



Initial Joint Polar System (IJPS) NOAA-N Launch

A large satellite with multiple solar panels and instruments is shown in the background, appearing to be in orbit or being launched. The satellite is yellow and white with large solar panels extending outwards.

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U.S. Department of Commerce - NOAA

Direct Readout Conference

December 8, 2004

Topics

Spacecraft Overview

Changes to the Spacecraft

User Impacts

NOAA-N/18

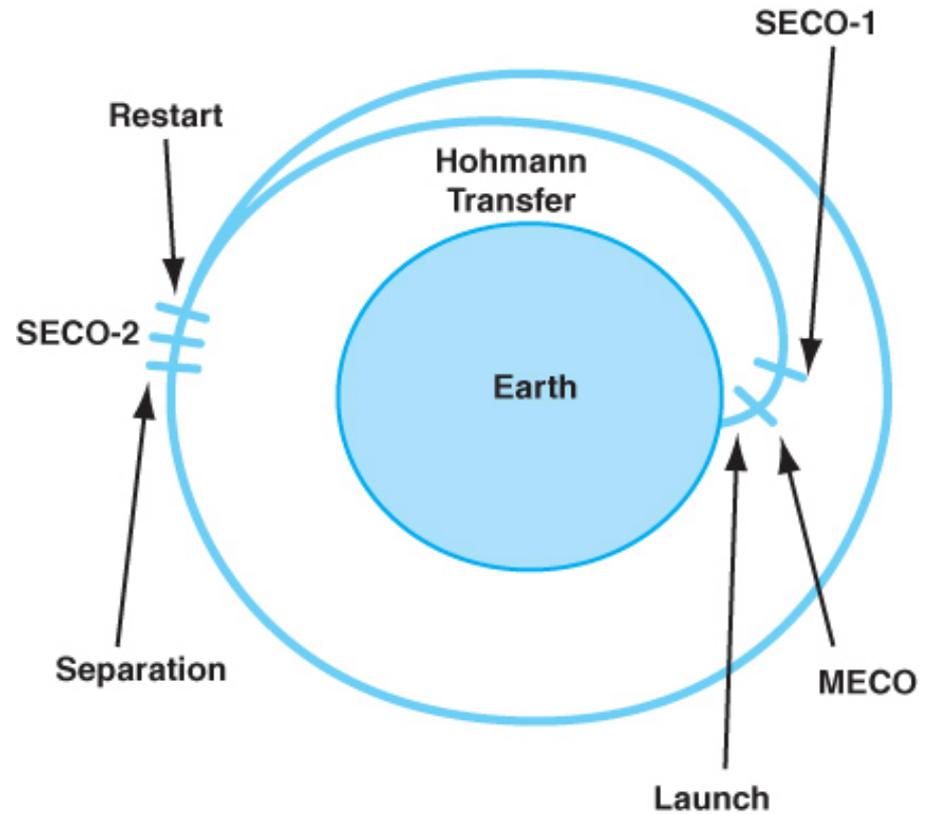


Planned Launch

Mar 10, 2005

Launch Vehicle

Boeing Space and Defense
Delta 7320-10



Sun Synchronous Orbit

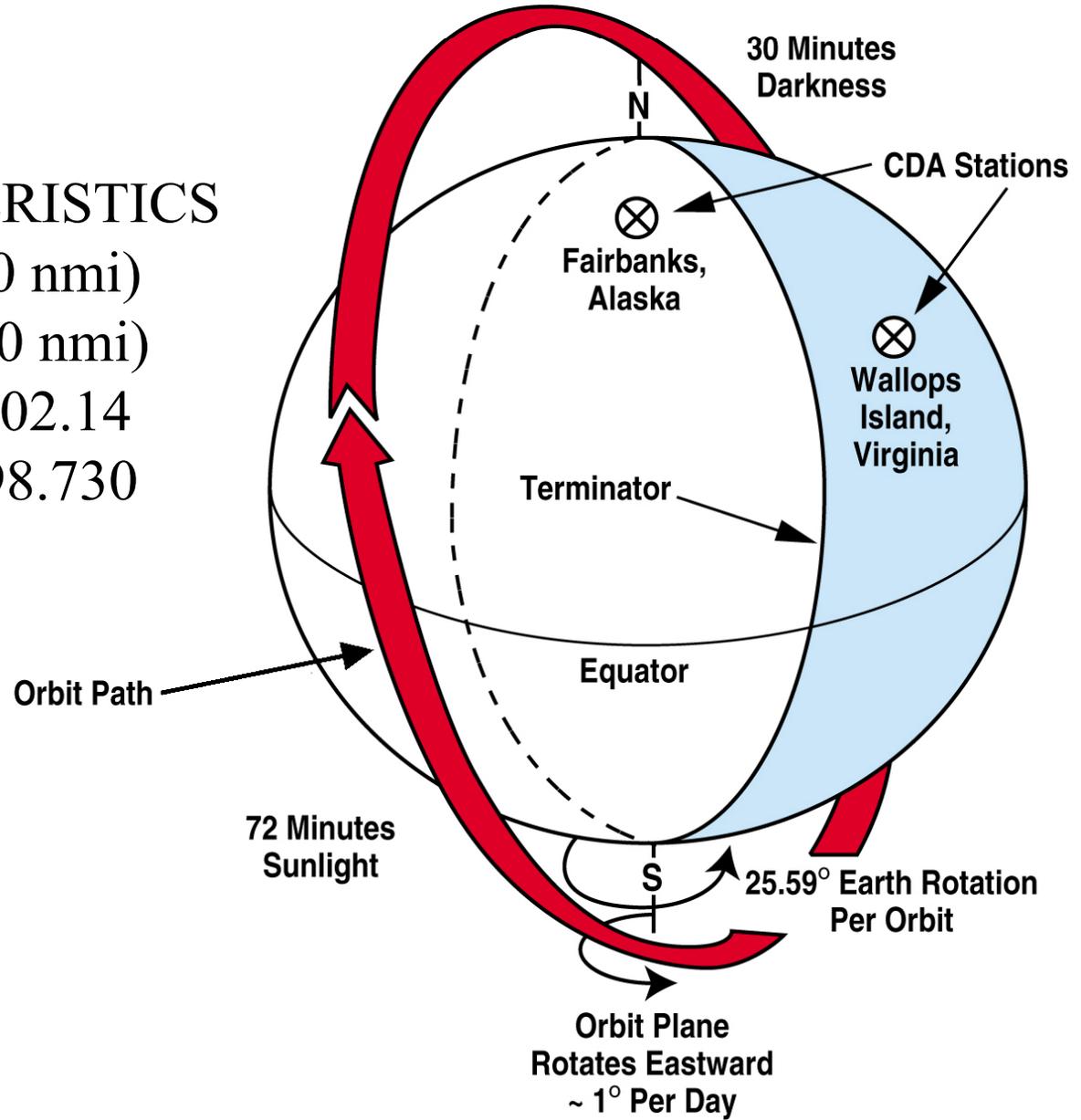
