Observation Monitoring

based on data
received/decoded at NCMRWF
(within operational data cut-off)
and NGFS GDAS

for 25122020 (1200 UTC)
Indian Observation Coverage
E_CYC

Data Coverage: Surface (25122020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 527
(42 & 43 Block)

Observation Frequency: ~ 3 hour
Data Coverage: Indian AWS (25122020 1200UTC +/- 3 Hrs) E_CYC

Total Number of Observations Received at NCMRWF: 1929

Observation Frequency: ~ 1 hour
Data Coverage: Indian ARG (25122029 1200UTC +/- 3 Hrs) E_CYC
Total Number of Observations Received at NCMRWF: 1642

Observation Frequency: ~ 1 hour
**Data Coverage: BUOY (25122020 1200UTC +/- 3 Hrs)**

Total Number of Observations Received at NCMRWF: 92

*Country code in GTS as:● INDIA(11) ○ USA(25) + FRANCE(51) □ OTHERS(5)*

*Observation Frequency: ~ 1 hour & ~ 3 hour (India)*
E_CYC

Data Coverage: Sondes (25/12/2020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 34
(42 & 43 Block)

TMPLND(8) PILOT(28) Reported, no ascent

Observation frequency: ~ 6 hour
Count for different types of observation (Over Indian Region) for the last 45 days (valid for 12 UTC) E_CYC

SYNOP
Avg=525
Today_Cnt=527
Dep=0. %

BUOY
Avg=112
Today_Cnt=92
Dep=-18. %

AWS+ARG
Avg=3646
Today_Cnt=3571
Dep=-2. %

RS/RW
Avg=12
Today_Cnt=12
Dep=0. %

PILOT
Avg=56
Today_Cnt=59
Dep=5. %

INSAT-3D AMV
Avg=149791
Today_Cnt=98958
Dep=-34. %
Global Observation Coverage
E_CYC

Data Coverage: Surface (25122020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 53481

LNSYS(15263)  SHIP(1921)  BUOY(9708)  METAR(16412)  MOBILE/AWS(3571)
LNSYS_BUFR(5609)  SHIP_BUFR(680)
Data Coverage: Sonde (25123020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 4803

TWPLND(457) TMPSHP(1) TMPDRP(0) TMPNOB(0) PILOT(235) PROFILER(4110)
TWPLND_BUF(103) PILOT_BUFR(1)
E_CYC

Data Coverage: AIRCFT (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 28253
Count for different types of observation (Global) for the last 45 Days (valid for 12 UTC) E_CYC

**SYNOP**
Avg=21135  
Today_Cnt=20869  
Dep=-1.%

**SHIP**
Avg=3187  
Today_Cnt=2901  
Dep=-9.%

**BUOY**
Avg=11123  
Today_Cnt=9708  
Dep=-13.%

**AIRCRAFT**
Avg=62882  
Today_Cnt=28253  
Dep=-55.%

**RS/RW**
Avg=578  
Today_Cnt=560  
Dep=-3.%

**PILOT**
Avg=237  
Today_Cnt=236  
Dep=-0.%

**AMV**
Avg=2040812  
Today_Cnt=1795445  
Dep=-12.%
E_CYC

Data Coverage: SCATSAT-1 & ASCAT winds (25122020 12UTC +/- 03Hrs)

SCATSAT-1 (68687)  ASCAT-A (77017)  ASCAT-B (78559)
Data Coverage: SAT RADIANCE (MARS+IMD MARS) (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 496260

NOAA15(0)  NOAA18(0)  NOAA18(84986)  NOAA18(411372)
Data Coverage: GPSRO (25122020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 194965
Atmospheric Motion Wind Vectors
F_CYC

Data Coverage: AMV IR (25122020 1200UTC +/- 03hrs)
Total Number of Observations Received at NCMRWF: 775720

GOES-15(0)   GOES-17(332761)   GOES-18(242016)   INSAT-3D(44341)
METEOSAT-6(42212)   METEOSAT-11(45469)   HIMAWARI-8(85921)
Data Coverage: AMV VIS (25122020 1200UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 516713

GOES-15(0)   GOES-18(323732)   GOES-17(22160)   INSAT-3D(6837)
METEOSAT-5(20835)  METEOSAT-11(62848)  HIMAWARI-8(2401)
AMV IR POLAR NH (2512020 1200UTC +/- 03Hrs) E_CYC
Total Number of Observations Received at NCMRWF: 8791

