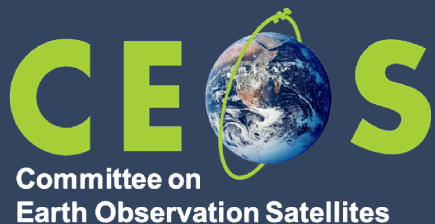




AVHRR Dataset description



Shanmukha Rao, ISRO
Agenda Item 8.5
WGISS-61
16-20 March, 2026
Dehradun, India

Data Acquisition , Processing & Dissemination - Automated

- Noaa-11,12,14,16,17,18,19 acquired by this 1.2m antenna.
- Enabled for Metop series satellites.



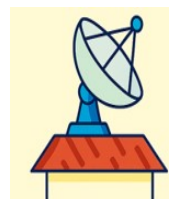
MetOp-B



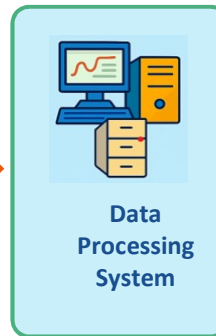
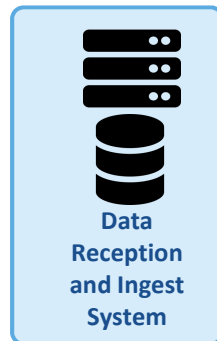
MetOp-C

**Data reception Facility
NRSC, Shadnagar,
Hyderabad, India.**

<https://www.nrsc.gov.in/>

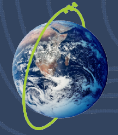


1.2 m
Antenna





AVHRR LAC data availability **CEOS**



Satellite	Available acquired raw data in Earth Station (IMGEOS-SAN)	Available L1C in Bhoonidhi	Remarks
Metop-A	01-NOV-2013 to 15-NOV-2021	No processed data	Archived data to be processed
Metop-B	01-NOV-2013 to till today	01-APR-2025 to till today	Archived data to be processed
Metop-C	01-APR-2025 to till today	01-APR-2025 to till today	Archived data to be processed
NOAA-19	01-JUL-2015 to 11-AUG-2025	01-MAR-2025 to 11-AUG-2025	Archived data to be processed

**Noaa-11,12,14,16,17,18 and NOAA-19 (before JUL-2015) all data is in CD's .
Discussions are in progress to port data into SAN storage.**



AVHRR- Data Processing Scenario

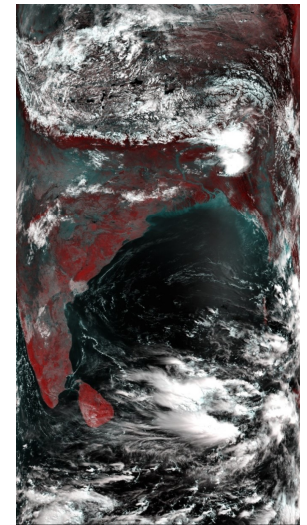


ADPGS (AVHRR Data Product Generation System) in NRT:

- ❖ **Automated frame work** is developed to generate AVHRR L1C from NOAA-19 (using PYGAC) , Metop-B and Metop-C data using AAPP(ATOVS and AVHRR Pre-processing Package) package.
- ❖ ADPGS operates in two modes for processing AVHRR data.
 - Mode-1: Automated Near Real-Time Processing.
 - Mode-2: Historical Data Processing.- **In Pipeline**
 - TAT: 15 mins after data acquired.

❖ Orbit wise Level-1C products are in HDF5 format. The following files are generated:

- Level-1C Radiometrically Calibrated , Geo-Tagged Image (.h5)
- Snapshot Image (.JPEG) for quick view:
 - RGB B2-B1-B1 composite for Day passes
 - Band 4 for Night passes
- Metadata File (.meta)



Metop-B DOP:11th May2025
Time : 03:26 UTC RGB: Band 2-1-1

File Naming Convention

Sample Filename for Metop-B:

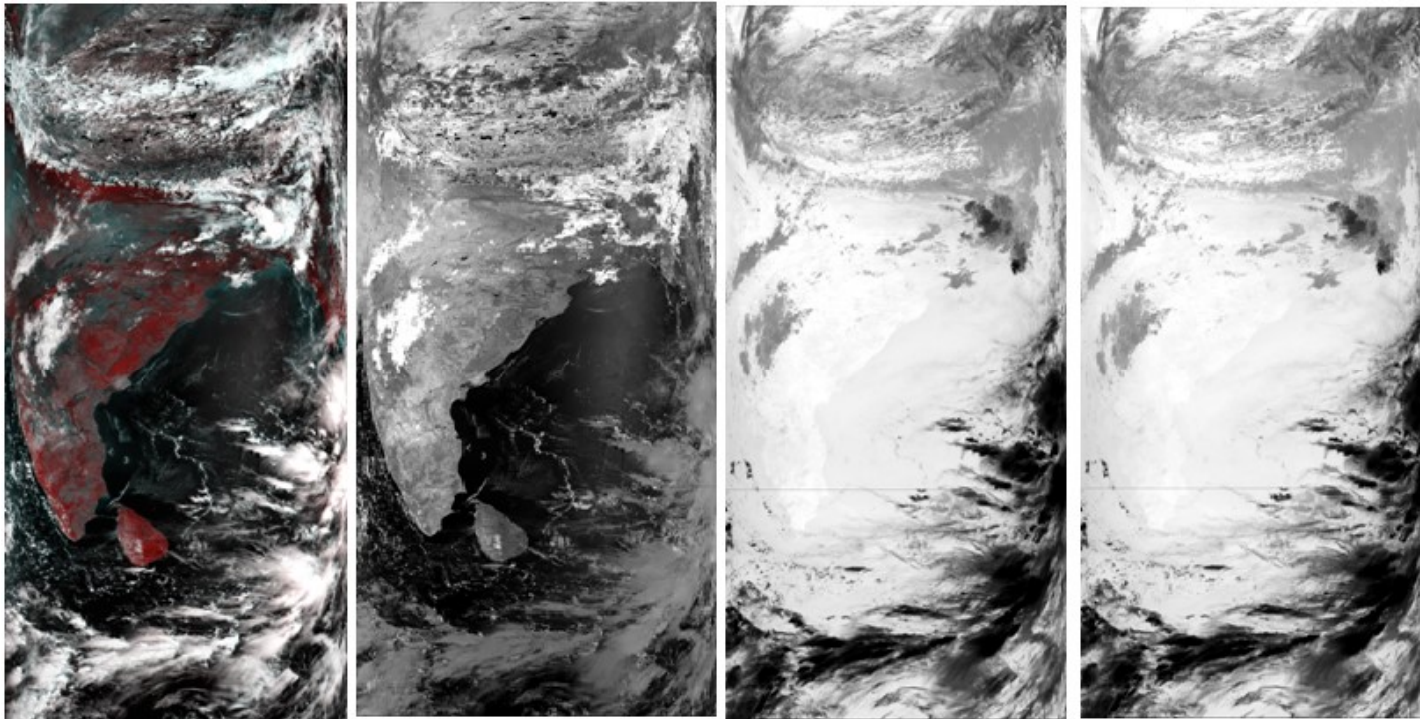
MTB_AVHR_LAC_11MAY2025_0507_65615_ST0000HTD_1_1_F.h5

Sample Filename for Metop-C:

