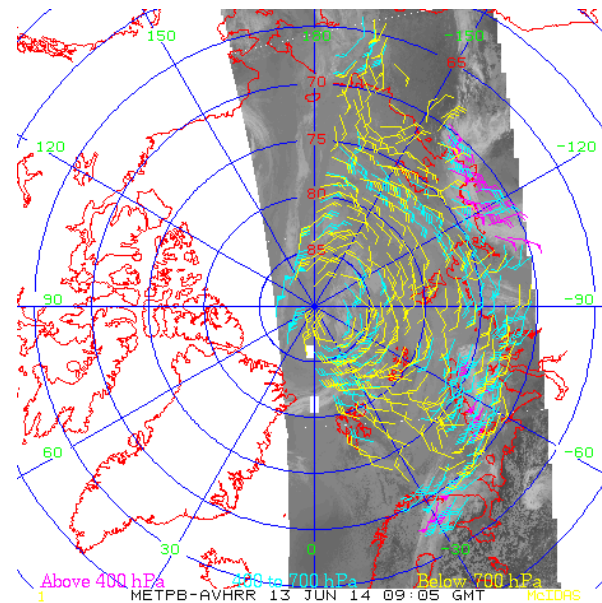
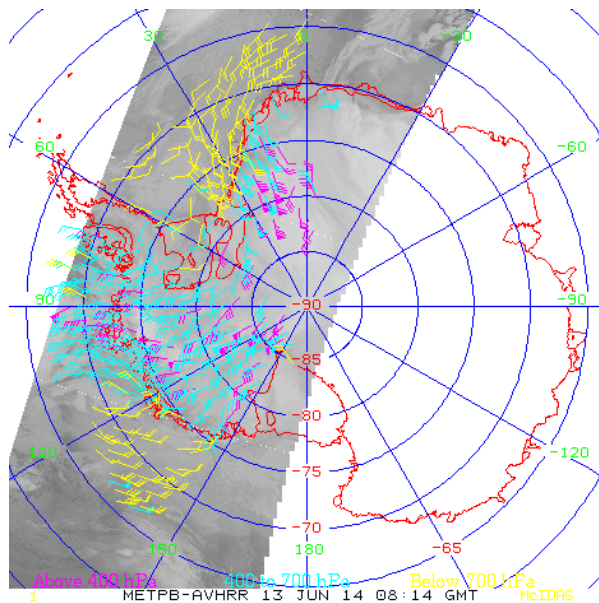
- Status of NESDIS' GOES and POES Satellites
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Update on Operational AMV Products (1/4)

- Discontinued AMV products in recent years
 - NOAA-17 AVHRR Polar Winds in September 2010 (AVHRR Scan Motor Issue)
 - TERRA MODIS Water Vapor Winds in July 2013 (Bad Water Vapor Channel)
 - NOAA-16 AVHRR Polar Winds in June 2014 (Decommissioned Satellite)

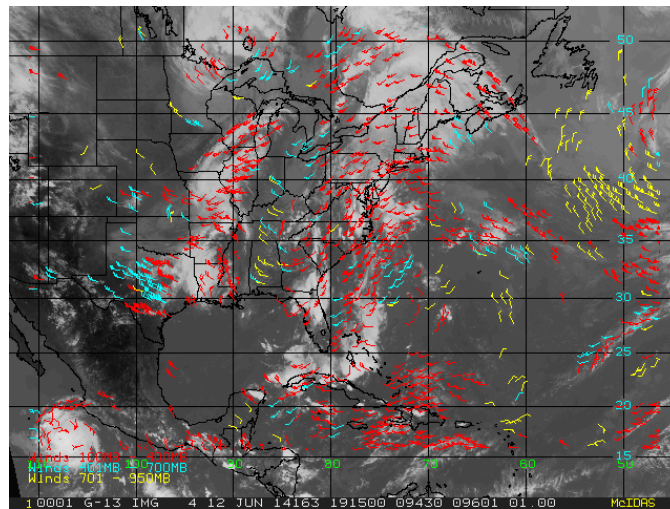
Update on Operational AMV Products (2/4)

- New/updated AMV products in operation
 - Metop-B AVHRR Winds since **April, 2013**



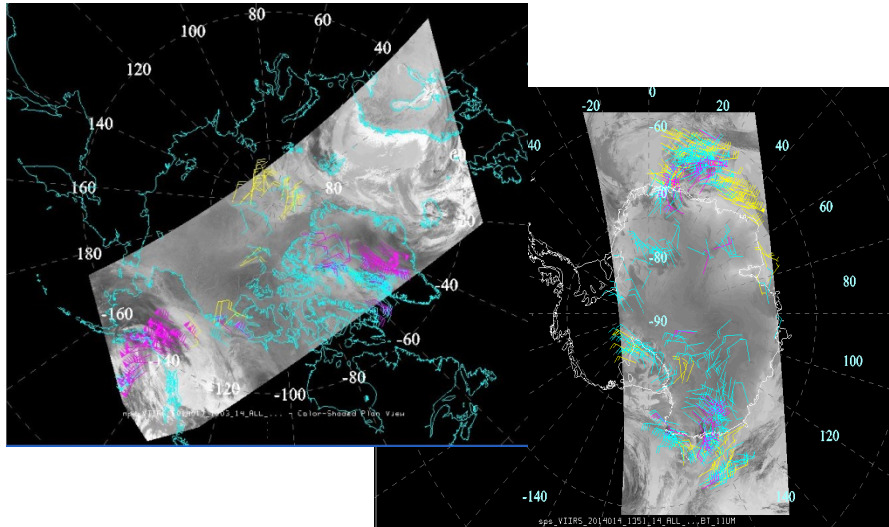
Update on Operational AMV Products (3/4)

- New/updated AMV products in operation
 - GOES Hourly Winds in ***May, 2014***
 - Increase the frequency from 3-hourly to hourly
 - The Quality Flag EE is available now



Update on Operational AMV Products (4/4)