ORBITAL CHARACTERISTICS

Apogee.....870 km (470 nmi)

Perigee870 km (470 nmi)

Minutes per orbit.....102.14

Degrees inclination.....98.730



Year 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 00 01 02 03 04

TIROS-N
(NASA)
10/13/78



NOAA-6 (A)
6/27/79



NOAA-B (B) Launch Failure
5/29/80



NOAA-7 (C)
6/23/81



NOAA-8 (E)
3/28/83



NOAA-9 (F)
12/12/84



NOAA-10 (G)
9/17/86



NOAA-11 (H)
9/24/88



NOAA-12 (D)
5/14/91



NOAA-13 (I) Power System Failure
8/9/93



NOAA-14 (J)
12/30/94



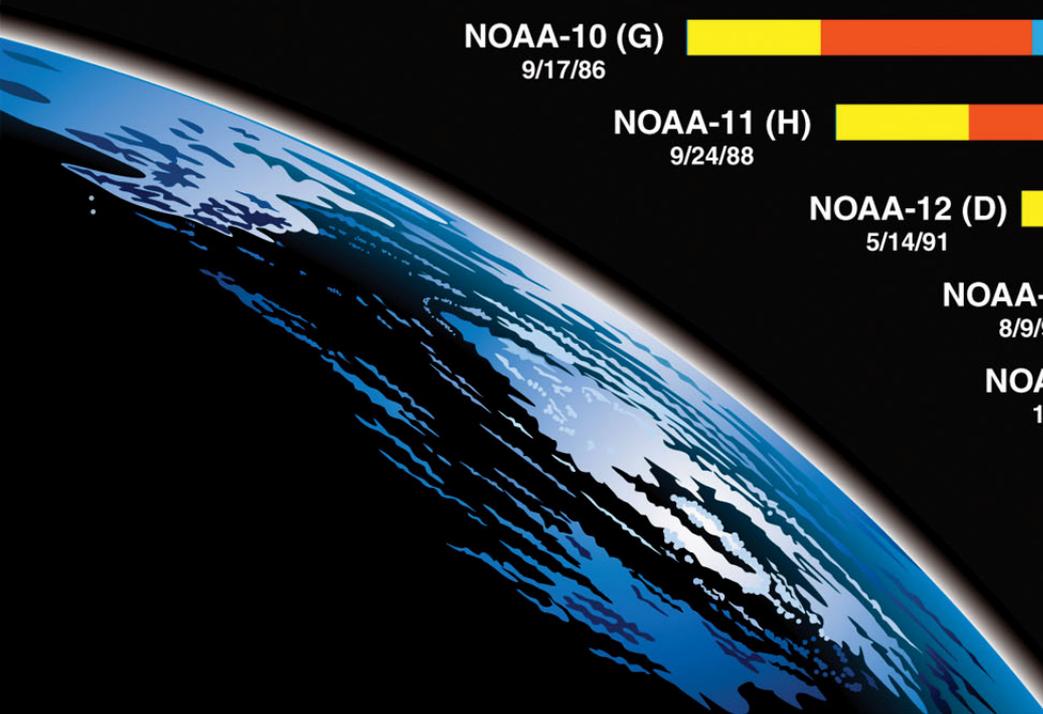
NOAA-15 (K)
5/13/98



NOAA-16 (L)
9/21/00



NOAA-17 (M)
6/24/02



Expected 2 year Operational Life

Extended Operational Life (Beyond 2 years)

