



Observation Monitoring

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

for 02072024 (0600 UTC)



Indian Observation Coverage

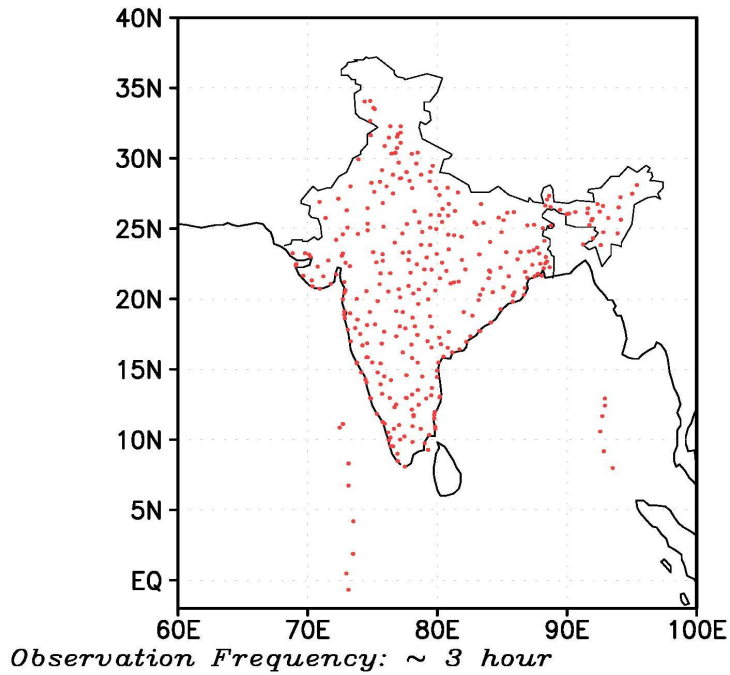


NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: Surface (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 521
(42 & 43 Block)

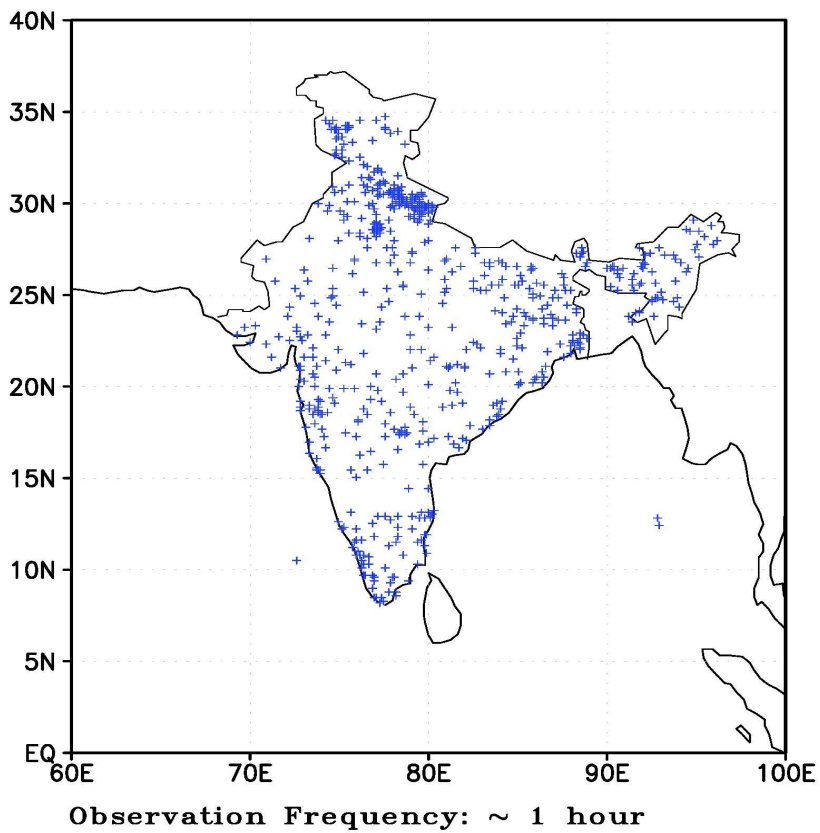
SYNOP(521)





NCMRWF OBSERVATIONS MONITORING

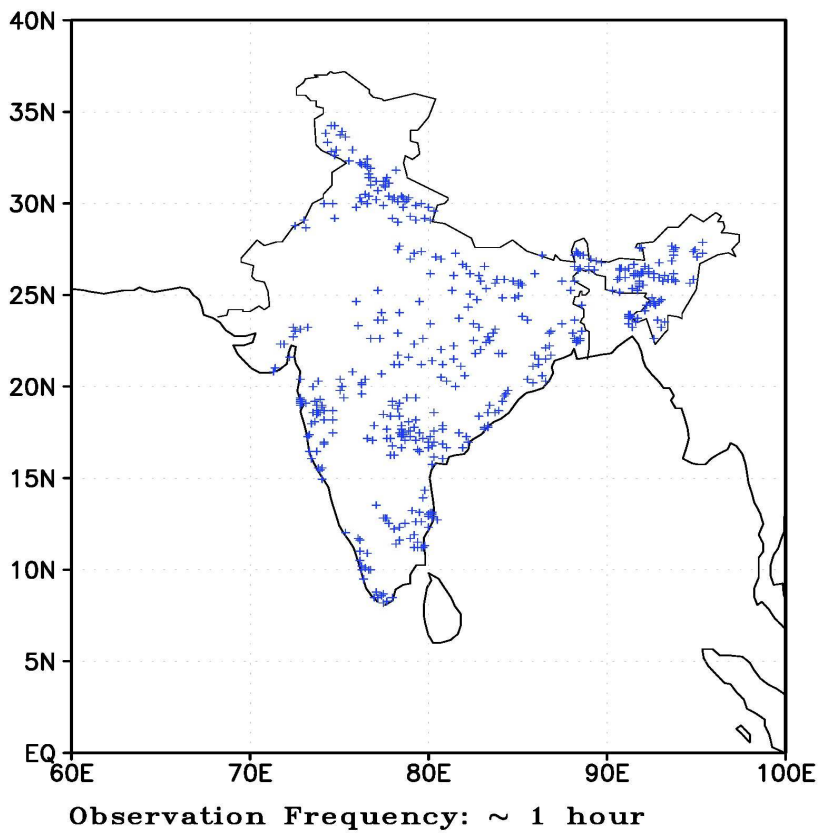
Data Coverage: Indian AWS (02072024 0600UTC +/- 3 Hrs) U_CYC
Total Number of Observations Received at NCMRWF: 3607





NCMRWF OBSERVATIONS MONITORING

Data Coverage: Indian ARG (02072024 0600UTC +/- 3 Hrs) U_CYC
Total Number of Observations Received at NCMRWF: 2585





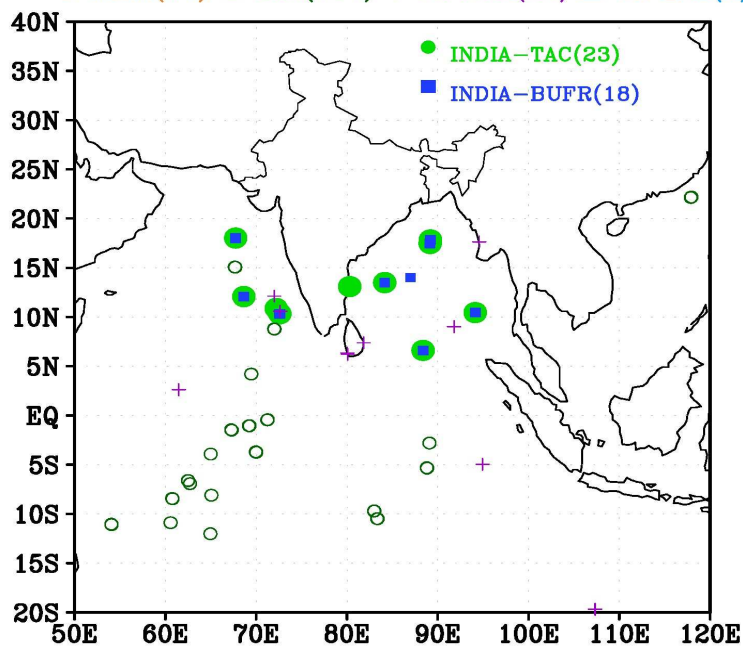
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: BUOY (02072024 0600UTC +/- 3 Hrs)

Total Number of Observations Received at NCMRWF: 193

country code in GTS as ● INDIA(41) ○ USA(101) + FRANCE(51) □ OTHERS(0)



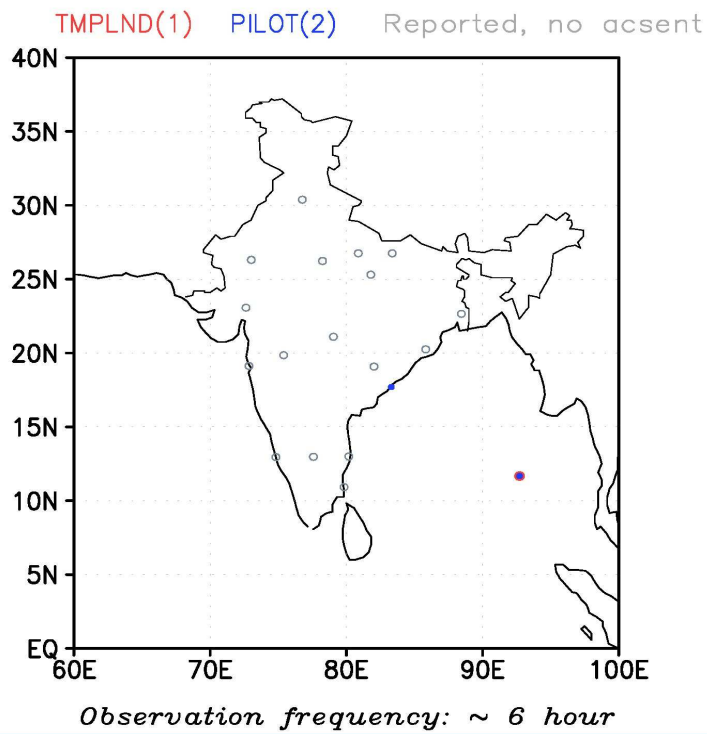
Observation Frequency: ~ 1 hour & ~ 3 hour (India)



NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: Sonde (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 3
(42 & 43 Block)

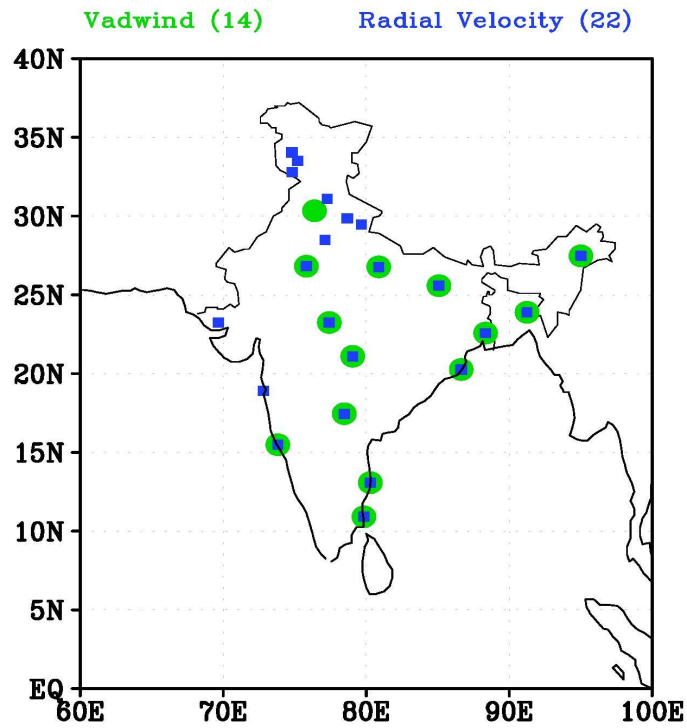




NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: Indian DWR Stations (02072024 0600UTC +/- 03Hrs)



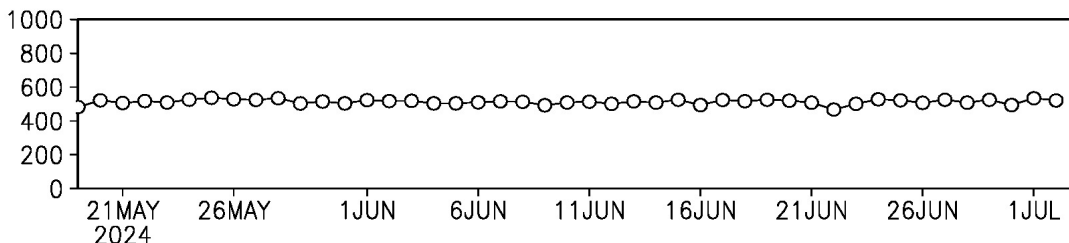


NCMRWF OBSERVATIONS MONITORING

Count for different types of observation (Over Indian Region)
for the last 45 days (valid for 06 UTC) U_CYC

