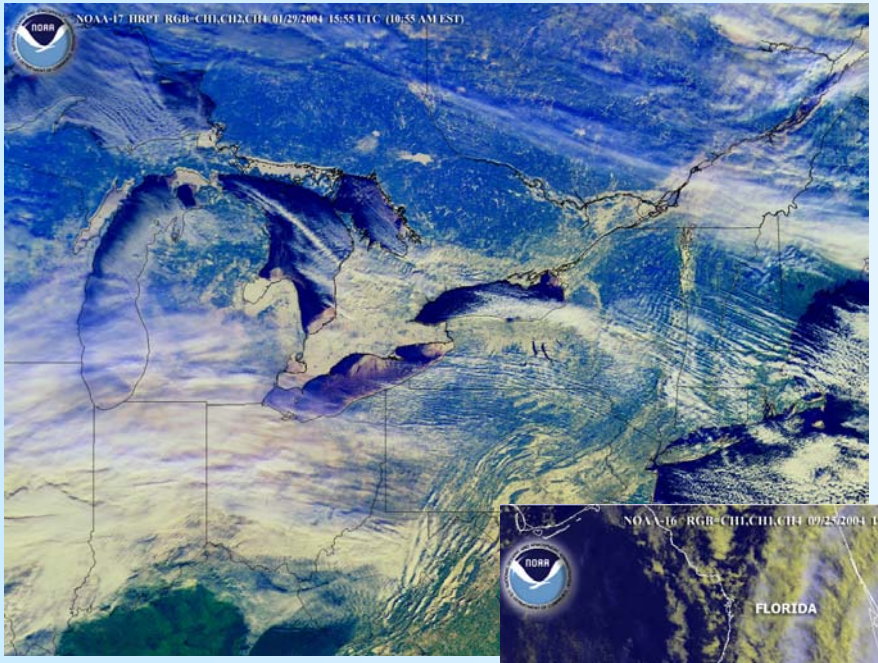
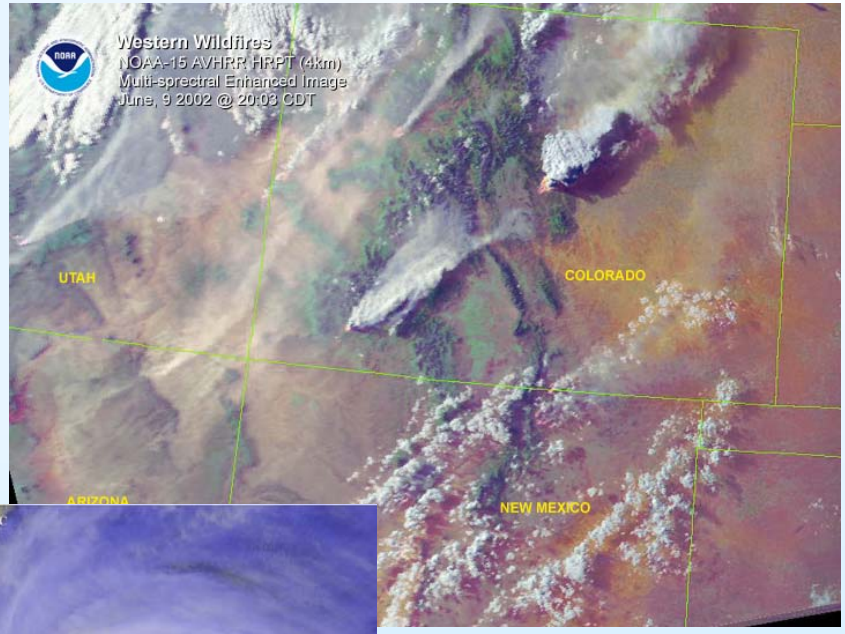
Current POES Status