METOP-A (2845) METOP-B (1677) NPP (0) MODIS/Aqua (0)
NOAA-15 (332) MODIS/Terra (0) NOAA-18 (0) NOAA-19 (647)
AMV IR POLAR SH (25/12/2020 1200 UTC +/- 03 Hrs) E_CYCLE

Total Number of Observations Received at NCMRWF: 1488

<table>
<thead>
<tr>
<th>Satellite/Instrument</th>
<th>Count</th>
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<tbody>
<tr>
<td>METOP-A (0)</td>
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<td>METOP-B (1127)</td>
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<tr>
<td>NOAA-18 (381)</td>
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Diagram of polar region with data points distributed across the map.
AMV WV POLAR NH (25122020 1200UTC +/- 03Hrs) E_CYC
Total Number of Observations Received at NCMWF:

MODIS/Aqua()  MODIS/Terra()
ANV W V POLAR SH (25122020 1200UTC +/- 08Hrs) E_CYC

Total Number of Observations Received at NCMRF:

MODIS/Aqua() MODIS/Terra()
Radiance Observations
Data Coverage: Humidity Sounders (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 239940
E_CYC

Data Coverage: AMSUA (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 29973
E_CYC

Data Coverage: HIRS (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 231214
E_CYC
Geostationary Clear Sky Radiance (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 70401

METEOSAT—11(70401)  METEOSAT—8(0)  GEMS—15(0)
E_CYC

Data Coverage: IASI (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 10812
E_CYC
Data Coverage: AIRS (25122020 1200UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 0
SCATTEROMETER WIND VECTORS

RECEIVED AT NCMRWF (20201225 12Z)
OBSERVATION—FIRST GUESS (25122020 12 UTC): NCMRWF

ASCAT: Metop-A
ASCAT: Metop-B

SCATSAT-1 (Indian)
INSAT-3D

ATMOSPHERIC MOTION VECTORS (AMV)

{ INFRA-RED WINDS [IR (10.8 & 3.8)]
    WATER VAPOUR WINDS (WV)
    VISIBLE WINDS (VIS) }

AMV DEVIATION
(Observation – First Guess)
INSAT–3D ATMOSPHERIC MOTION VECTORS (IR, 10.8) (25122020 1200UTC)

Low Level (Below 700 hPa)

Mid Level (700 – 401 hPa)

High Level (Above 400 hPa)
INSAT–3D ATMOSPHERIC MOTION VECTORS (IR,3.8) (25122020 1200UTC)

Low Level (Below 700 hPa)

Mid Level (700 – 401 hPa)
INSAT–3D ATMOSPHERIC MOTION VECTORS (WV & VIS) (25122020 1200UTC)

WV, High Level (Above 400 hPa)  VIS, Low Level (Below 700 hPa)
INSAT–3D ATMOSPHERIC MOTION VECTORS (IR, 10.8) DEVIATION (25122020 1200UTC)

Low Level (Below 700 hPa)  Mid Level (700 – 401 hPa)

High Level (Above 400 hPa)
INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.B) DEVIATION (2512202D 1200JTC)

Low Level (Below 700 hPa)  Mid Level (700 - 401 hPa)
INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (25122020 1200UTC)

WV, High Level (Above 400 hPa)    VIS, Low level (Below 700 hPa)
METEOSAT-8 ATMOSPHERIC MOTION VECTORS (IR) (25122020 1200UTC)

Low level (Below 700 hPa)

Mid Level (700 - 400 hPa)

High Level (Above 400 hPa)
METEOSAT–8 ATMOSPHERIC MOTION VECTORS (WV & VIS) (25122020 1200UTC)

WV, High Level (Above 400 hPa)

VIS, Low Level (Below 700 hPa)
METEOSAT-8 ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (25122020 1200UTC)

WV, High Level (Above 400 hPa)

VIS, Low Level (Below 700 hPa)
Indian Doppler Weather Radar

Data Monitoring
Volume of DWR observations received at NCMRWF

Date: 2020-12-25 at 12 UTC
Quality of Indian RS/RW Observations

Maximum height reported by RS/RW ascents

Temperature and Zonal Wind Rejections by NGFS GDAS
Observed (---) and 1st-guess (---) Temperature (Deg C) for 12UTC 25122020

× --- denotes the rejection of observation by NGFS GDAS

(plotted for standard pressure levels only)
Observed ( — ) and 1st-guess ( — — ) Zonal wind (m/s) for 12UTC 25122020

\( \times \) — — denotes the rejection of observation by NGFS GDAS

( plotted for standard pressure levels only )