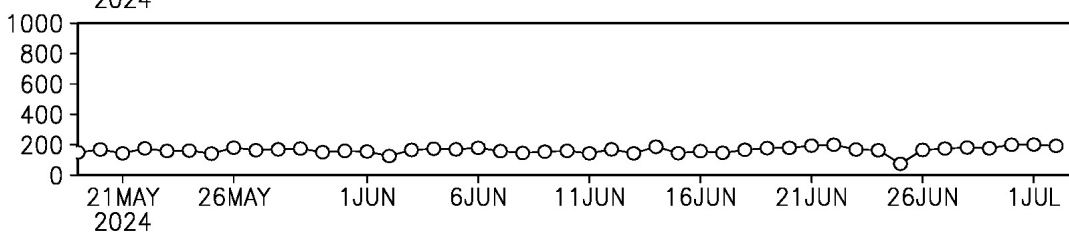
SYNOP

Avg=522
Today_Cnt=521
Dep=-0. %



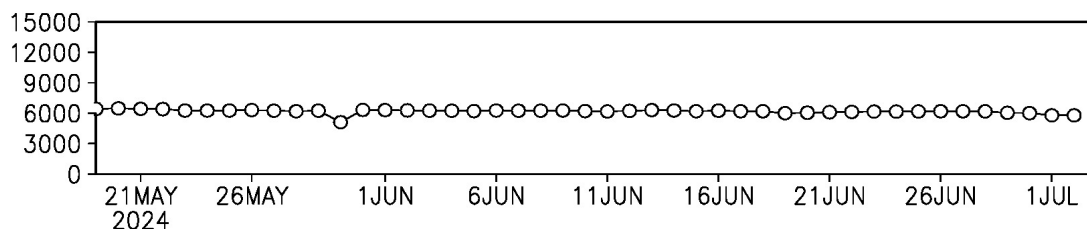
BUOY

Avg=177
Today_Cnt=193
Dep=9. %



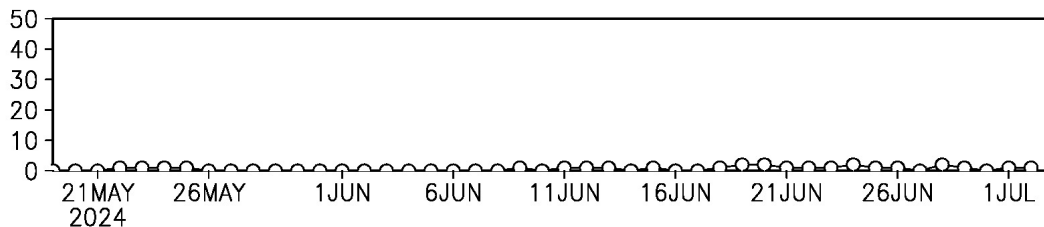
AWS+ARG

Avg=6289
Today_Cnt=5788
Dep=-8. %



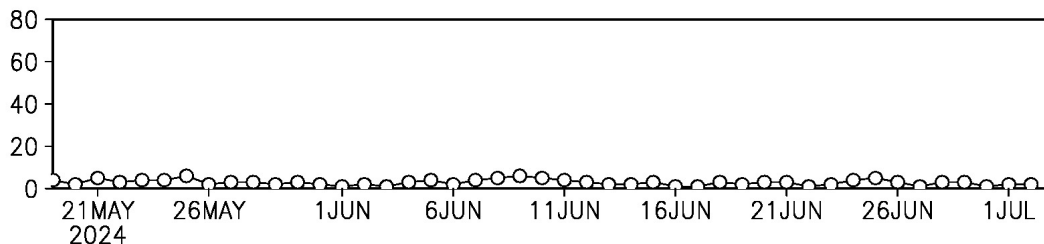
RS/RW

Avg=0
Today_Cnt=1
Dep=Inf %



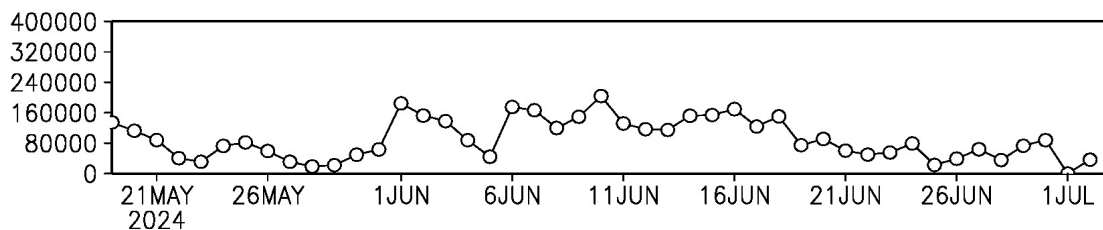
PILOT

Avg=3
Today_Cnt=2
Dep=-33. %



INSAT-3D AMV

Avg=118655
Today_Cnt=29080
Dep=-75. %





Global Observation Coverage



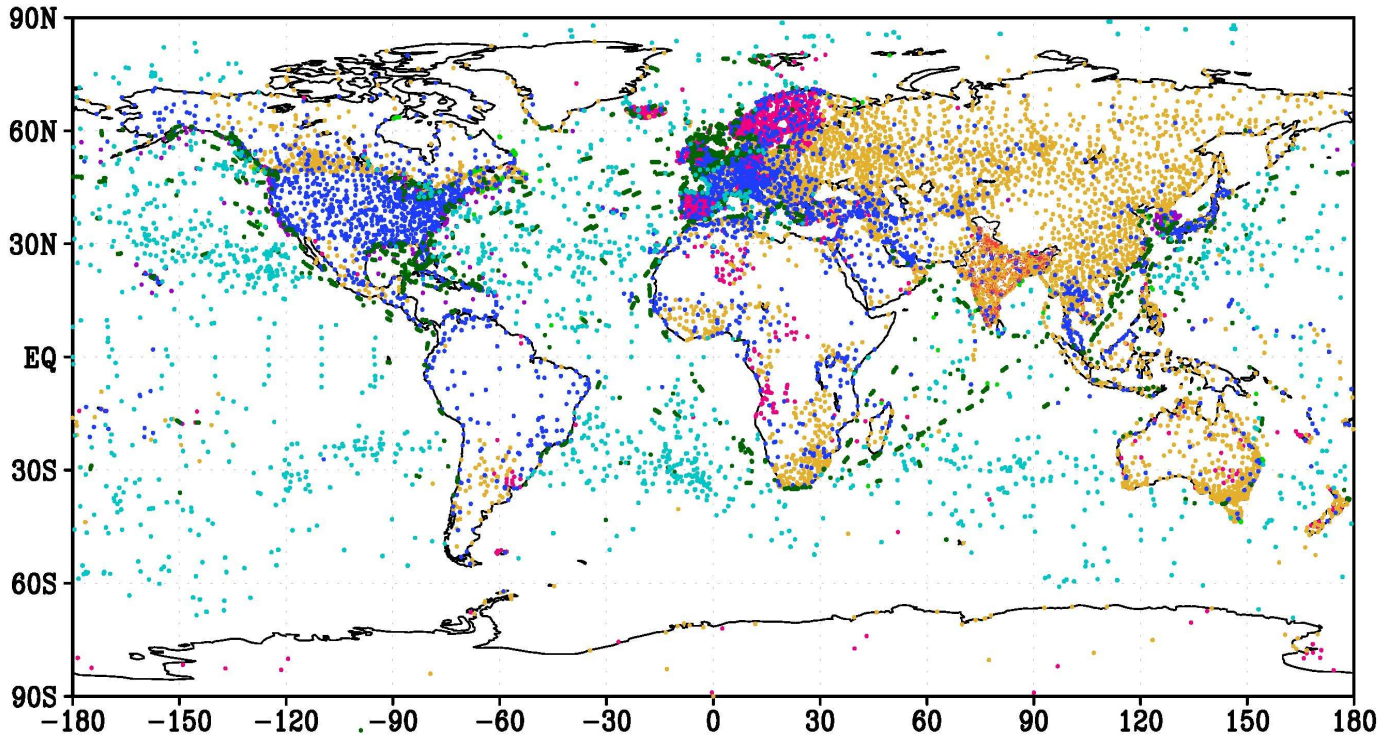
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: Surface (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 79261

LNDSYN(16923) SHIP(3532) BUOY(6827) METAR(22114) MOBILE/AWS(6192)

LNDSYN_BUFR(10254) SHIP_BUFR(4070) BUOY_BUFR(9349)





NCMRWF OBSERVATIONS MONITORING

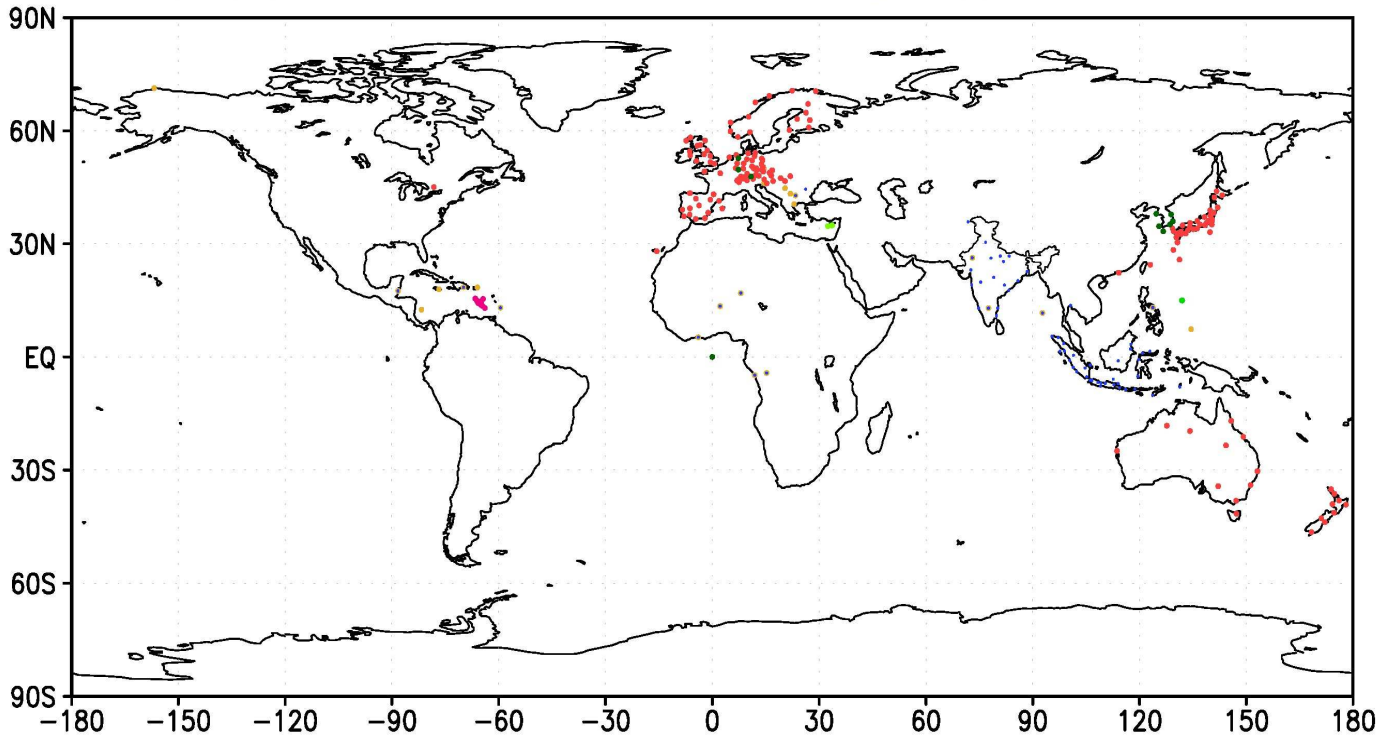
U_CYC

Data Coverage: Sonde (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 5123

TMPLND(25) TMPSHP(2) TMPDRP(14) TMPMOB(0) PILOT(67) PROFILER(5015)

TMPLND_BUF(14)

PILOT_BUF(2)





NCMRWF OBSERVATIONS MONITORING

U_CYC

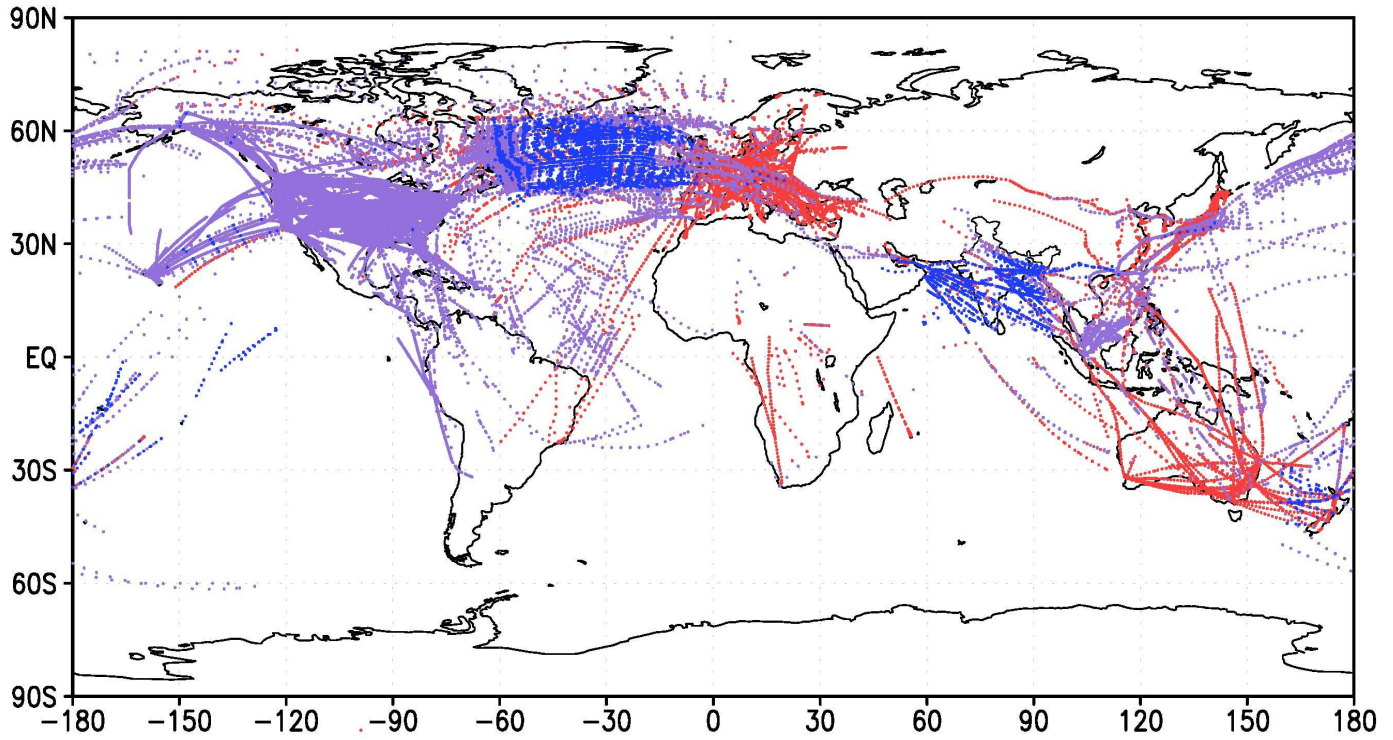
Data Coverage: AIRCFT (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 115172