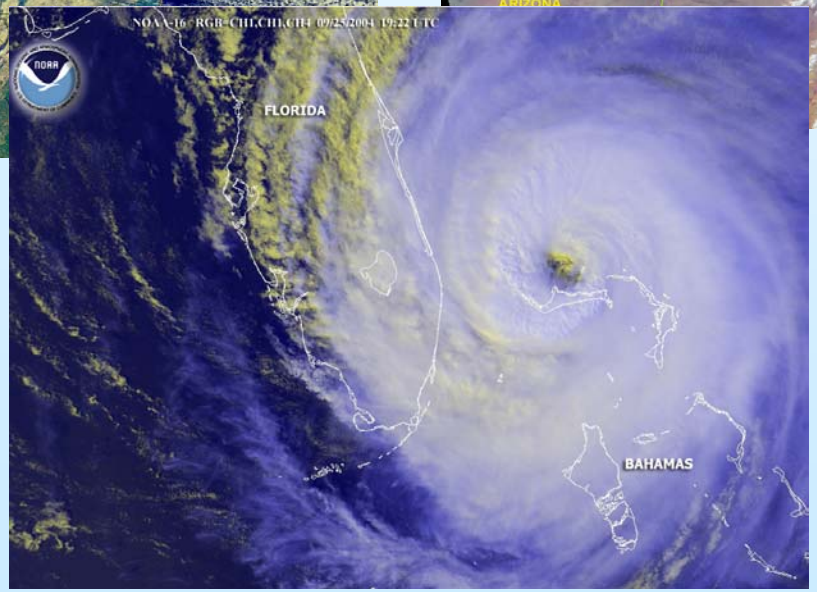
2004 Satellite Direct Readout Conference

December 2004

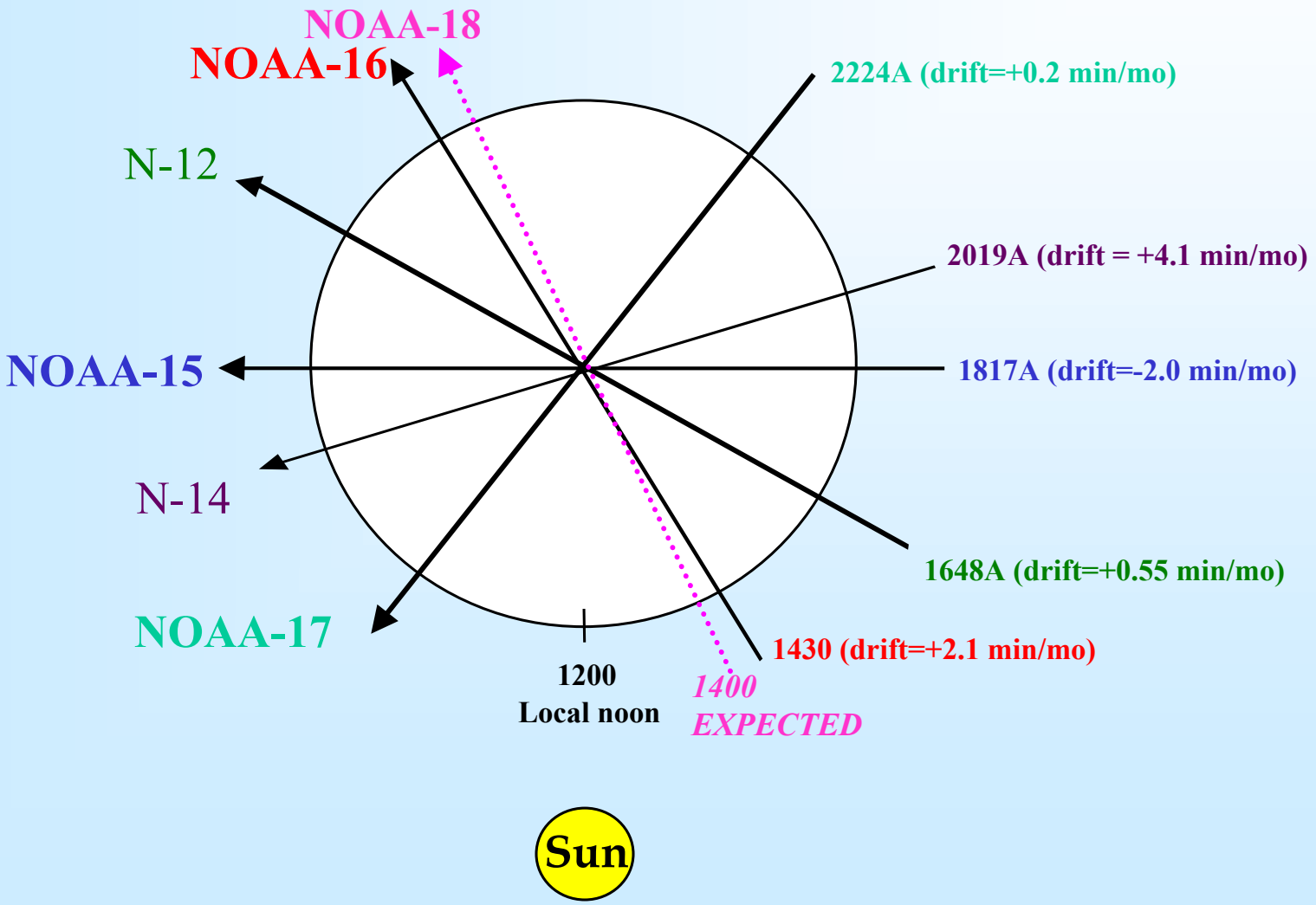
Cynthia Hampton
Chief, Engineering Branch
Satellite Operations Control Center
NOAA Satellite and Information Service