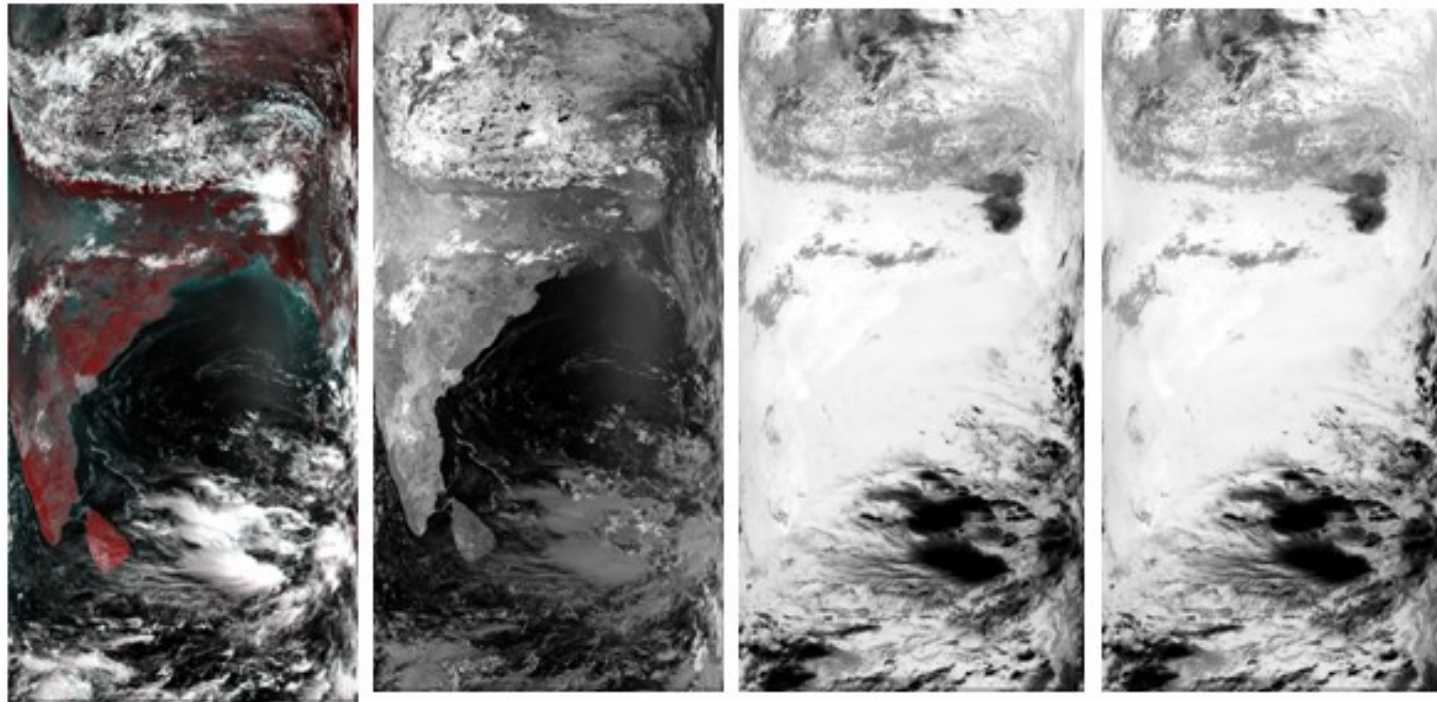
MTC_AVHR_LAC_23JUN2025_1719_34390_ST0000HTD_1_1_F.h5

Components:

Component	Description
MTB/MTC	Satellite(Metop-B/Metop-C)
AVHR	Sensor
LAC	Acquisition Mode
26MAR2025	Date of Pass (ddmmmyyyy)
043415	Scene Start Time (hhmmss)
83119	Orbit Number
ST0000HTD	Product Code
1	Path
1	Row
F	Subscene