- New/updated AMV products in operation
 - S-NPP VIIRS Polar Winds in **May, 2014**
 - First AMV product using GOES-R AMV Algorithm
 - Available Formats: NetCDF4 and BUFR
 - Running and distributing via new OSPO NDE system



Operational AMV Products (1/4)

AMV Products	Frequency (hours)	Image Sectors	Image Interval (min)	WMO Header
GOES				
LWIR (10.68um) Cloud-drift	1	CONUS/PACUS	15	JACX11 (GOES-E)
	1	NHEM/SHEM	30	JCCX11 (GOES-W)
SWIR (3.9um) Cloud-drift	1(Nighttime)	CONUS/PACUS	15	JQCX11 (GOES-E)
	1 (Nighttime)	NHEM/SHEM	30	JRCX11 (GOES-W)
Water Vapor (6.55um)	1	NHEM/SHEM	30	JECX11 (GOES-E) JGCX11 (GOES-W)
Visible (0.625um) Cloud-drift	1 (Daytime)	CONUS/PACUS	15	JHCX11 (GOES-E)
	1 (Daytime)	NHEM/SHEM	30	JJCX11 (GOES-W)

Operational AMV Products (2/4)

AMV Products	Frequency (hours)	Image Sectors	Image Interval (min)	WMO Header
GOES SOUNDER				
Sounder WV (7.4um)	1	Tropical	60	JKCX11 (GOES-E) JMCX11 (GOES-W)
Sounder WV (7.0um)	1	Tropical	60	JNCX11 (GOES-E) JPCX11 (GOES-W)
AQUA/TERRA MODIS				
LWIR (11um) Cloud-drift	2	NHEM/SHEM (poleward 65°)	100	JBCX11 (TERRA) JICX11 (AQUA)
Water Vapor (6.7um)	2	NHEM/SHEM (poleward 65°)	100	JLCX11 (AQUA)

Operational AMV Products (3/4)

AMV Products	Frequency (hours)	Image Sectors	Image Interval (min)
MTSAT-2			
LWIR Cloud-drift	3	NHEM	30
	6	SHEM	30
SWIR Cloud-drift	3	NHEM	30
	6	SHEM	30
Water Vapor	3	NHEM	30
	6	SHEM	30
Visible Cloud-drift	3 (Daytime)	NHEM	30
	6 (Daytime)	SHEM	30

Operational AMV Products (4/4)

AMV Products	Frequency (hours)	Image Sectors	Image Interval (min)	WMO Header
AVHRR				
LWIR Cloud-drift	2	NHEM/SHEM (poleward 65°)	100	JCVX98 (Metop-B) JCVX95(N19) JCVX97(Metop-A) JCVX94(N18) JCVX91(N15)
VIIRS				
LWIR (10.76um) Cloud-drift	2	NHEM/SHEM (poleward 65°)	100	N/A

Operational GOES AMV Monitoring

Monitor of GOES-E HD Winds Operations

Thursday, 06/12/2014 17:27:46 UTC		Prev Day <<	Wednesday, 06/11/2014																				>> Next Day		
		00Z	01Z	02Z	03Z	04Z	05Z	06Z	07Z	08Z	09Z	10Z	11Z	12Z	13Z	14Z	15Z	16Z	17Z	18Z	19Z	20Z	21Z	22Z	23Z
Northern Hemisphere (NH)	CD	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	SW	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	VZ	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	WV	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
Southern Hemisphere (SH)	CD	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	SW	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	VZ	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	WV	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
CONUS	CD	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	SW	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
	VZ	Wnd Buf	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
Sounder Water Vapor	10C	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	10T	Wnd Buf	Wnd Buf	N/A	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	
	11C	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	Wnd Buf	
	11T	Wnd Buf	Wnd Buf	N/A	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	N/A	Wnd Buf	Wnd Buf	Wnd Buf	N/A	N/A	

Operational POES AMV Monitoring

AVHRR NOAA 15/16/18/19/METOP-A and METOP-B HD Winds Monitor

Thursday, 06/12/2014 17:28:55 UTC

METOP-A High Density Winds				
N.	06/12/14 13:35	06/12/14 11:53	06/12/14 10:12	06/12/14 08:31
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 06:49	06/12/14 05:08	06/12/14 03:27	06/12/14 01:45
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/12/14 00:04	06/11/14 22:22	06/11/14 20:41	06/11/14 19:00
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 17:18	06/11/14 15:37	06/11/14 13:56	
	Wind BUFR	Wind BUFR	Wind BUFR	
S.	06/12/14 12:44	06/12/14 11:03	06/12/14 09:21	06/12/14 07:40
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 05:59	06/12/14 04:17	06/12/14 02:36	06/12/14 00:54
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/11/14 23:13	06/11/14 21:32	06/11/14 19:50	06/11/14 18:09
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 16:28	06/11/14 14:46	06/11/14 13:05	
	Wind BUFR	Wind BUFR	Wind BUFR	

METOP-B High Density Winds				
N.	06/12/14 14:30	06/12/14 12:48	06/12/14 11:07	06/12/14 09:26
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 07:44	06/12/14 06:03	06/12/14 04:21	06/12/14 02:40
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/12/14 00:59	06/11/14 23:17	06/11/14 21:36	06/11/14 19:55
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 18:13	06/11/14 16:32	06/11/14 14:51	
	Wind BUFR	Wind BUFR	Wind BUFR	
S.	06/12/14 13:39	06/12/14 11:58	06/12/14 10:16	06/12/14 08:35
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 06:53	06/12/14 05:12	06/12/14 03:31	06/12/14 01:49
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/12/14 00:08	06/11/14 22:27	06/11/14 20:45	06/11/14 19:04
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 17:23	06/11/14 15:41	06/11/14 14:00	
	Wind BUFR	Wind BUFR	Wind BUFR	