NOAA-17 HRPT RGB-CH1,CH2,CH4 01/29/2004 15:55 UTC (10:55 AM EST)


Western Wildfires
NOAA-15 AVHRR HRPT (4km)
Multi-spectral Enhanced Image
June, 9 2002 @ 20:03 CDT
UTAH
COLORADO
NEW MEXICO


NOAA-16 RGB-CH1,CH3,CH4 09/25/2004 19:22 UTC
FLORIDA
BAHAMAS

Constellation Orbital Configuration



Status Nomenclature

Green, Operational

O — Orange, Operational with degraded performance

Y — Yellow, Operational with limitations

R — Red, Not Operational

LTAN: Local Time Ascending Node

POES Status

Spacecraft Subsystems	NOAA17	NOAA16	NOAA15	NOAA14	NOAA12
Ascending Node +/- 5 mins	2224	1430	1817	2019	1648
Mission Data Category	PRI	PRI	Back Up	SEC	SEC
Instruments					
Adv. Hi Resolution Radiometer (AVHRR)		Y	Y	R	
High Resolution Infrared Sounder (HIRS)			Y		R
Adv Microwave Sounding Unit (AMSU-A1)	R	Y	Y	N/A	N/A
Adv Microwave Sounding Unit (AMSU-A2)				N/A	N/A
Adv Microwave Sounding Unit (AMSU-B)			Y	N/A	N/A
Microwave Sounding Unit (MSU)	N/A	N/A	N/A	Y	R
Stratospheric Sounding Unit (SSU)	N/A	N/A	N/A		N/A
Data Collection Subsytem (DCS)					
Search and Rescue Repeater (SARR)		Y	Y		N/A
Search and Rescue Processor (SARP)				R	N/A
Space Environment Monitor (SEM)				Y	
Solar Backscatter UV Radiometer (SBUV)		Y	N/A	Y	N/A
Spacecraft Subsystems					
Command and Control				Y	
Electrical Power				Y	
Attitude Determination and Control					
Communications		Y	Y		
Thermal Control			Y		
Data Handling (Recorders)		Y		Y	Y

NOAA-17 (M) – LTAN 2224

Launch Date: June 24, 2002

HRPT: STX3 1707.0 MHz
APT: VTX2 137.62 MHz

R **AMSU-A1: Scan Motor Failure - Oct. 29, 2003**

Comm: STX3 (1707 MHz) Power dropped to 2 Watts April 28, 2003.