AIREP(7404)

AMDAR(34221)

WIGOS-AMDAR(73547)



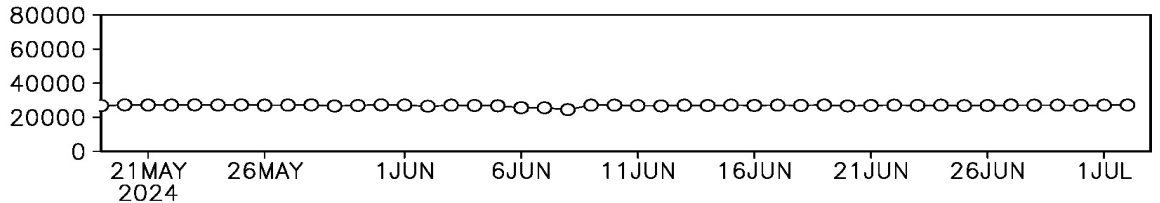


NCMRWF OBSERVATIONS MONITORING

Count for different types of observation (Global)
for the last 45 Days (valid for 06 UTC) U_CYC

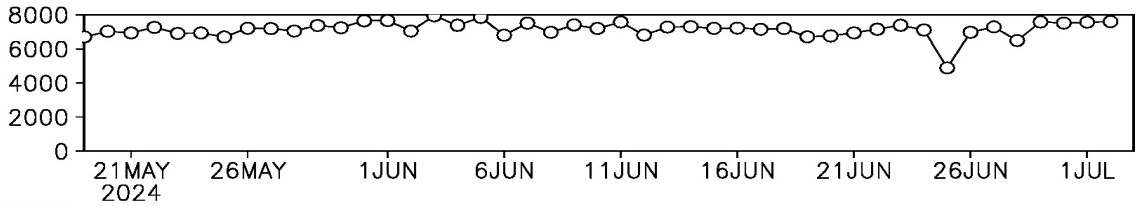
SYNOP

Avg=27079
Today_Cnt=27177
Dep=0. %



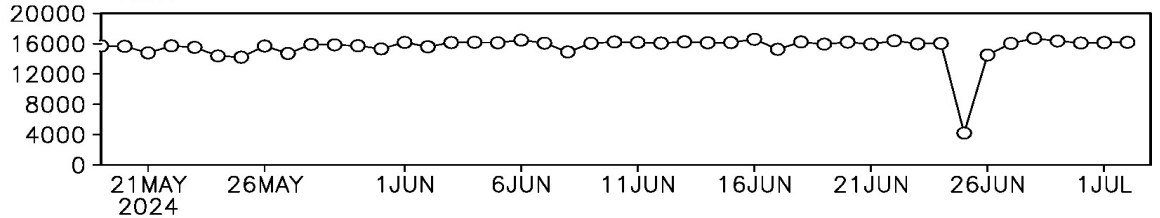
SHIP

Avg=7397
Today_Cnt=7602
Dep=3. %



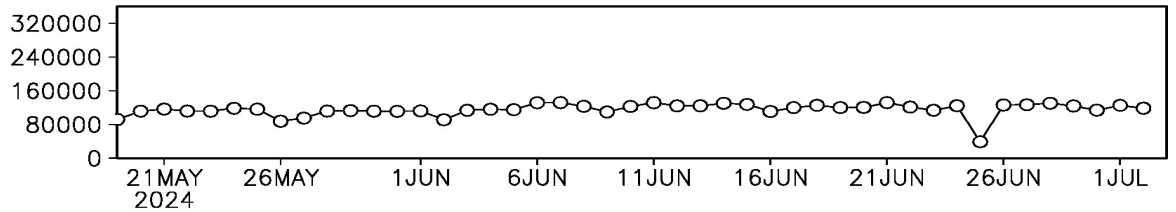
BUOY

Avg=16072
Today_Cnt=16176
Dep=1. %



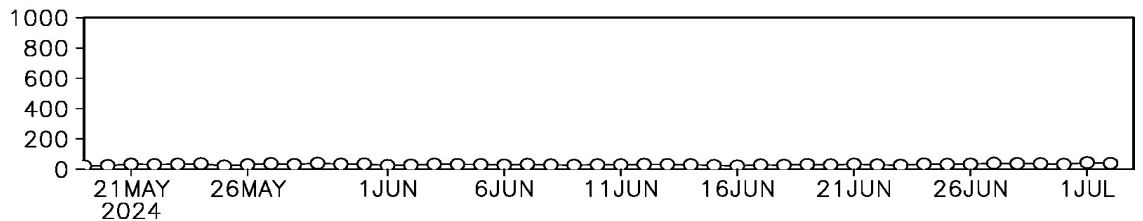
AIRCRAFT

Avg=121320
Today_Cnt=115172
Dep=-5. %



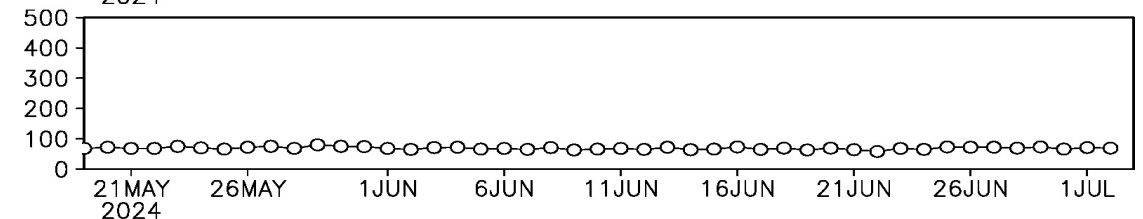
RS/RW

Avg=34
Today_Cnt=39
Dep=15. %



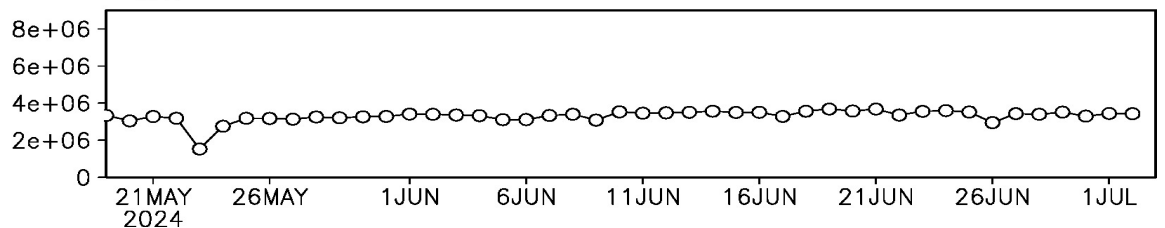
PILOT

Avg=71
Today_Cnt=69
Dep=-3. %



AMV

Avg=3468930
Today_Cnt=3424136
Dep=-1. %





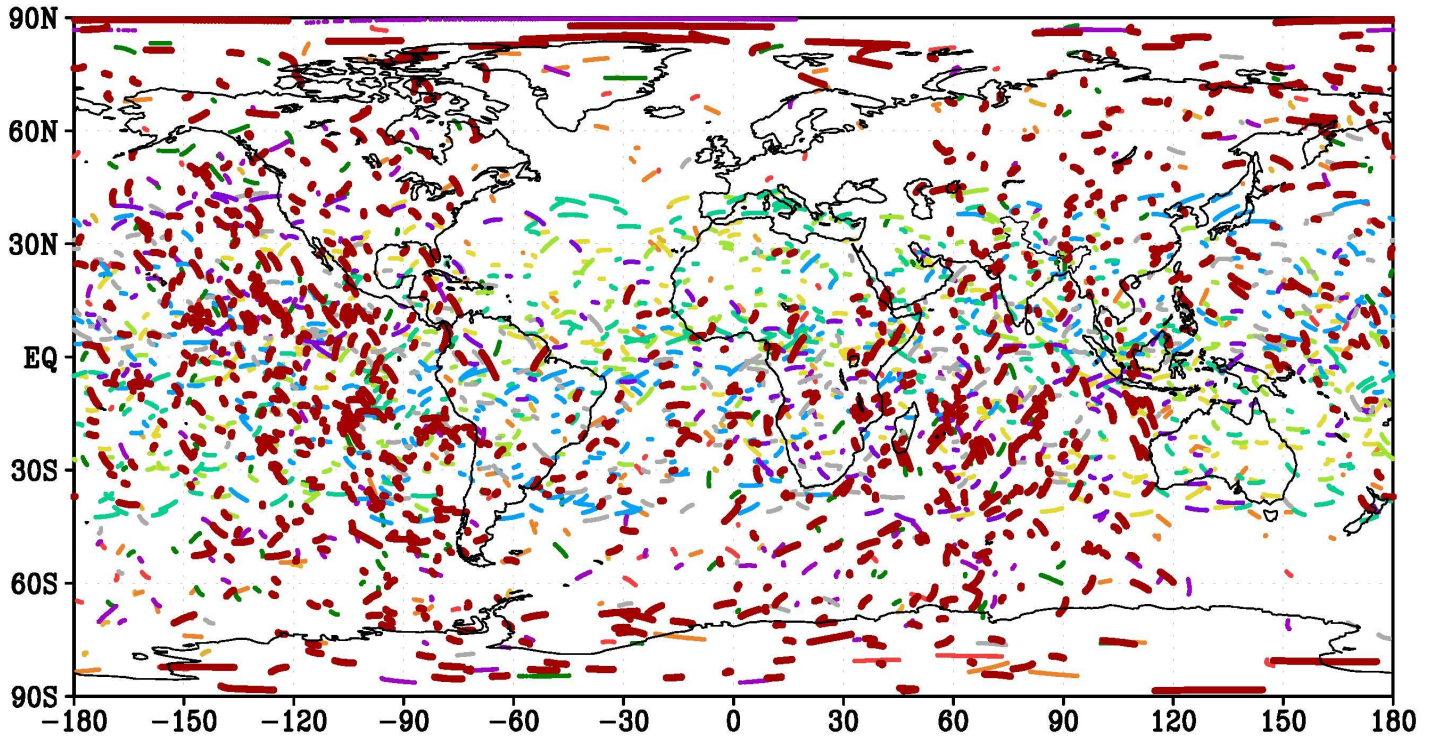
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage:GNSSRO (02072024 0600UTC +/-03Hrs)

Total Number of Observations Received at NCMRWF: 664662

- | | | | | |
|-------------------|-------------------|-------------------|-------------------|-------------------|
| TerraSAR-X(13962) | TenDEM-X(7347) | FY-3D(26397) | SPIRE(218578) | COSMIC-2E1(52002) |
| COSMIC-2E2(55325) | COSMIC-2E3(67354) | COSMIC-2E4(57234) | COSMIC-2E5(46841) | COSMIC-2E6(38858) |
| METOP-B(35243) | METOP-C(33221) | PAZ(12300) | KOMPSAT-5(0) | GeoOptics(0) |