NOAA-18 High Density Winds				
N.	06/12/14 10:19	06/12/14 08:37	06/12/14 06:55	06/12/14 05:13
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 03:31	06/11/14 22:25	06/11/14 20:43	06/11/14 19:01
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/11/14 17:19	06/11/14 15:37	06/11/14 13:54	06/11/14 12:12
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 10:30			
	Wind BUFR			
S.	06/12/14 09:28	06/12/14 07:46	06/12/14 06:04	06/12/14 04:22
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR

NOAA-19 High Density Winds				
N.	06/12/14 14:24	06/12/14 12:42	06/12/14 10:59	06/12/14 09:17
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/12/14 07:35	06/12/14 07:35	06/12/14 05:53	06/12/14 04:11
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/12/14 02:29	06/12/14 00:47	06/11/14 23:05	06/11/14 21:23
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
H.	06/11/14 19:41	06/11/14 17:59	06/11/14 16:17	06/11/14 14:35
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR
S.	06/12/14 13:32	06/12/14 11:50	06/12/14 10:08	06/12/14 08:26
	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR

Operational MTSAT-2 AMV Monitoring

GOES-EAST HD Winds

GOES-WEST HD Winds

MT-SAT HD Winds

MODIS HD Winds

AVHRR HD Winds

More Info ...

Monitor of MTSAT-2 HD Winds Operations

Thursday, 06/12/2014 17:31:14 UTC		Prev Day <<		Thursday, 06/12/2014				>> Next Day	
		00Z	03Z	06Z	09Z	12Z	15Z	18Z	21Z
Northern Hemisphere (NH)	CD	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR		
	SW	Wind BUFR	N/A	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR		
	VZ	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	N/A		
	WV	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR	Wind BUFR		
Southern Hemisphere (SH)	CD	Wind BUFR	N/A	Wind BUFR	N/A	Wind BUFR	N/A		N/A
	SW	Wind BUFR	N/A	Wind BUFR	N/A	Wind BUFR	N/A		N/A
	VZ	Wind BUFR	N/A	Wind BUFR	N/A	N/A	N/A		N/A
	WV	Wind BUFR	N/A	Wind BUFR	N/A	Wind BUFR	N/A		N/A

OSPO NDE Process Monitoring

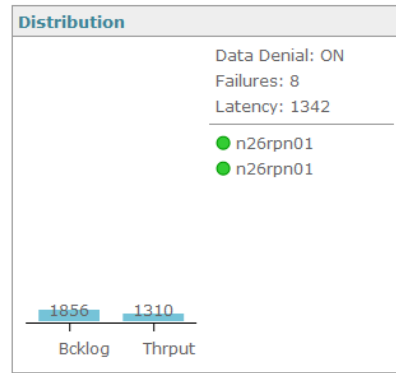
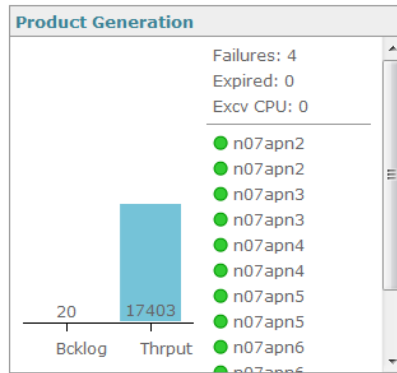
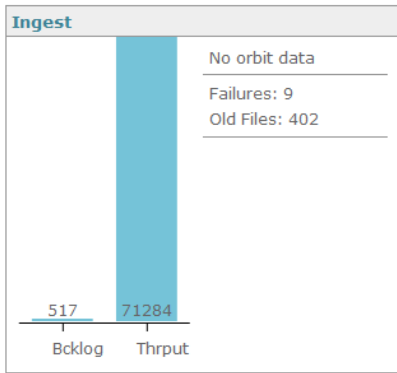
NDE DATA HANDLING SYSTEM

NDE_OP1

System ▾ Product Management ▾ Ingest ▾ Product Generation ▾ Distribution ▾ 0586 secs ▾ Last 24 hrs ▾ adminuser ▾

SAN **NaN% Used**
Cleanup: 15 sec ago

Notices There are no notices at this time < 1 / 1 >
[view all](#)



Customer Hosts

- n24rpn03
- dds.nesdis.noaa.gov

Log/Alert Summaries

Type	Host	Count	Message	Last Occurred
NOTIFY	6	1	Resource (Res ID: 6) is DOWN	2013-06-27 08:45:04
NOTIFY	7	1	Resource (Res ID: 7) is DOWN	2013-06-27 08:45:04
NOTIFY	13	1	Resource (Res ID: 13) is DOWN	2013-06-27 08:45:04
NOTIFY	16	1	Resource (Res ID: 16) is DOWN	2013-06-27 08:45:04
NOTIFY	17	1	Resource (Res ID: 17) is DOWN	2013-06-27 08:45:04
NOTIFY	23	1	Resource (Res ID: 23) is DOWN	2013-06-27 08:45:04
NOTIFY	26	1	Resource (Res ID: 26) is DOWN	2013-06-27 08:45:04
NOTIFY	27	1	Resource (Res ID: 27) is DOWN	2013-06-27 08:45:04

OSPO AMV Products Web Pages

The image is a collage of several screenshots from the NOAA Office of Satellite and Product Operations (OSPO) website, specifically focusing on High Density Winds (HD Winds) and GOES East Northern Hemisphere Infrared (NH Infrared) products.

High Density Winds (HD Winds) Page:

- Header:** NOAA OFFICE OF SATELLITE AND PRODUCT OPERATIONS. NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE.
- Navigation:** ORGANIZATION, SERVICES, PRODUCTS, OPERATIONS.
- Section:** High Density Winds
- Description:** The satellite derived winds (AMV - Atmospheric Motion Vectors) are generated by incorporating GOES and POES imager and forecast data from a numerical model. The principle of wind derivation is to follow a recognizable tracer (cloud and water vapor features in infrared window and water vapor bands) in a sequence of images, and derive its apparent velocity. The current operational wind products are derived from the following satellites: GOES East, GOES West, NOAA KLINN, Metop-A, Aqua and Terra. The operational satellite derived winds are available in BUFR format.
- Data Availability:** Wind data is available in [McdIDAS](#) MD file and ASCII formats via FTP.
- Map:** A polar projection map of the Northern Hemisphere showing wind vectors (arrows) overlaid on satellite imagery. The vectors are color-coded by speed.