NOAA-16 (L) – LTAN 1424

Launch Date: September 21, 2000

HRPT: STX1 1698.0 MHz
APT: Not Operational

Y **AVHRR: Scan Motor Current Surges started January 14, 2004**
Improved performance since late July 2004

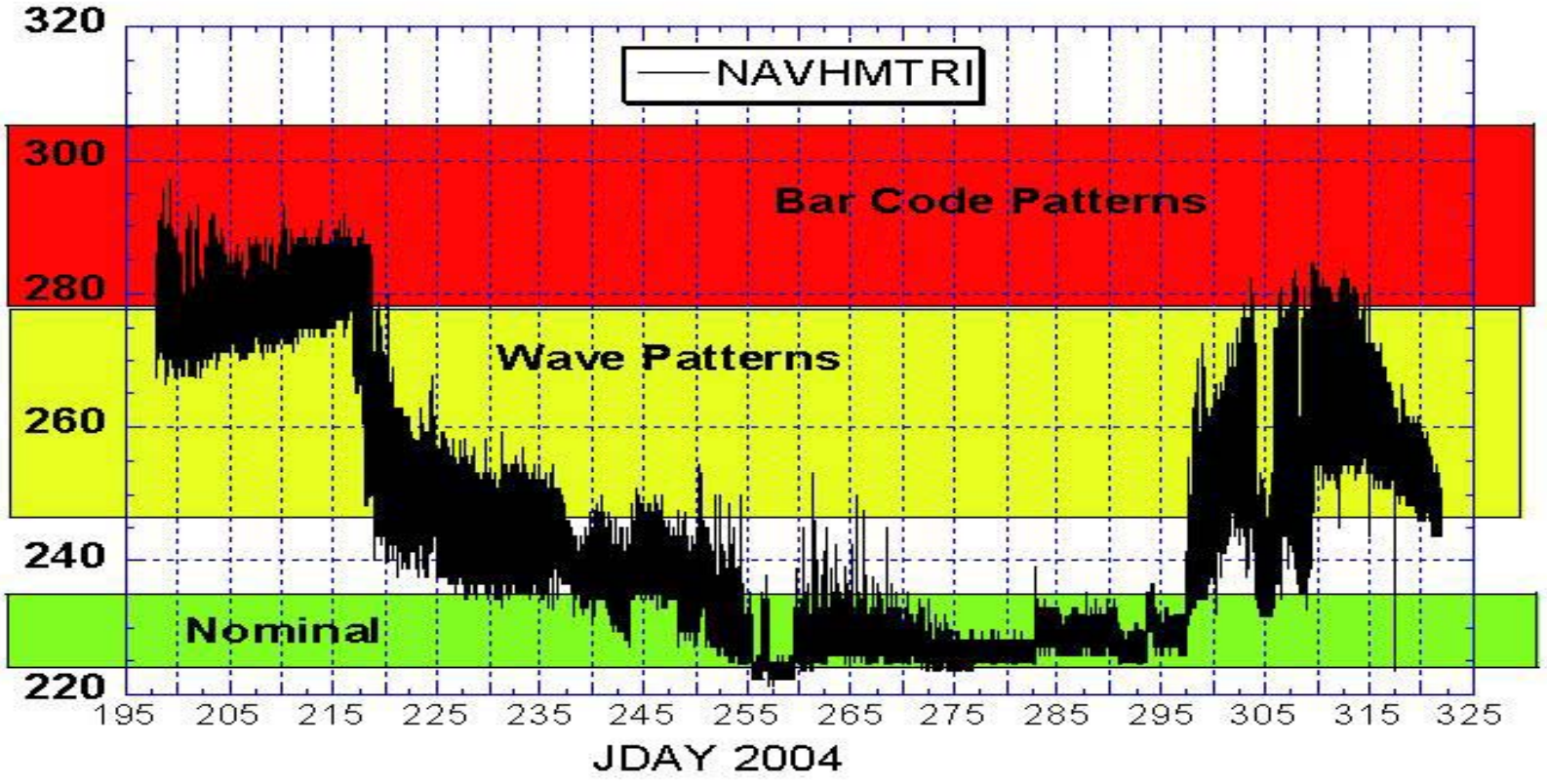
Y **AMSU-A1: Phase Lock Loop Oscillator #2 Failed**
November 2002