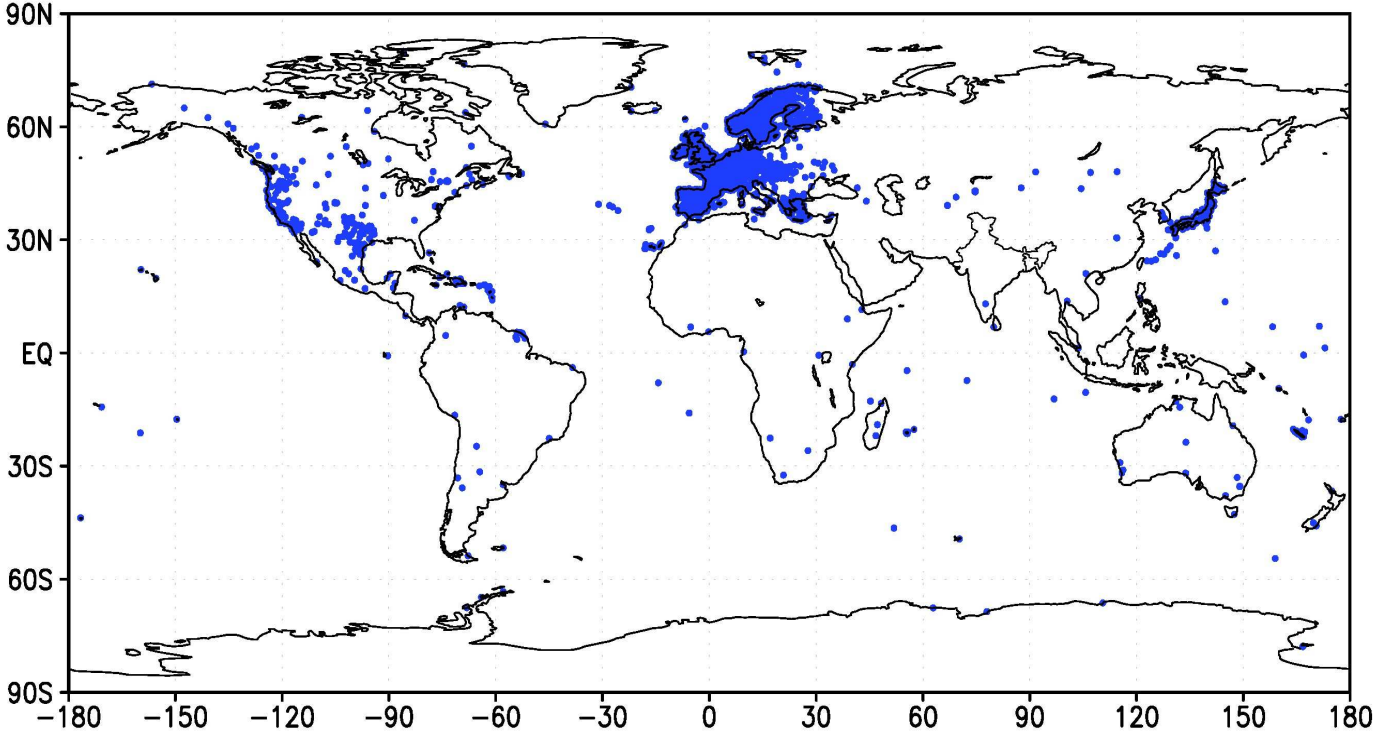
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: GNSS-IPW (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 13752

GPSIPW(13752)





NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: OZONE (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 54092

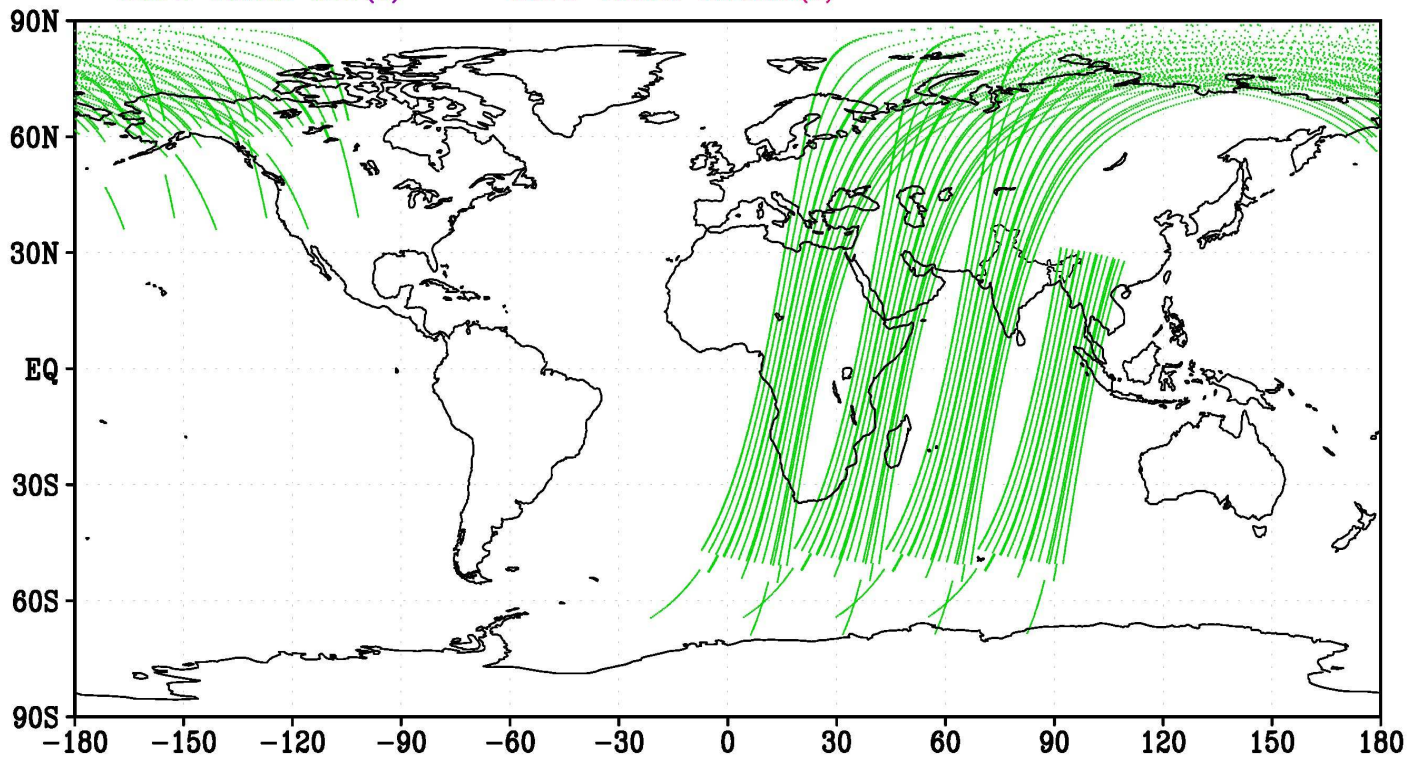
GOME-METOP-B(54092)

OMPS-Nadir-NPP(0)

OMPS-Nadir-NOAA20(0)

OMPS-TotCol-NPP(0)

OMPS-TotCol-NOAA20(0)





NCMRWF OBSERVATIONS MONITORING

U_CYC

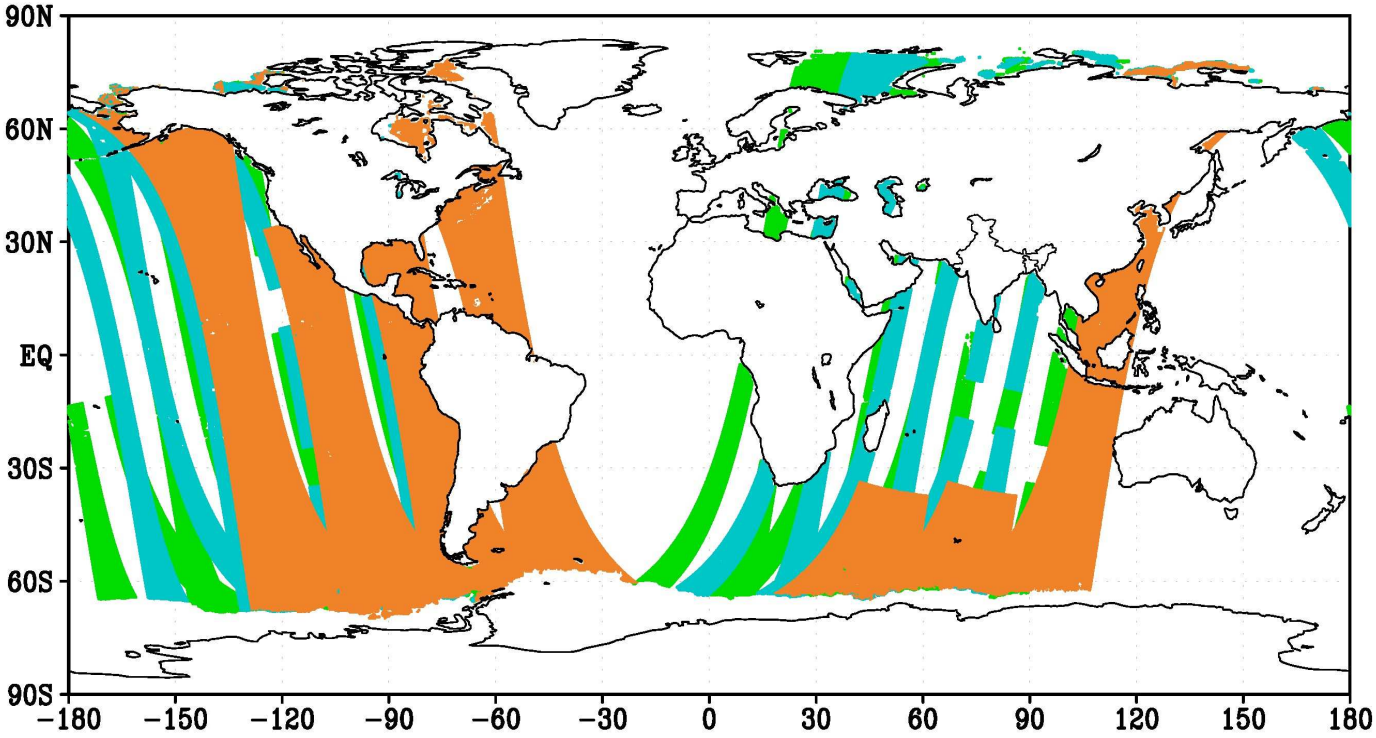
Data Coverage: Scatterometer winds (02072024 06UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1517442

ASCAT (METOP-B) (454482)

ASCAT (METOP-C) (435074)

SCATSAT (OCEANSAT-3) (627886)





Atmospheric Motion Wind Vectors



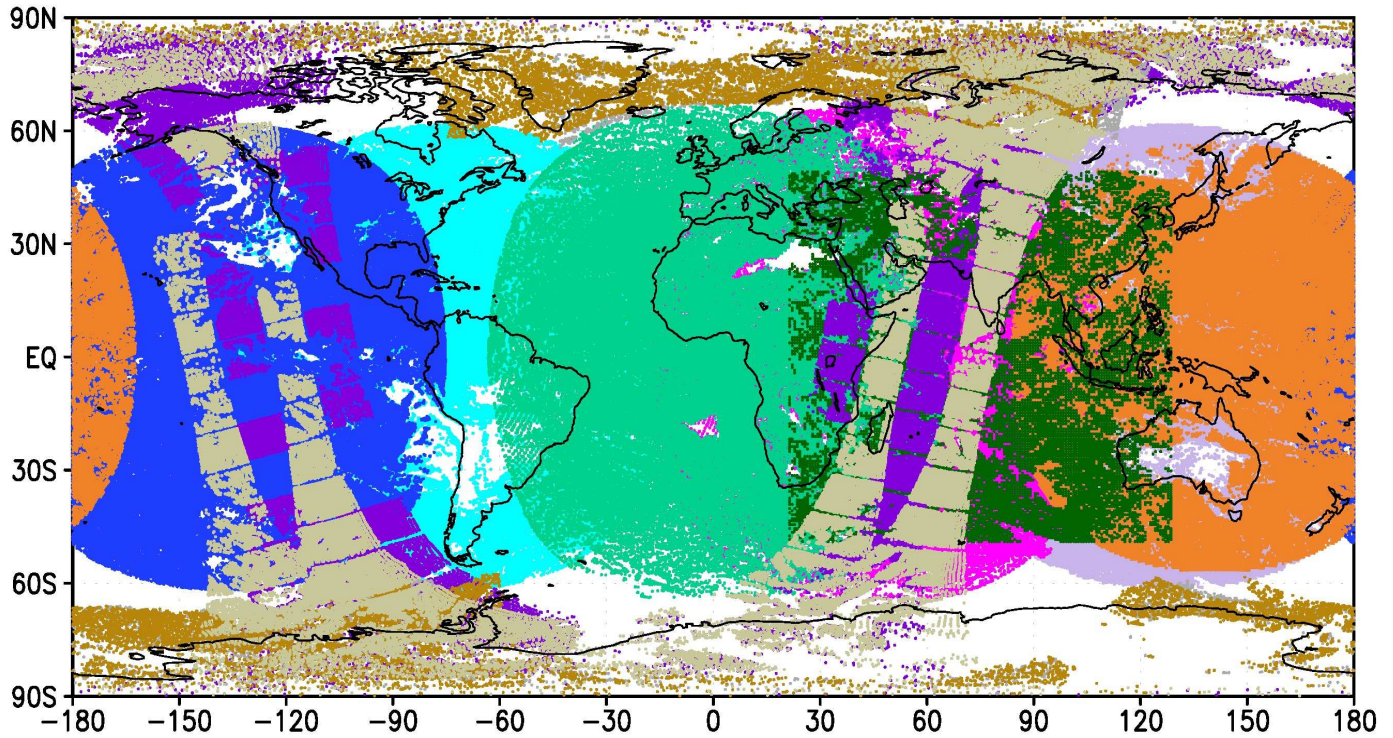
NCMRWF OBSERVATIONS MONITORING

U_CYC

Total Number of Observations Received at NCMRWF: 3424135

Data Coverage: AMV_ALL (02072024 0600UTC +/- 03Hrs)