GOES East: Northern Hemisphere Infrared Page:

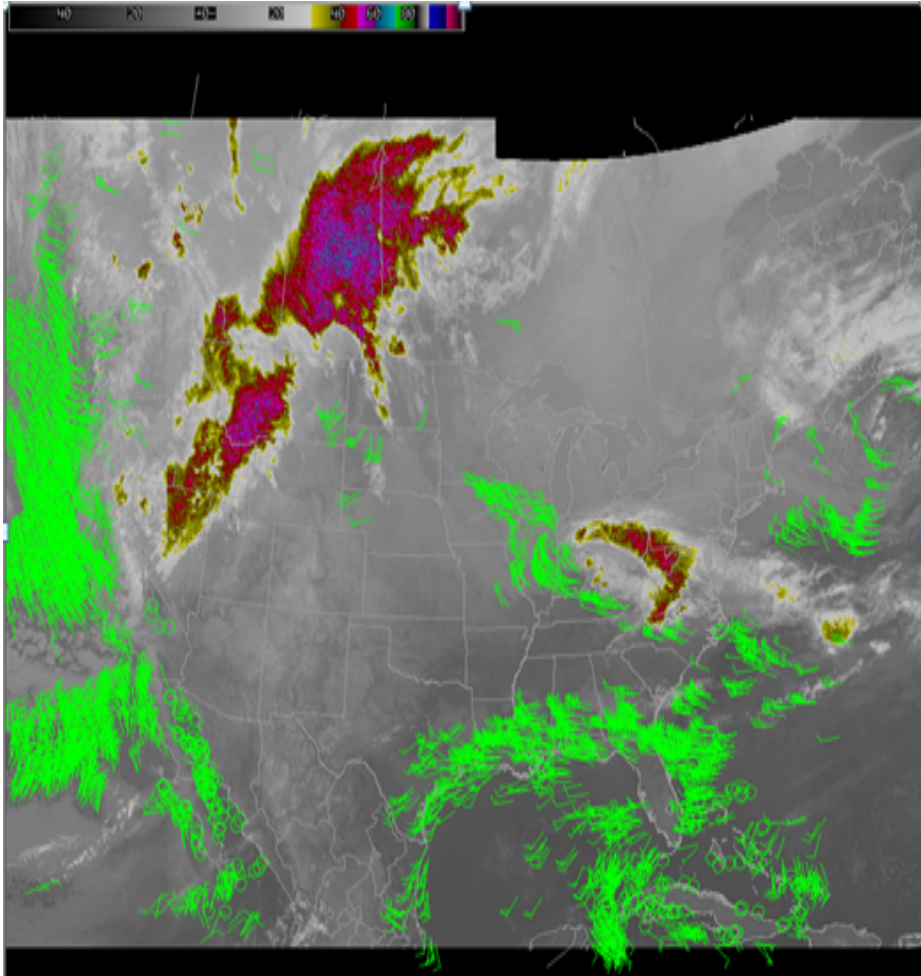
- Header:** NOAA OFFICE OF SATELLITE AND PRODUCT OPERATIONS.
- Section:** GOES East: Northern Hemisphere Infrared
- Navigation:** ORGANIZATION, SERVICES, PRODUCTS, OPERATIONS.
- Map:** A polar projection map of the Northern Hemisphere showing satellite imagery. The map includes a time slider (Hour: 16) and animation controls (Start, Stop).
- Product List:**
 - Northern Hemisphere:
 - Infrared
 - Water Vapor
 - Visible
 - Short Wave IR
 - Sounder Channel 10
 - Sounder Channel 11
 - Southern Hemisphere:
 - Infrared
 - Water Vapor
 - Visible
 - Short Wave IR
 - GOES West:
 - Northern Hemisphere:
 - Infrared
 - Water Vapor
 - Visible
 - Short Wave IR
 - Sounder Channel 10
 - Sounder Channel 11
- Antarctic:**
 - METOP-B
 - METOP-A
 - NOAA-18
 - NOAA-19
 - NOAA-16
 - NOAA-15
- Data:**
 - FTP

<http://www.ospo.noaa.gov/Products/atmosphere/hdwinds/index.html>

Operational AMV Products Distribution

- GOES, POES and MODIS AMV products continue to be distributed via SATEPSDIST1 (DDS) server for NOAA users and via GTS for international users
- S-NPP VIIRS Polar Winds is being distributed via OSPO NDE distribution subsystem (FTPS transfer protocol is needed)