Y **SARR: 243 Receiver signal degradation - November 2001**

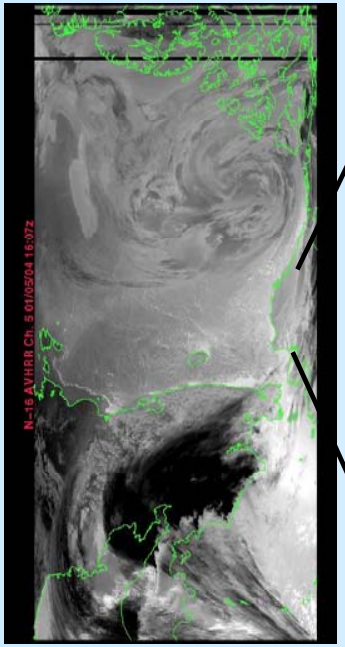
Y **SBUV: Both Diffusers degraded - May 2003**

Y **Comm: VTX#1 and VTX#2 RF Hybrid Failure (No APT)**
- November 2000

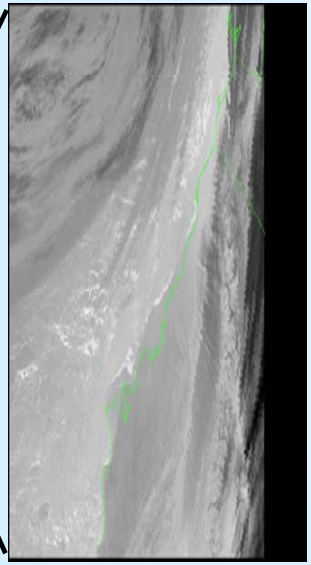
N16 AVHRR Scan Motor Current
(16 Jul 04 through 16 Nov 04)



NOAA-16 AVHRR



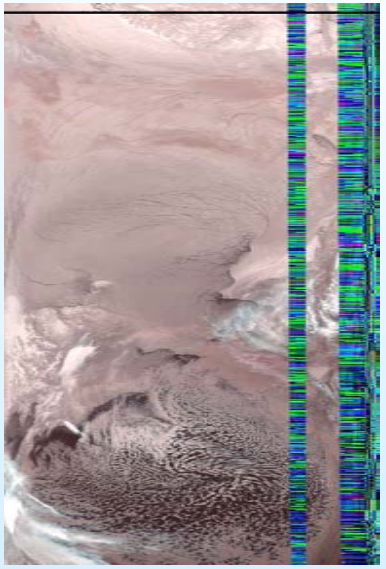
SOCC Normal (1x) zoom)