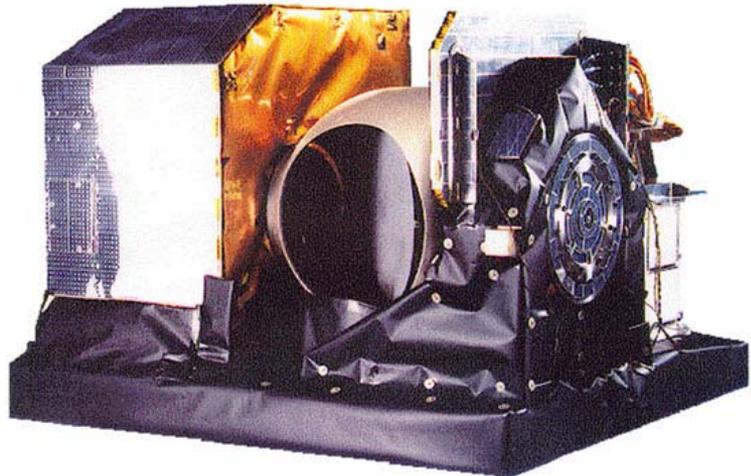
Extended Backup Operational Life

Spacecraft Overview

- Fourth generation in TIROS-N Series
- Payload:
 - AVHRR/3 Advanced Very High Resolution Radiometer
 - HIRS/4 High Resolution Infra-red Sounder
 - AMSU-A1,2 Advanced Microwave Sounding Unit
 - MHS Microwave Humidity Sounder
 - SBUV/2 Solar Backscatter Ultra-violet Radiometer
 - SEM-2 Space Environment Monitor
 - DCS-2 Argos Data Collection System
 - SARR Search and Rescue Repeater
 - SARP Search and Rescue Processor
- First IJPS satellite to be launched

Changes to the Spacecraft

- AMSU-B is replaced by the MHS
 - 5 channel Microwave radiometer
 - 5 year design life
 - Sophisticated data system allowing re-programmability



Changes to the Spacecraft (Cont.)

- HIRS/3 replaced by HIRS/4
 - Instantaneous Ground Field of View changed from 20Km to 10Km
 - Improves quality of sounding by reducing probability of cloud contaminated views
- AVHRR/3 upgraded with high torque scan motor
 - Should significantly improve the reliability and life-time of this primary instrument

Changes to the Spacecraft (Cont.)

- Automatic Picture Transmission (APT) frequencies changed
 - 137.5 MHz ---> 137.1 MHz
 - 137.62 MHz ---> 137.9125 MHz
 - New frequencies have Primary use allocation
- Solid-State Digital Recorders replace Tape Recorders
 - Provides 80% greater storage

User Impacts

- APT Users must ensure their systems can operate with the new frequencies;
- MHS data formatting and minor science algorithm changes from AMSU-B;
- HIRS/4 sounding algorithms must be adjusted for smaller field of view--gaps will exist between pixels.



NOAA KLM USER'S GUIDE

with NOAA-N,-N' SUPPLEMENT

Table of Contents



[Introduction Page](#)

The NOAA KLM User's Guide (September 2000 revision) is a document that describes the orbital and spacecraft characteristics, instruments, data formats, etc. of the NOAA-K through NOAA-M polar orbiter series of satellites. In addition, the NOAA-N and NOAA-N' spacecraft are also described in the NOAA-N,-N' Supplement (see link below). Listed below are links to the HTML versions of the individual chapters.

- [Cover Page:](#)
- [Disclaimer:](#) A Disclaimer from the Author/Editor of the NOAA KLM User's Guide.
- [Acknowledgments:](#) A Letter of thanks for all those who helped out.
- [Acronyms and Abbreviations:](#) A Listing of Acronyms and Abbreviations used in the NOAA KLM User's Guide.
- [List of Figures:](#) A Listing of all Figures in the NOAA KLM User's Guide.
- [List of Tables:](#) A Listing of all Tables in the NOAA KLM User's Guide.
- [NOAA-N, -N' Supplement:](#) A Listing of links with specific changes for the NOAA-N and -N' spacecraft.
- [Amendments:](#) A Listing of all Revisions made to the NOAA KLM User's Guide.

Section 1:

- [Section 1.0:](#) Introduction to the NOAA KLM System

NOAA N Booklets

http://goespoes.gsfc.nasa.gov/poes/spacecraft/noaa_n_booklet.pdf