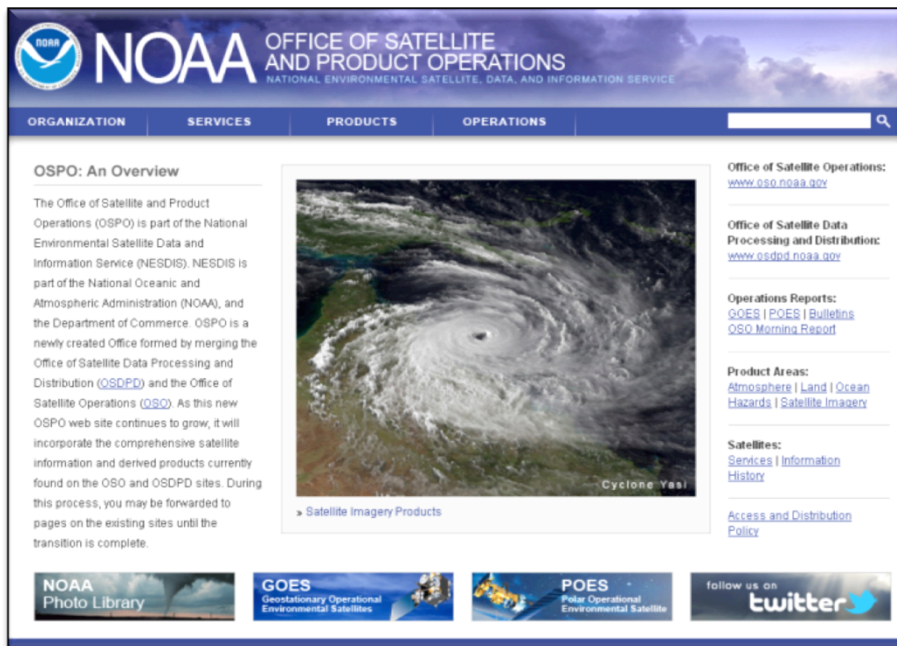
Day to Day Uses of AMV at AWIPS



- NWS AWIPS gives the field forecasters access to a multitude of digital data to help them in daily forecast preparation
- AWIPS display software allows for easy integration of AMVs with a multitude of other data sources like model analyses/forecasts, observations from other observation systems)

Data Access & Distribution Policy

Contact: NESDIS.data.access@noaa.gov



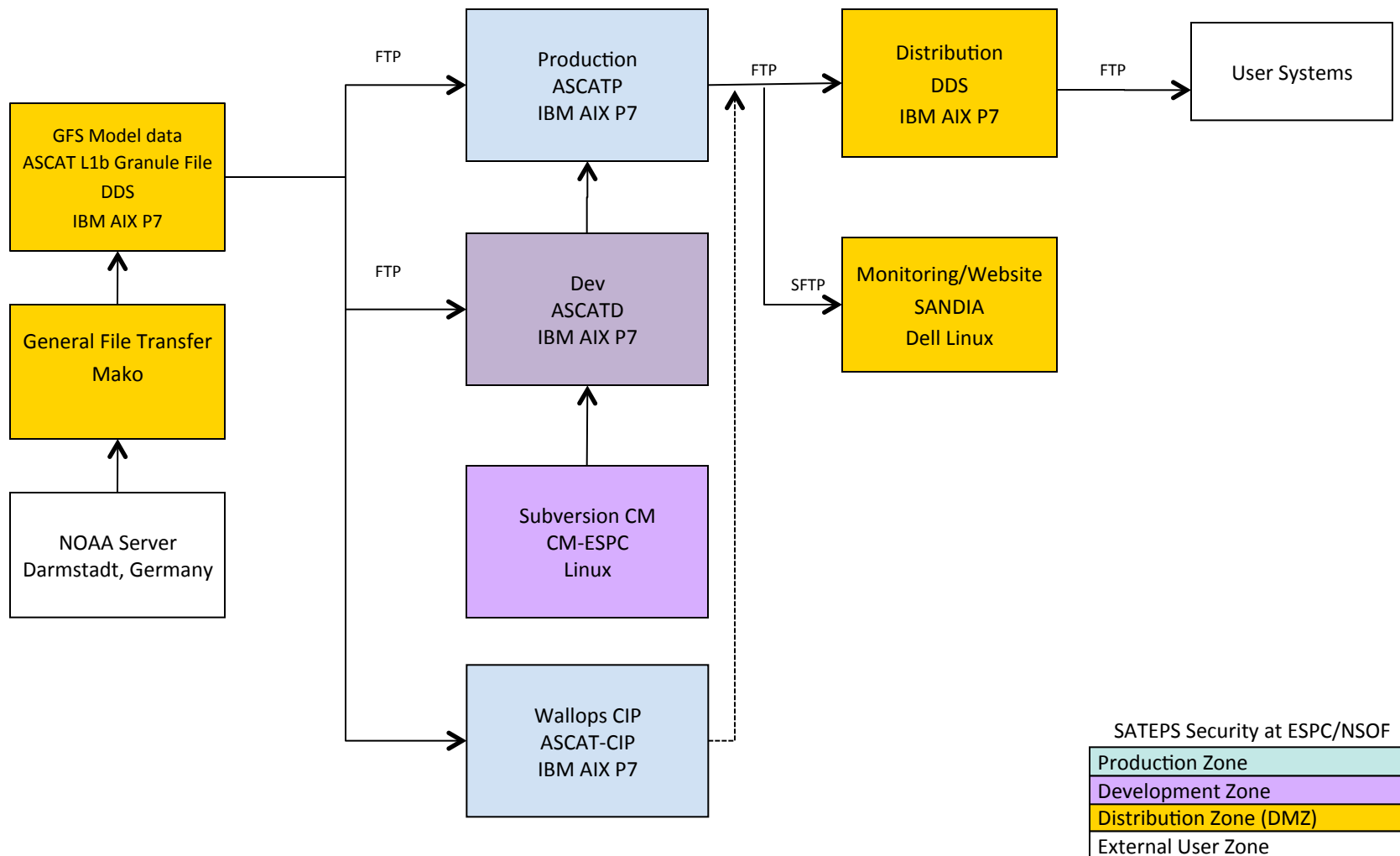
www.ospo.noaa.gov

- To consistently vet user requests for near real-time satellite data and products based on organizational affiliation or type of application
- To effectively manage **data distribution resources** to ensure effective system performance
- To be in compliance with policy, procedures and required **interconnection agreements** with NIST/DOC IT security regulations
- To factor ESPC **IT system planning** and future distribution resource availability and capacity needs into data access decisions

TOPIC

- Status of NESDIS' GOES and POES Satellites
- Operational AMV System and Products
 - AMV System Architectures
 - AMV Products, Monitoring and Distribution
- Operational ASCAT processes and products
- Coming Update on Systems and Products