SOCC Zoom in 32x

User image 32x

January 5 16:07 Z



January 20 15:10z

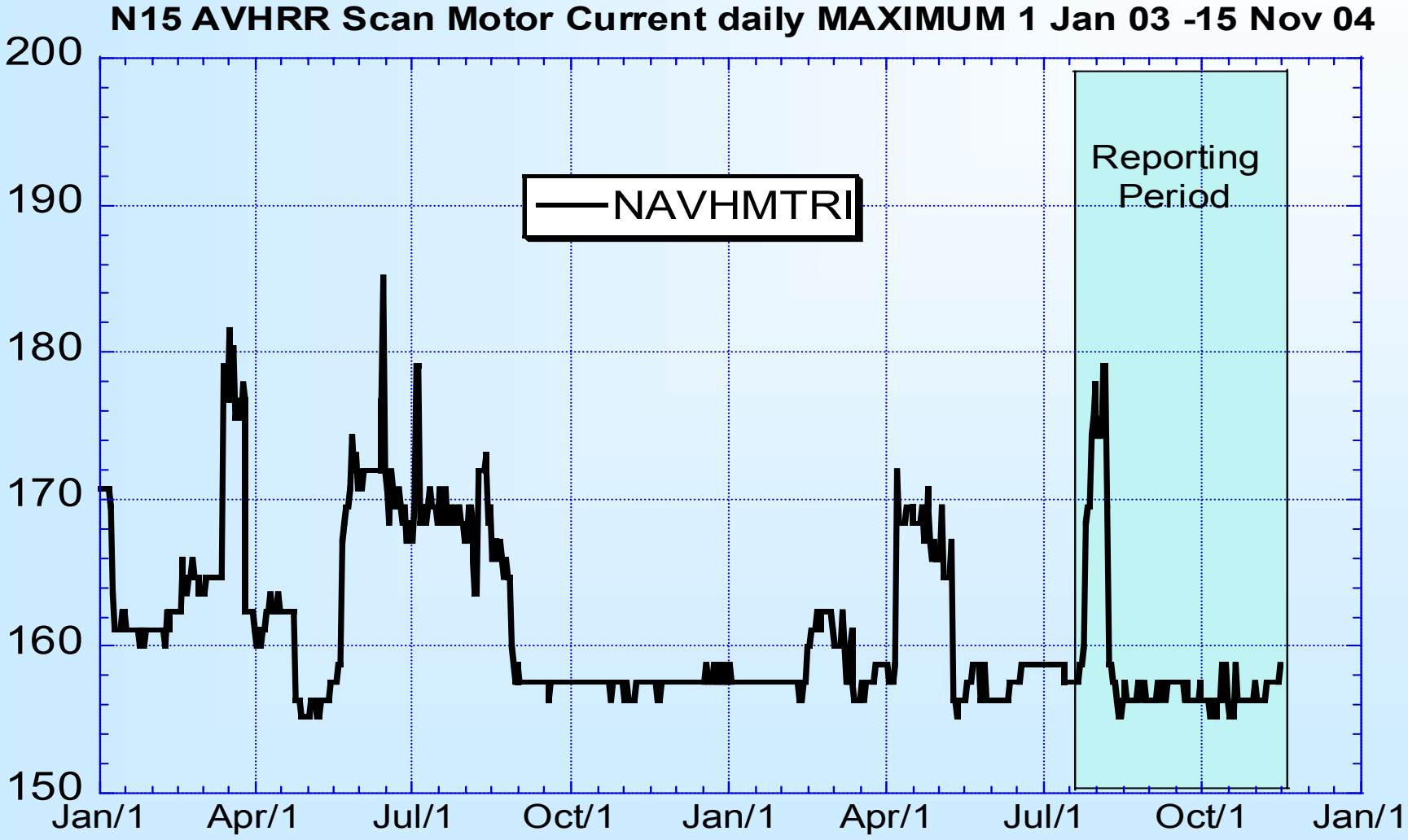
NOAA-15 (K) – LTAN 1822

Launch Date: May 13, 1998

HRPT: STX2 1702.5 MHZ
APT: VTX1 137.5 MHz

- Y **AVHRR: Scan Motor Current Surges started April 2000**
- Y **HIRS: Periodic Filter Motor Surges since Dec. 1999. Last surge seen in June 2004**
- Y **AMSU-A1: Channel 11 failed - April 2002 and Channel 14 failed – October 2000**
- Y **AMSU-B: Periodic Scan Motor Current Surges started Aug. 2003; Most recent Nov. 14, 2004. Bias in all channels.**
- Y **SARR: 243 Receiver signal degradation - February 2001**
- Y **Comm: STX#2 (1702.5 MHz) Operating in OMNI mode since May 1998**
  STX#3 (1707 MHz) Taken out of service due to Interference with AMSU-B since May 1998

N15 AVHRR Health Analysis



NOAA-14 (J) LTAN 2006

Launch Date: December 30, 1994

HRPT: STX3 1707 MHz
APT: No APT

R AVHRR: Scan Motor failed April 2004.

Y MSU: Scan Motor and Antenna problems

R SARP: Receiver Power Unit failed - March 1995

Y SEM: One of four telescopes inoperable - Jan. 1995

Y SBUV: Grating Drive periodically gets stuck. Started in Nov. 1995; last occurrence July 2004.

NOAA-12 (D) LTAN 1646

Launched Date: May 14, 1991

HRPT: STX1 1698.0 MHz
APT: VTX1 137.5 MHz

R HIRS: Filter wheel ceased - September 25, 2002

R MSU: Scan Motor Belt Drive failure - June 26, 2001

MSU, HIRS and SEM Instruments are turned off during eclipse season due to degrading power system

- NOAA 11 – Decommissioned June 16, 2004

- For updated information: http://www.oso.noaa.gov/poesstatus/