GOES-16(884049)	GOES-18(912947)	NOAA-18(0)	NOAA-19(0)	METEOSAT-9(190422)
METEOSAT-11(0)	NPP(12096)	NOAA-20(23873)	MODIS/Terra(0)	MODIS/Aqua(0)
METOP-B(55826)	METOP-C(52886)	INSAT-3D(0)	INSAT-3DR(29079)	HIMAWARI-9(174358)
NOAA-15(0)	COMS-2(917878)	METEOSAT-10(147483)		



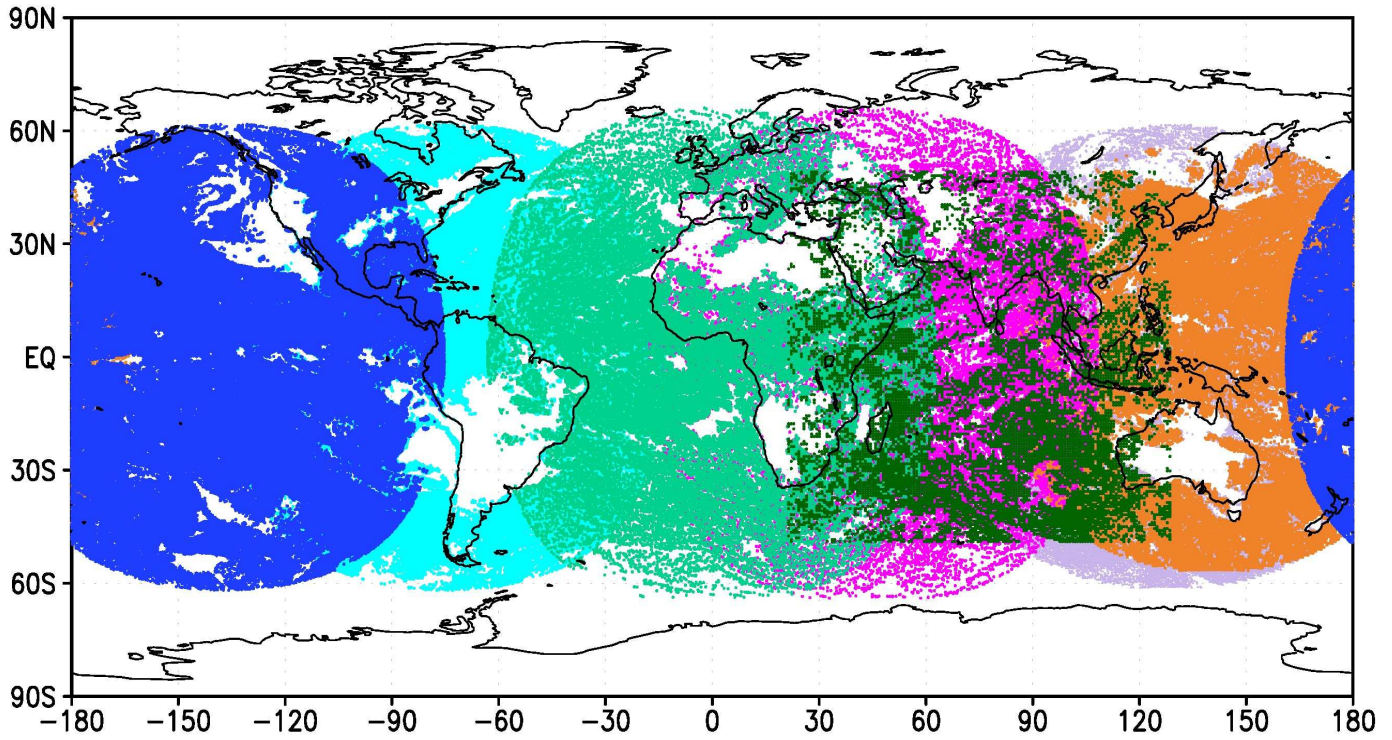


NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: AMV IR (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 1714191

- GOES-16(549716)
- GOES-18(692555)
- INSAT-3DR(15170)
- INSAT-3D(0)
- COMS-2(299834)
- METEOSAT-9(42039)
- METEOSAT-10(43274)
- METEOSAT-11(0)
- HIMAWARI-9(71603)



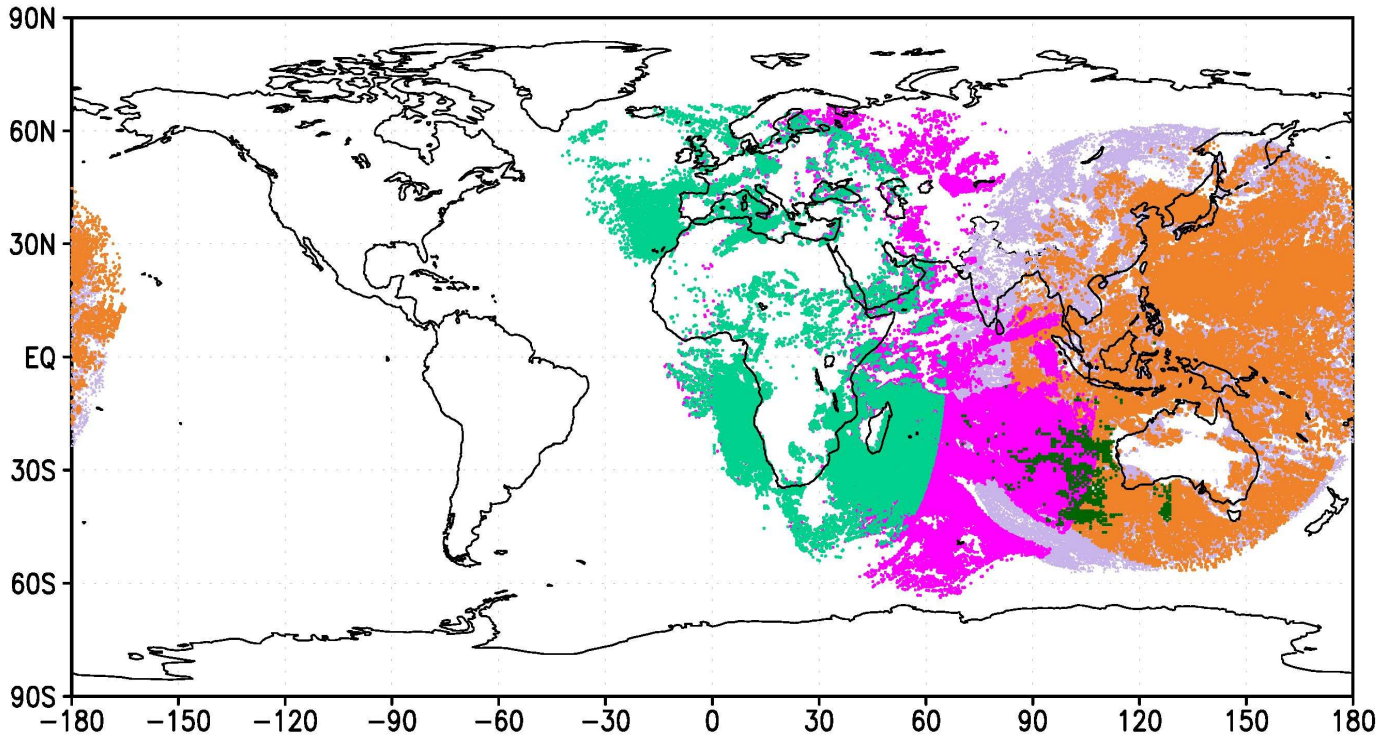


NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: AMV VIS (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 469768

- GOES-16(0)
- GOES-18(0)
- INSAT-3DR(957)
- INSAT-3D(0)
- COMS-2(320372)
- METEOSAT-9(72884)
- METEOSAT-10(30833)
- METEOSAT-11(0)
- HIMAWARI-9(44722)



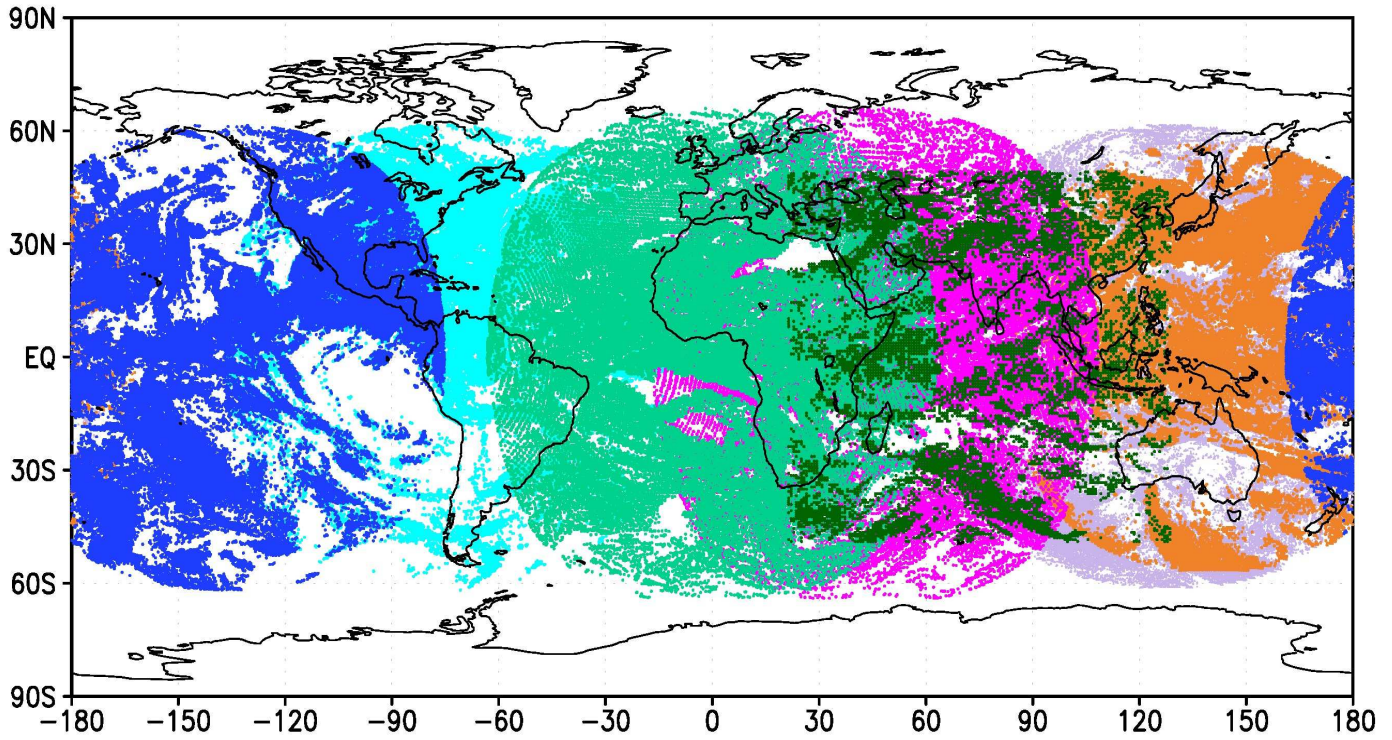


NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: AMV WV (02072024 0600UTC +/- 03Hrs)
Total Number of Observations Received at NCMRWF: 1072254

GOES-16(334333) GOES-18(220392) INSAT-3DR(12949) INSAT-3D(0) COMS-2(297672)
METEOSAT-9(75499) METEOSAT-10(73376) METEOSAT-11(0) HIMAWARI-9(58033)



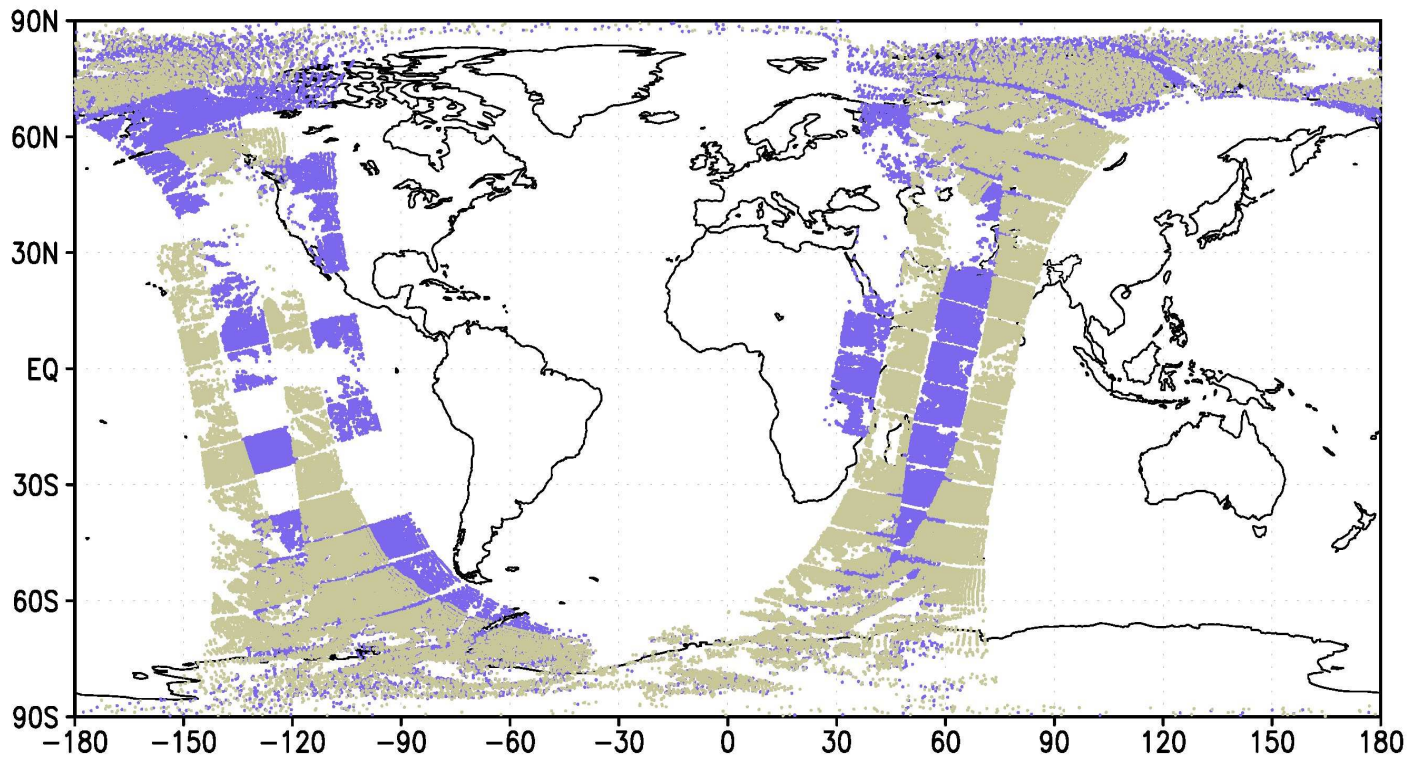


NCMRWF OBSERVATIONS MONITORING

AMV POLAR (02072024 0600UTC +/- 03Hrs) U_CYC

Total Number of Observations Received at NCMRWF: 108712

- NOAA-15(0)
- NOAA-18(0)
- NOAA-19(0)
- MODIS/Aqua(0)
- MODIS/Terra(0)
- METOP-B(0)
- DUAL-MetOp-B(55826)
- DUAL-MetOp-C(52886)