ASCAT Ocean Surface Wind System and Data Flow

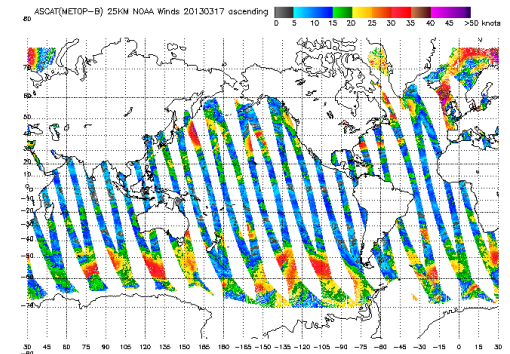
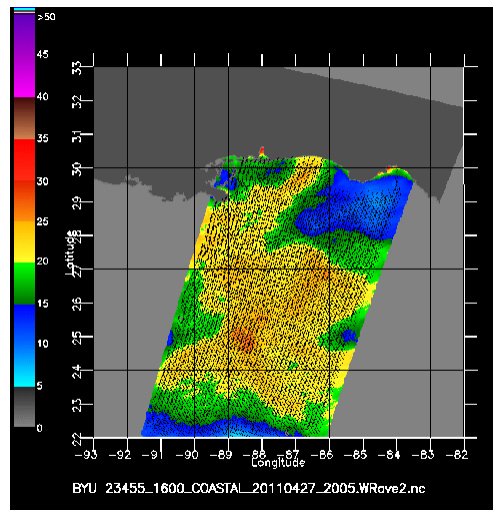
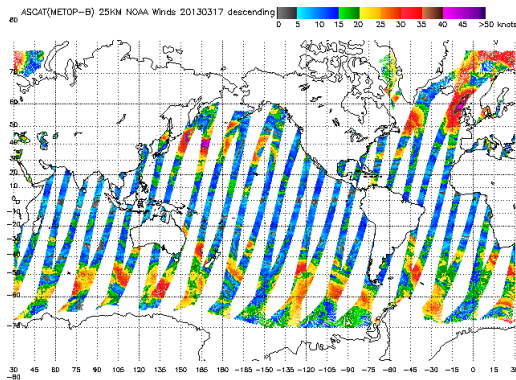


Operational ASCAT Winds (1/2)

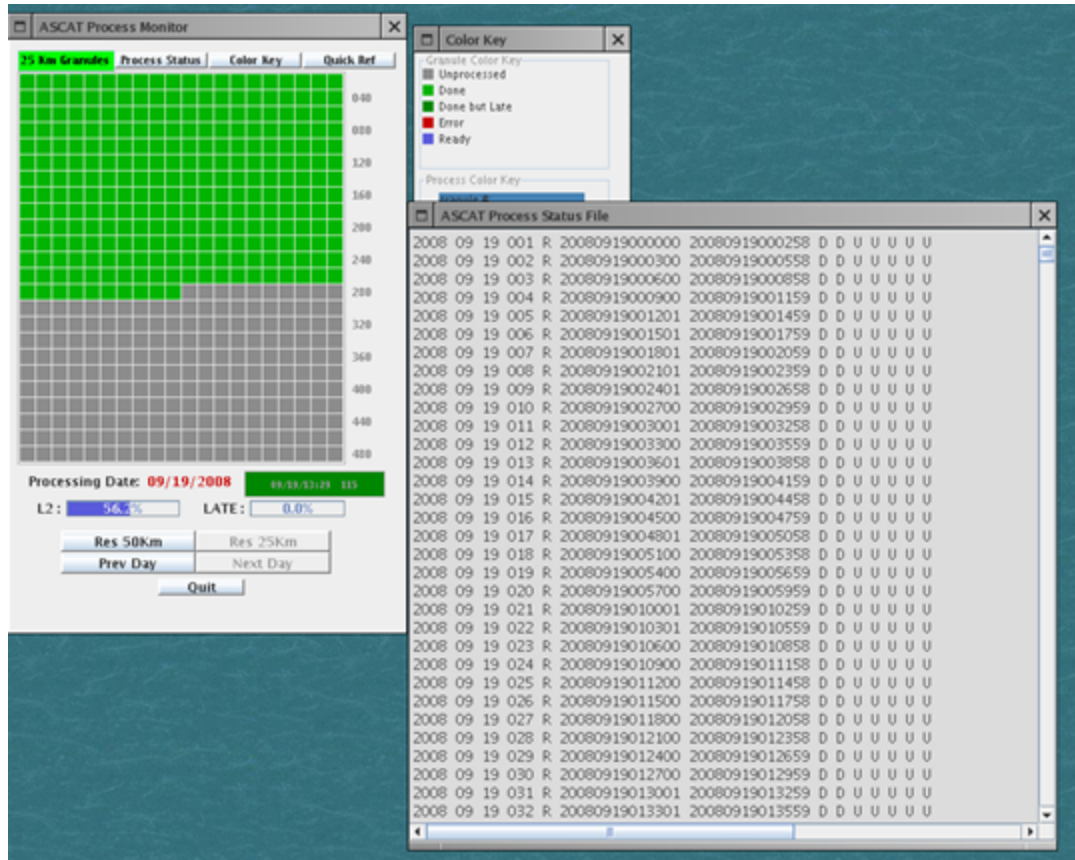
- Metop-B and Metop-A ASCAT
 - 50 km and 25 km OSVW products
 - 50 km
 - 3-min granule files in BUFR and binary
 - 3-min ASCAT-lite files for NAWIPS (binary)
 - 25 km
 - 3-min granule files in BUFR and binary
 - 3-min ASCAT-lite files for NAWIPS (binary)
 - 3-min ASCAT-lite files for AWIPS (BUFR)

Operational ASCAT Winds (2/2)

- Enhanced resolution wind products
 - Tropical cyclone storm sector wind speed imagery