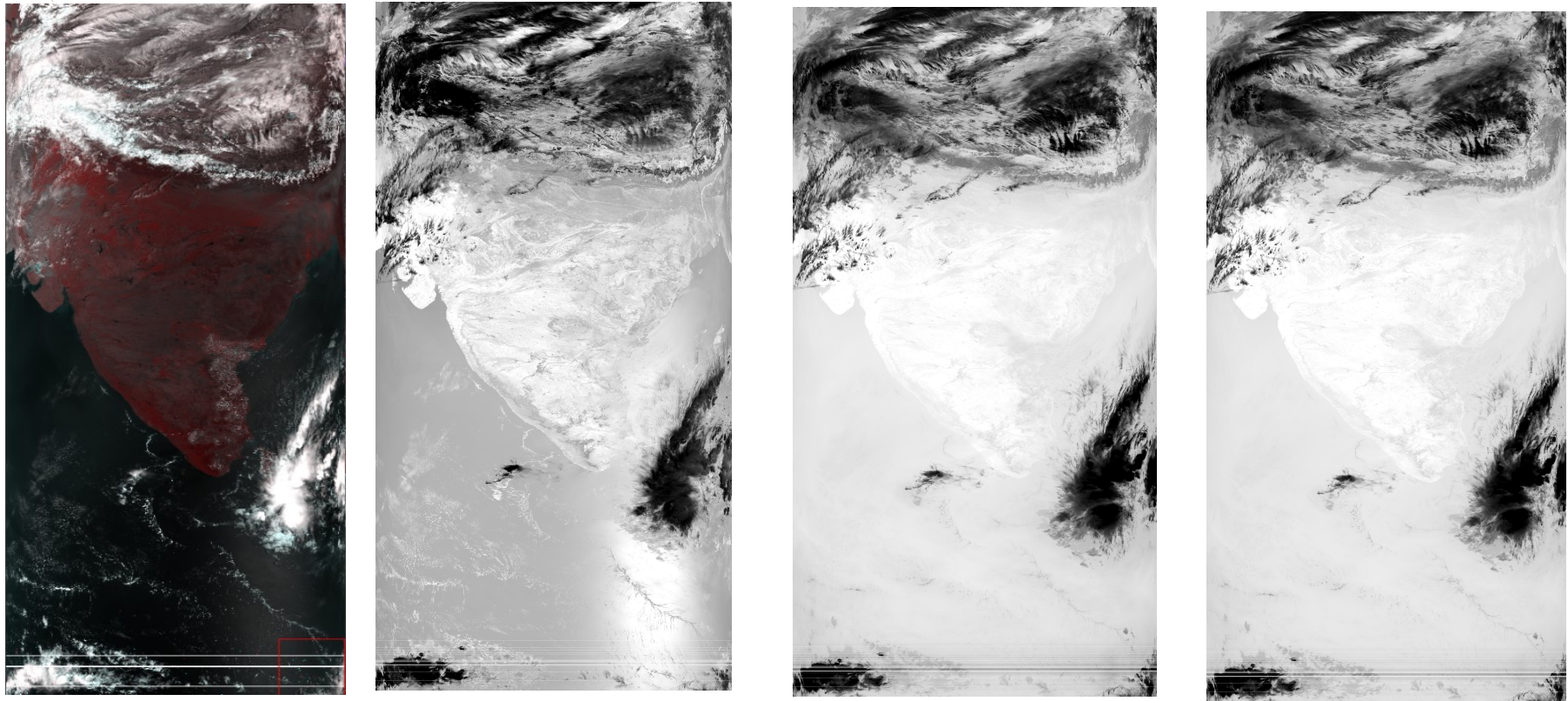


Metop-B, TOA Reflectance and BT, DOP: 11th May2025, Time: 03:26 UTC Left to Right: TOA Reflectance (RGB: Band2-1-1), TOA Reflectance: Band3A, BT: Band4, BT: Band5



Metop-C, TOA Reflectance and BT, DOP: 12thMay2025, Time: 3:56 UTC

Left to Right: TOA Reflectance (RGB-BAND-2-1-1), TOA Reflectance Band3A, BT:Band4 and BT:Band5

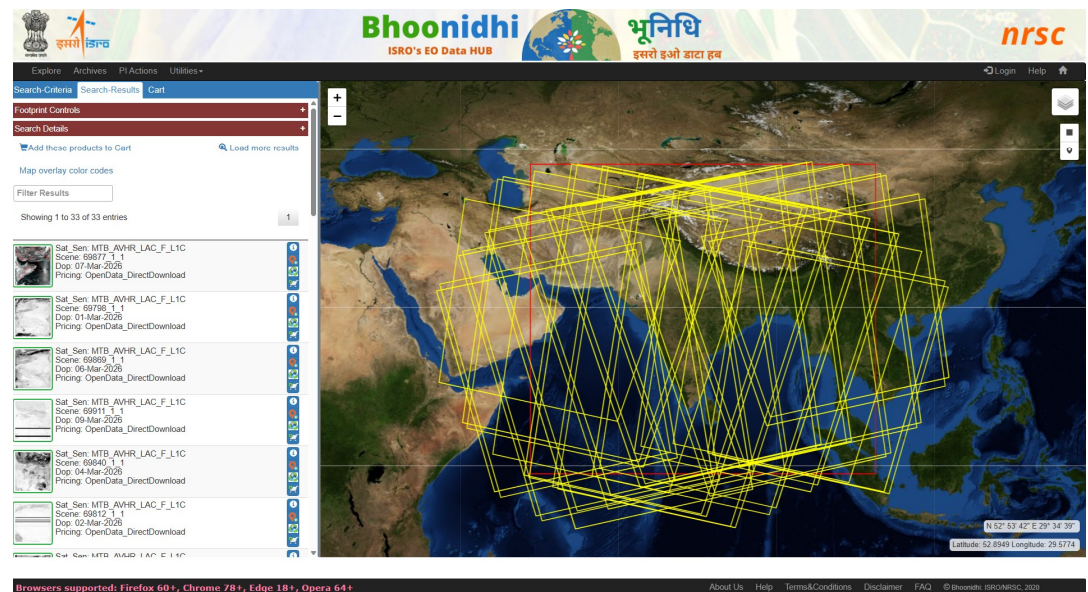


TOA Reflectance Ch-1, Ch-2 , Brightness Temperature Ch-3B,Ch-4,Ch-5(Left to Right)

❖ AVHRR Data is disseminated through Bhoonidhi.

❖ URL: <https://bhoonidhi.nrsc.gov.in>

❖ Metop-B data covered
over India For March-2026





Information Required



- ❖ Availability of globally projected 1.1 km AVHRR data.
- ❖ Geolocation accuracy of AVHRR onboard Metop satellites.
- ❖ Availability of TLE archive data for Metop-A, Metop-B, and Metop-C for processing historical datasets.

Thank You