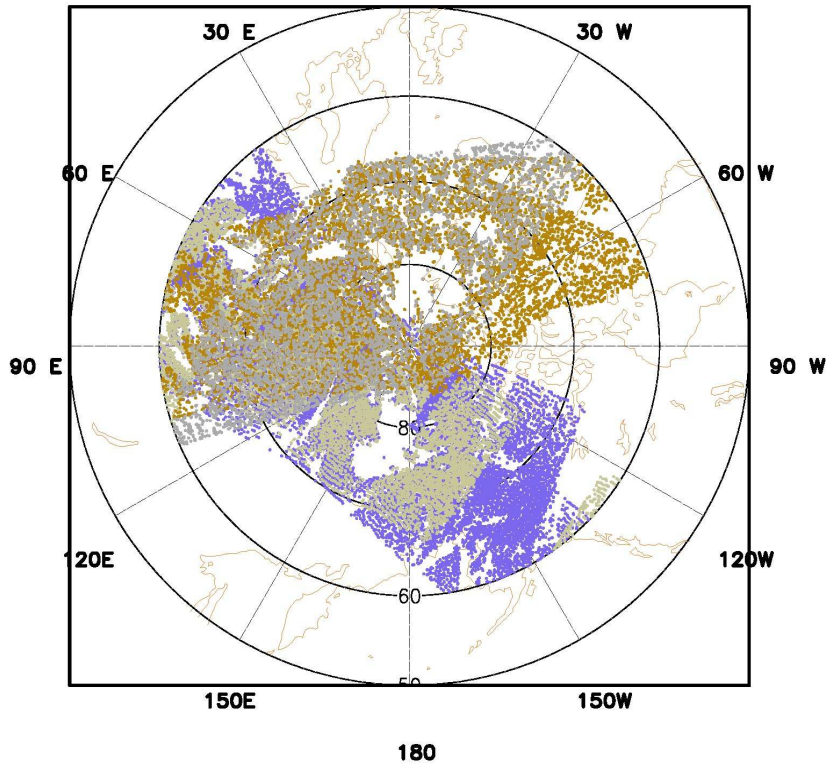


NCMRWF OBSERVATIONS MONITORING

AMV IR POLAR NH (02072024 0600UTC +/- 03Hrs) U_CYC

Total Number of Observations Received at NCMRWF: 53904

- NOAA-15(0)
- NOAA-18(0)
- NOAA-19(0)
- NOAA-20(12169)
- NPP(6260)
- MODIS/Aqua(0)
- MODIS/Terra(0)
- METOP-B(0)
- METOP-C(7443)
- DUAL-METOP(16367)



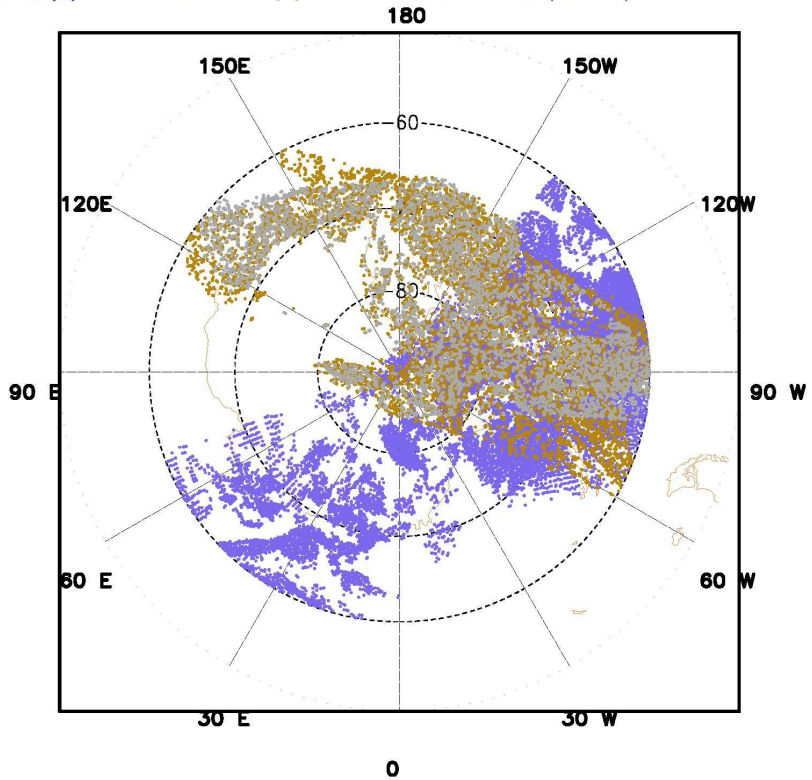


NCMRWF OBSERVATIONS MONITORING

AMV IR POLAR SH (02072024 0600UTC +/- 03Hrs) U_CYC

Total Number of Observations Received at NCMRWF: 46042

NOAA-15(0)	NOAA-18(0)	NOAA-19(0)	NOAA-20(11402)
NPP(5699)	MODIS/Aqua(0)	MODIS/Terra(0)	
METOP-B(0)	METOP-C(0)	DUAL-METOP(17671)	





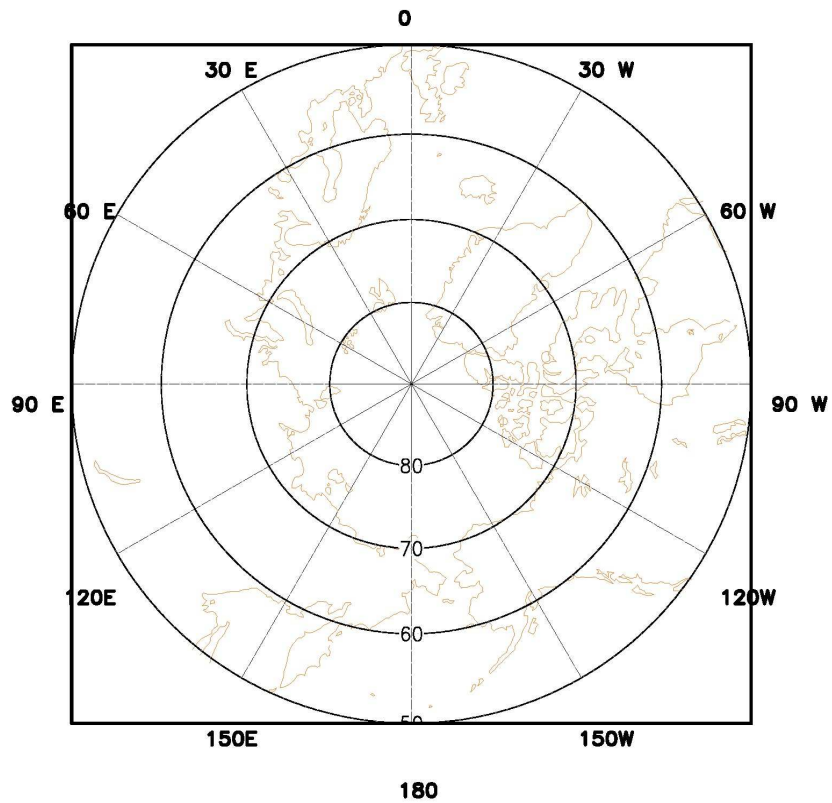
NCMRWF OBSERVATIONS MONITORING

AMV WV POLAR NH (02072024 0600UTC +/- 03Hrs) U_CYC

Total Number of Observations Received at NCMRWF: 0

MODIS/Aqua(0)

MODIS/Terra(0)





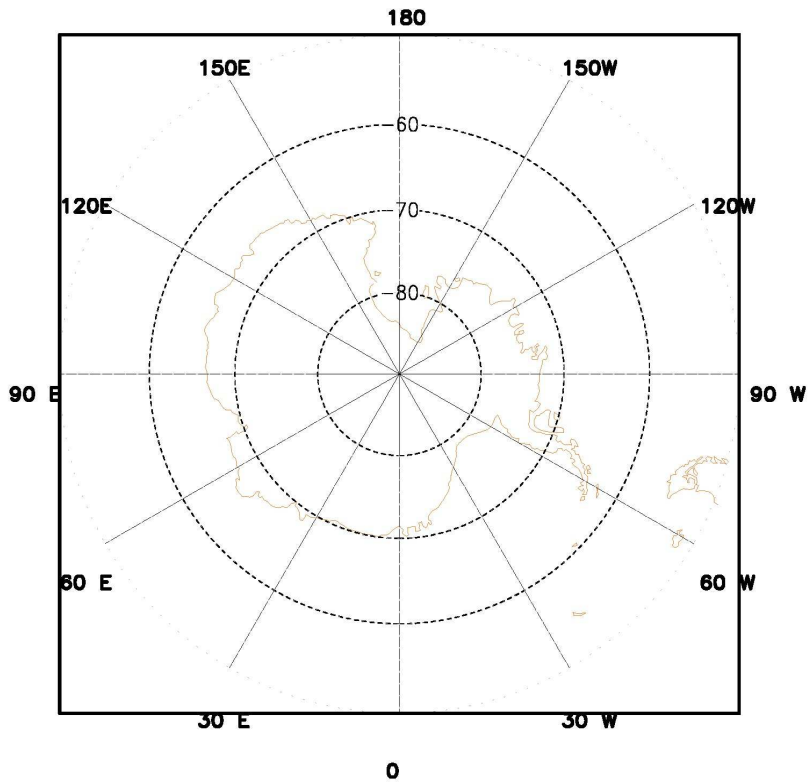
NCMRWF OBSERVATIONS MONITORING

AMV WV POLAR SH (02072024 0600UTC +/- 03Hrs) U_CYC

Total Number of Observations Received at NCMRWF: 0

MODIS/Aqua(0)

MODIS/Terra(0)





Radiance Observations



NCMRWF OBSERVATIONS MONITORING

U_CYC

Geostationary Radiance (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 937906

METEOSAT-9(151024)