ASCAT Winds Monitoring



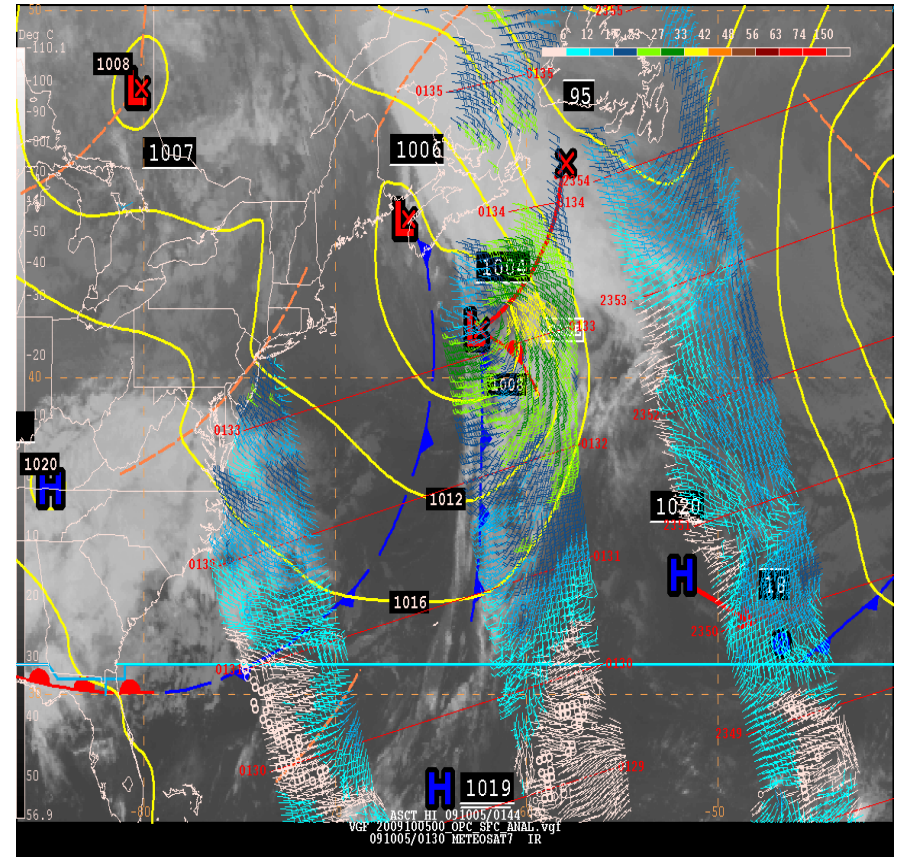
- A Java based automatic monitoring tool for ASCAT winds
- Monitoring the process on 3-minute granule level
- Ability to display the status from data ingest, process and distribution

Operational ASCAT Winds Distribution

- ASCAT winds are distributed via DDS server
- Main NOAA users
 - National Hurricane Center (NHC)/Tropical Prediction Center (TPC)
 - Ocean Prediction Center
 - Alaska and Pacific Regions
 - Coastal Weather Forecast Offices
 - Great Lakes Weather Forecast Offices
 - Environmental Modeling Center (EMC)

Day to Day Uses of ASCAT at OPC

- Identify weather features
- Marine wind warnings
- Short term marine forecasts
- Real-time Verification



TOPIC

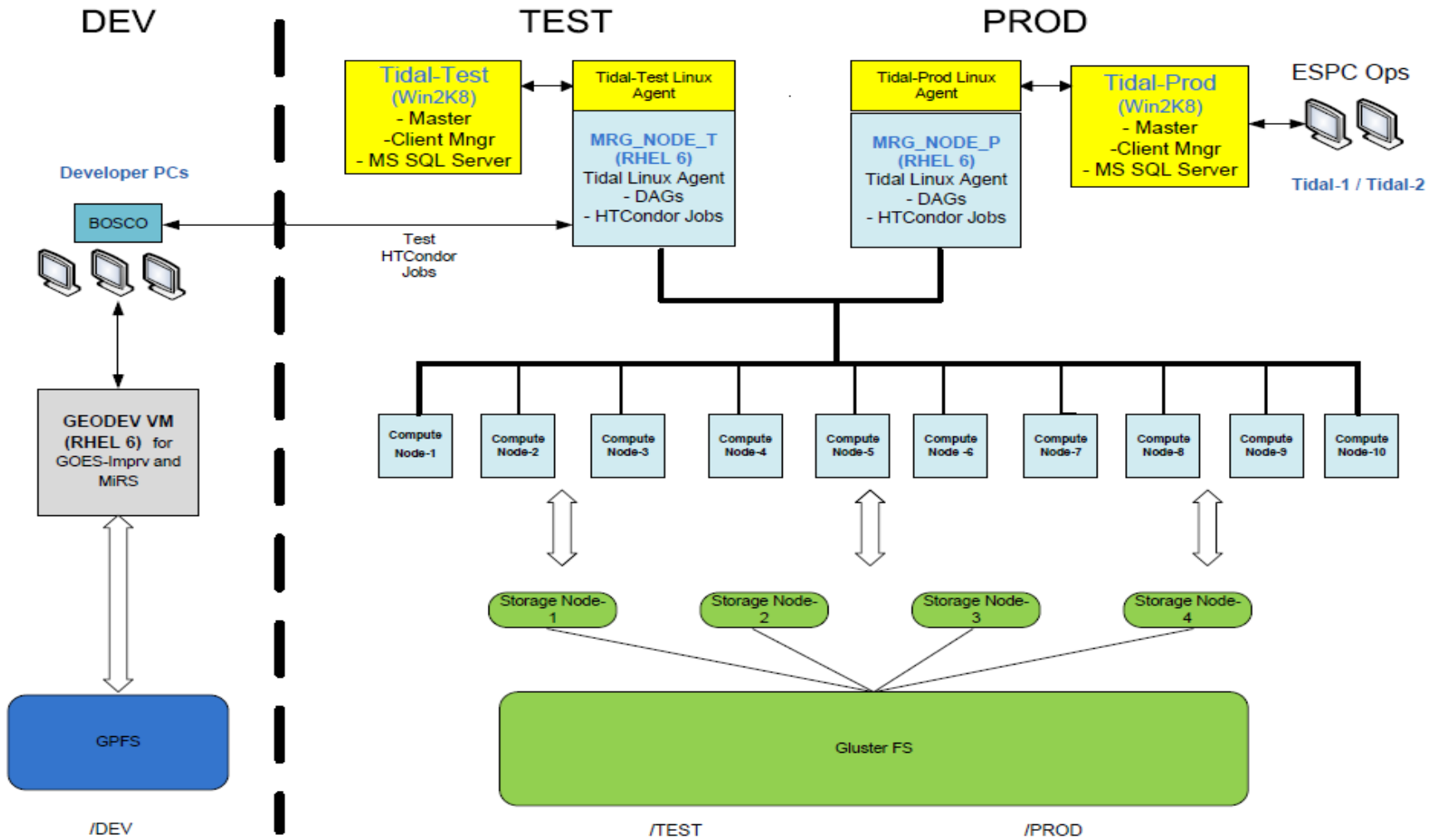
- Status of NESDIS' GOES and POES Satellites
- Operational AMV System and Products
 - AMV System Architectures
 - AMV Products, Monitoring and Distribution
- Operational ASCAT processes and products
- Coming Update on Systems and Products

Update on AMV Systems

- Working on CHOPS (**C**onsolidated **H**igh-throughput **O**perational **P**roducts **S**ystem)
- Based on the Red Hat MRG product (Messaging/RealTime/Grid). The components include HTCondor and GlusterFS
- CHOPS is designed to provide high-throughput computing for satellite product generation so all AMV processes except S-NPP VPW will be run on the CHOPS

CHOPS Architecture Diagram

CHOPS Architecture – Dev / Test / Prod Version 6.0



Update on AMV Products

- New Improved GOES Winds (Available in October 2014 and expected operation in July, 2015)
 - Using GOES-R algorithm with current GOES data
 - Available in NetCDF4 format and BUFR format with new BUFR table(expected)
 - Will run on CHOPS
 - Plan to provide users longer testing period in parallel with current GOES AMV products

Update on AMV Products

- MODIS/AVHRR Winds with GOES-R Algorithm (November, 2015)
 - Will be generated by the same GOES-R algorithm as S-NPP VIIRS Polar Winds
 - Avoid the different error characteristics from different algorithm
 - Will run on CHOPS

Update on AMV Products

- Himawari-8 Winds (April 2016)
 - Himawari-8 will be launched in September 2014 and will replace current MTSAT-2
 - Same GOES-R algorithm will be used to generate H-8 AMV products
 - Will run on new CHOPS
 - Will provide H-8 AMV products to NWS/AWIPS

Future AMV Quality Monitoring

Product Monitor

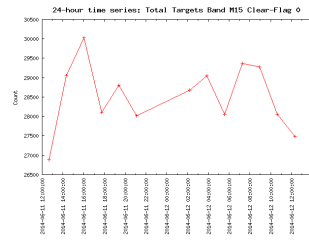
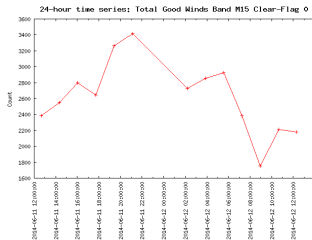
imgs

[Manual Plotting Tool](#)

< 2014-06-10 > Today

● Good ● Warning ● Bad ● Unknown

Product	00	01	02	03	04	05	06	07	08	09	10	11	12	13	14	15	16	17	18	19	20	21	22	23
ACSPO_SST	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NPR_MIRS	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NUCAPS_Rad	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
NUCAPS_Ret	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VPW_NH	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
VPW_SH	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●



- Working on new quality monitoring tool which has one database as the backend
- More information of the process and products on metadata and database
- Benefit the monitoring of AMV product quality in the longer term

Contact Information for Operational Wind Products

Hongming Qi

Winds PAL (Product Area Leader)

At NESDIS/OSPO

Email: Hongming.Qi@noaa.gov

Contact Information

OSPO Home

NOAA OFFICE OF SATELLITE AND PRODUCT OPERATIONS
NATIONAL ENVIRONMENTAL SATELLITE, DATA, AND INFORMATION SERVICE

ORGANIZATION SERVICES PRODUCTS OPERATIONS

OSPO: An Overview

The Office of Satellite and Product Operations (OSPO) is part of the National Environmental Satellite Data and Information Service (NESDIS) is part of the National Oceanic and Atmospheric Administration (NOAA), and the Department of Commerce. OSPO is a newly created Office formed by merging the Office of Satellite Data Processing and Distribution (OSDPD) and the Office of Satellite Operations (OSO). As this new OSPO web site continues to grow, it will incorporate the comprehensive satellite information and derived products currently found on the OSO and OSDPD sites. During this process, you may be forwarded to pages on the existing sites until the transition is complete.

Office of Satellite Operations:
www.oso.noaa.gov

Office of Satellite Data Processing and Distribution:
www.osdpd.noaa.gov

Operations Reports:
[GOES](#) | [POES](#) | [Bulletins](#)
[OSO Morning Report](#)

Product Areas:
[Atmosphere](#) | [Land](#) | [Ocean](#)
[Hazards](#) | [Satellite Imagery](#)

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@usnoagov_ospo Suitland, MD
NOAA Satellite and Information Service - The Office of Satellite and Product Operations highlights satellite imagery, hazard products, direct services, etc.

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Comments and Questions



Dzieki Ačiū TACK! þakka þér fyrir Takk

Danke! Teşekkürler Salamat Mahalo

Cảm ơn bạn 谢谢您 dhanayawad Grazie

Хвала Kiitos *Bedankt* mulţumesc! Спасибо

Σε ευχαριστώ 감사합니다 *gracias!* obrigado! Hvala

Go raibh maith agat

THANK YOU!

ありがとうございました

Domo merci! Благодаря a dank!

Paldies תודה Toda TĀNAN vd'aka! Asante