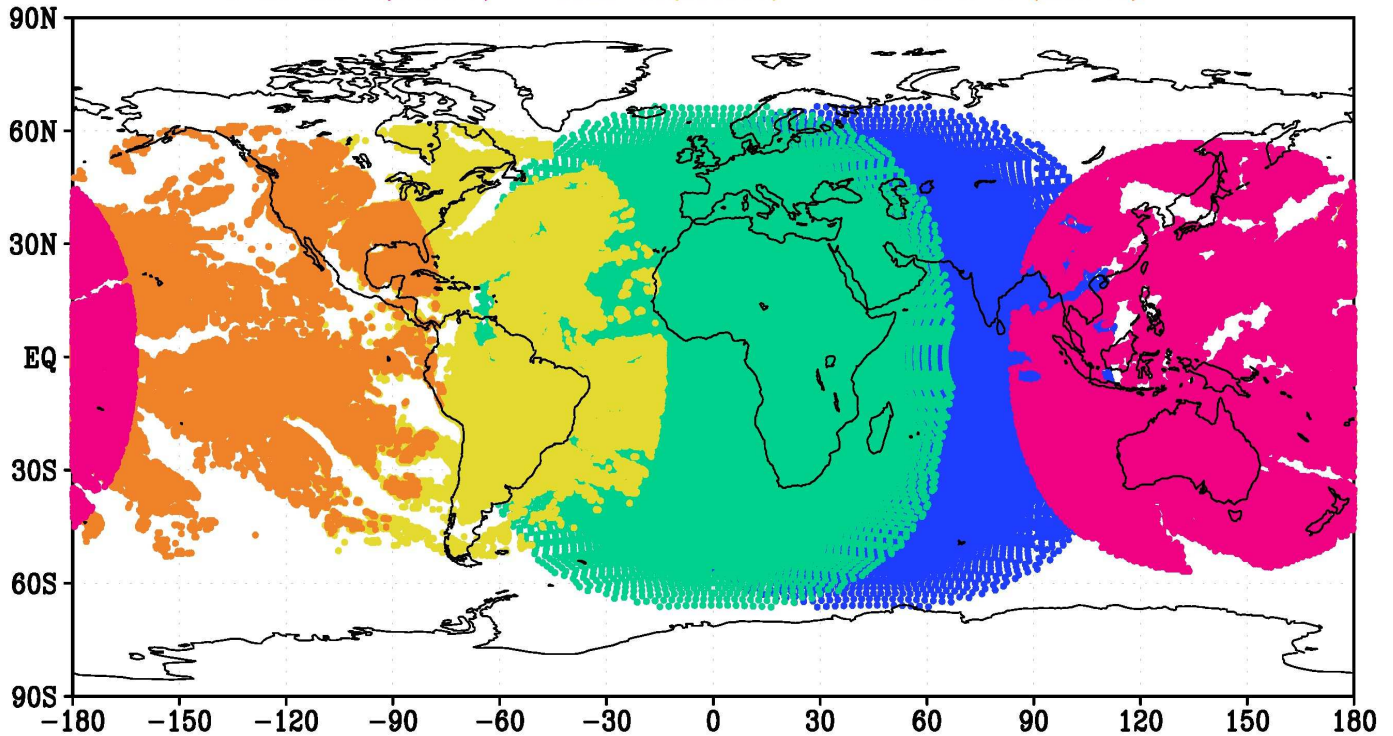
METEOSAT-10(151024)

METEOSAT-11(0)

HIMAWARI-9(151714)

GOES-16(260994)

GOES-18(223150)





NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: SAT RADIANCE (EARS+IMD RARS) (02072024 0600UTC +/- 03Hrs)

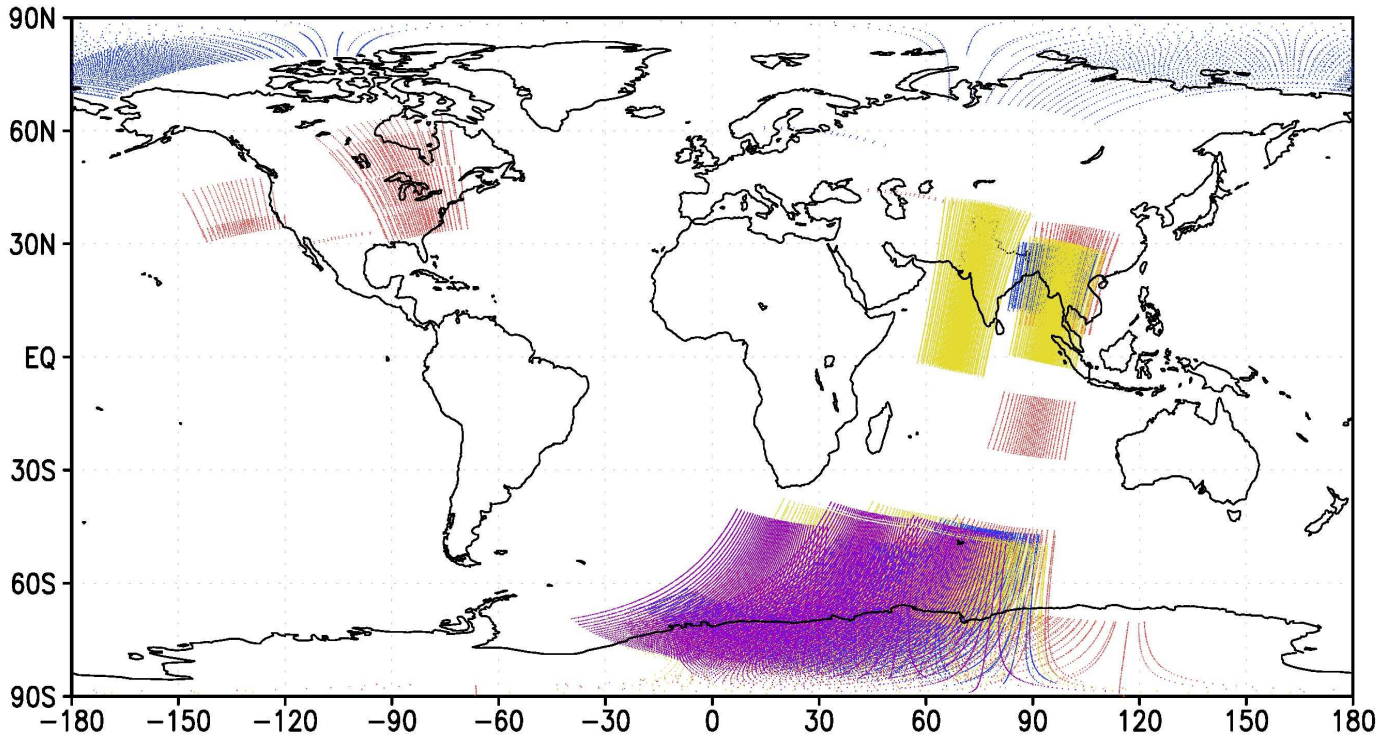
Total Number of Observations Received at NCMRWF: 334450

NOAA18(40826)

NOAA19(87120)

METOP-B(117614)

METOP-C(88890)





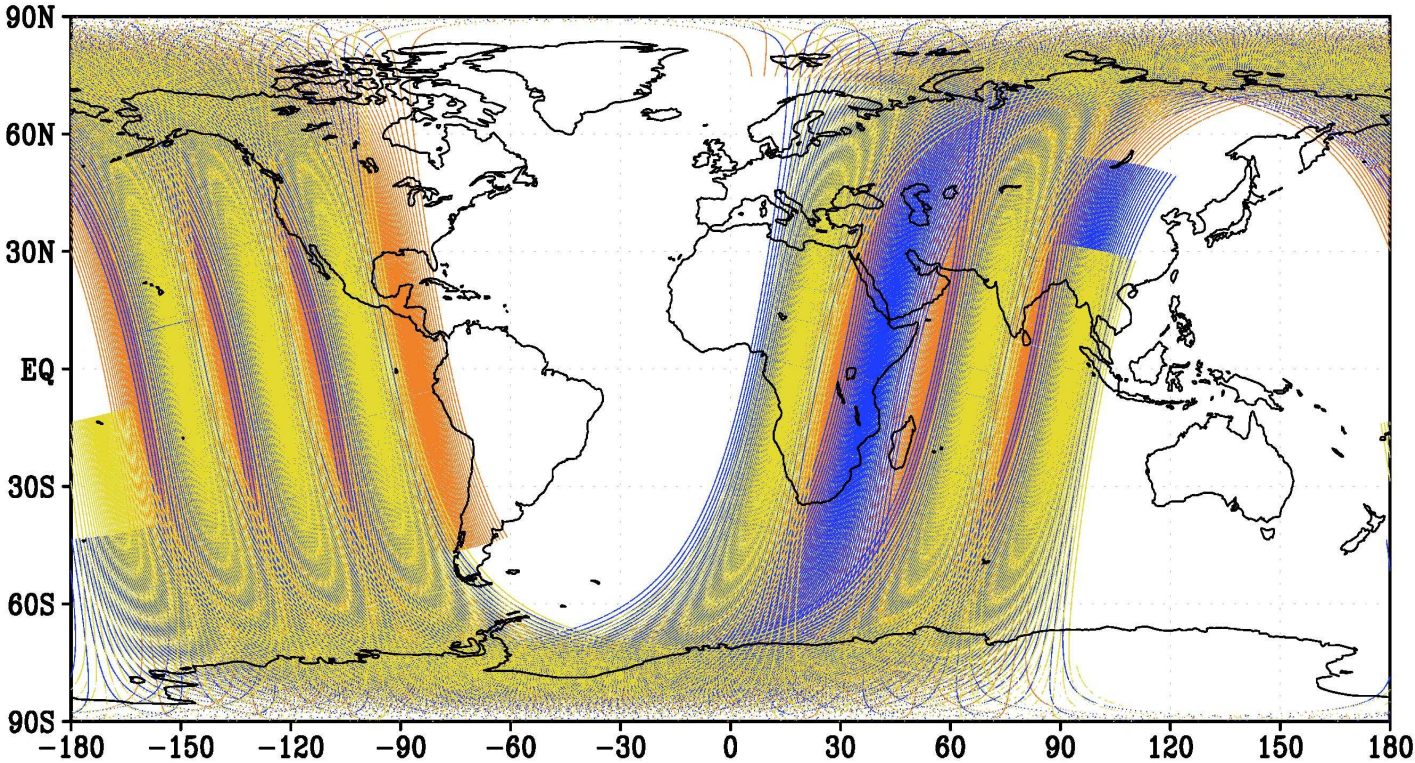
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: Humidity Sounders (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1354183

SAPHIR(0) NOAA19(720450) METOP-B(633733) METOP-C(688154)





NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: AMSUA (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 363530

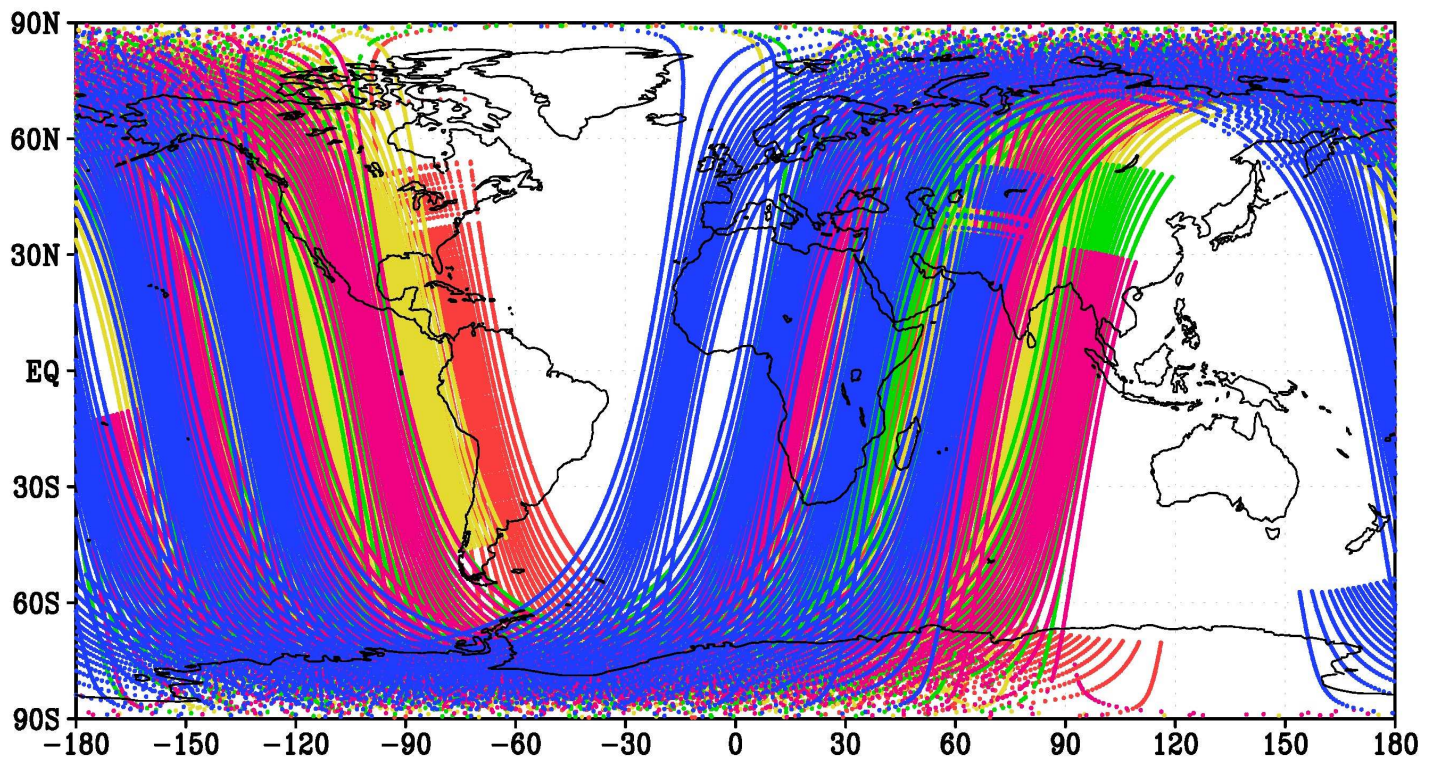
NOAA15(78755)

NOAA18(56780)

NOAA19(79050)

METOP-B(70891)

METOP-C(78074)





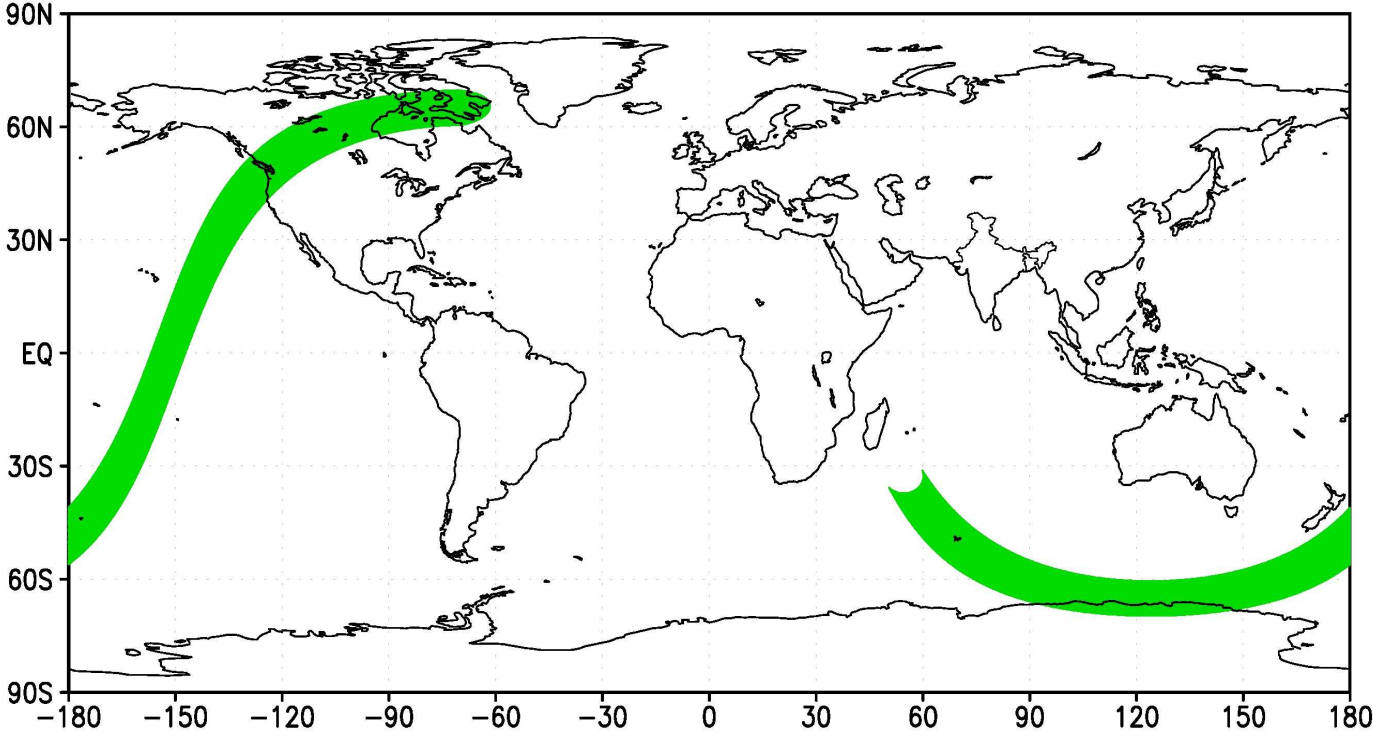
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: GPM-GMI (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 424320

GPM(424320)





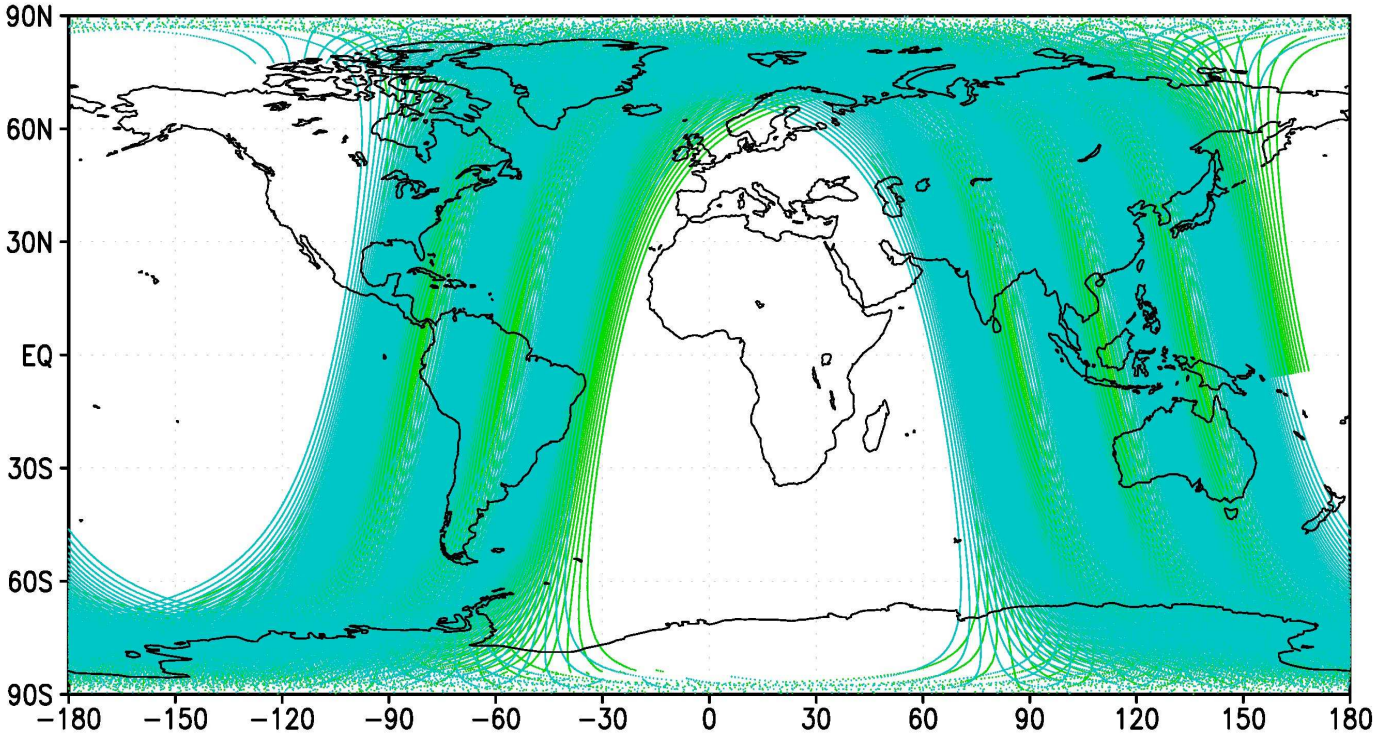
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: ATMS (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1463269

NOAA-20(777600) NPP(685669)





NCMRWF OBSERVATIONS MONITORING

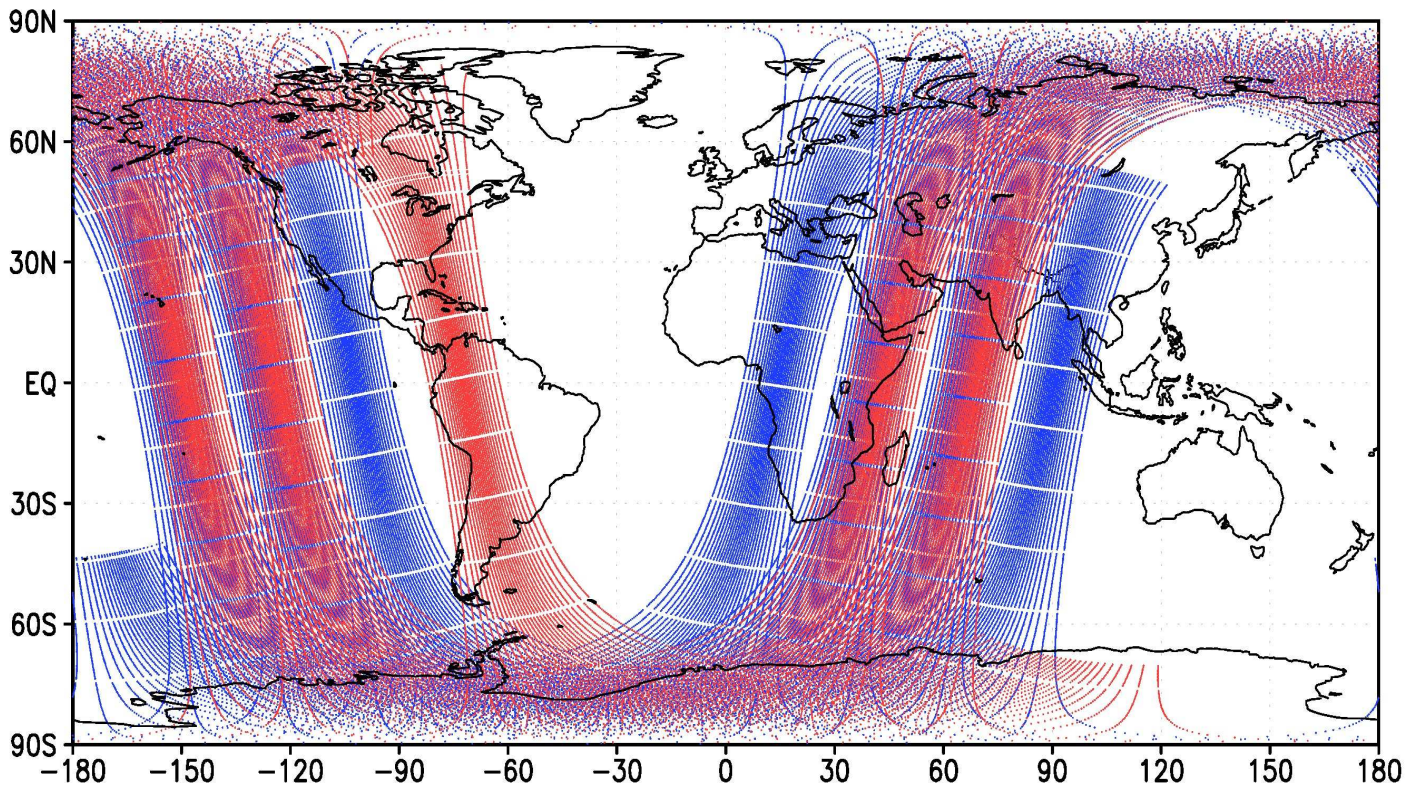
U_CYC

Data Coverage: HIRS (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 311304

NOAA18(131880)

NOAA19(179424)





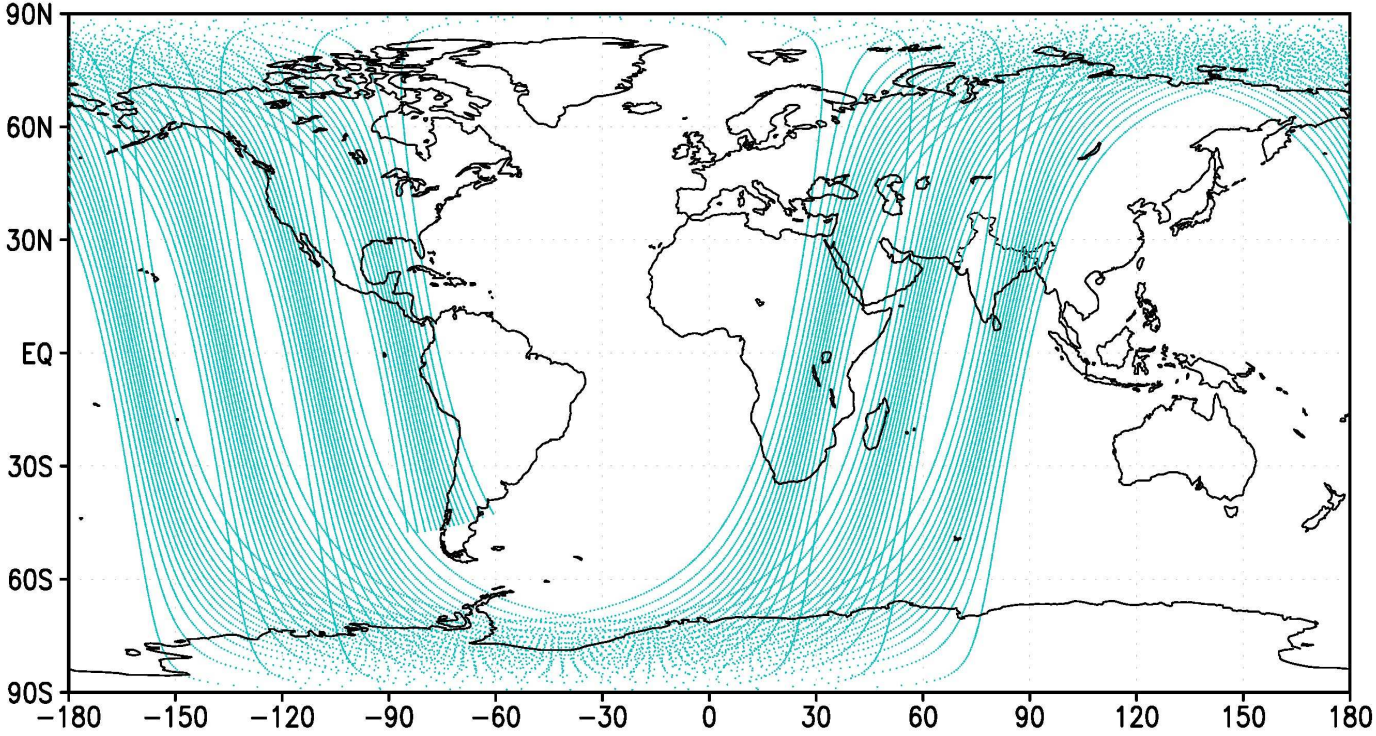
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: IASI (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 77608

METOP-C(77608) METOP-B(0)





NCMRWF OBSERVATIONS MONITORING

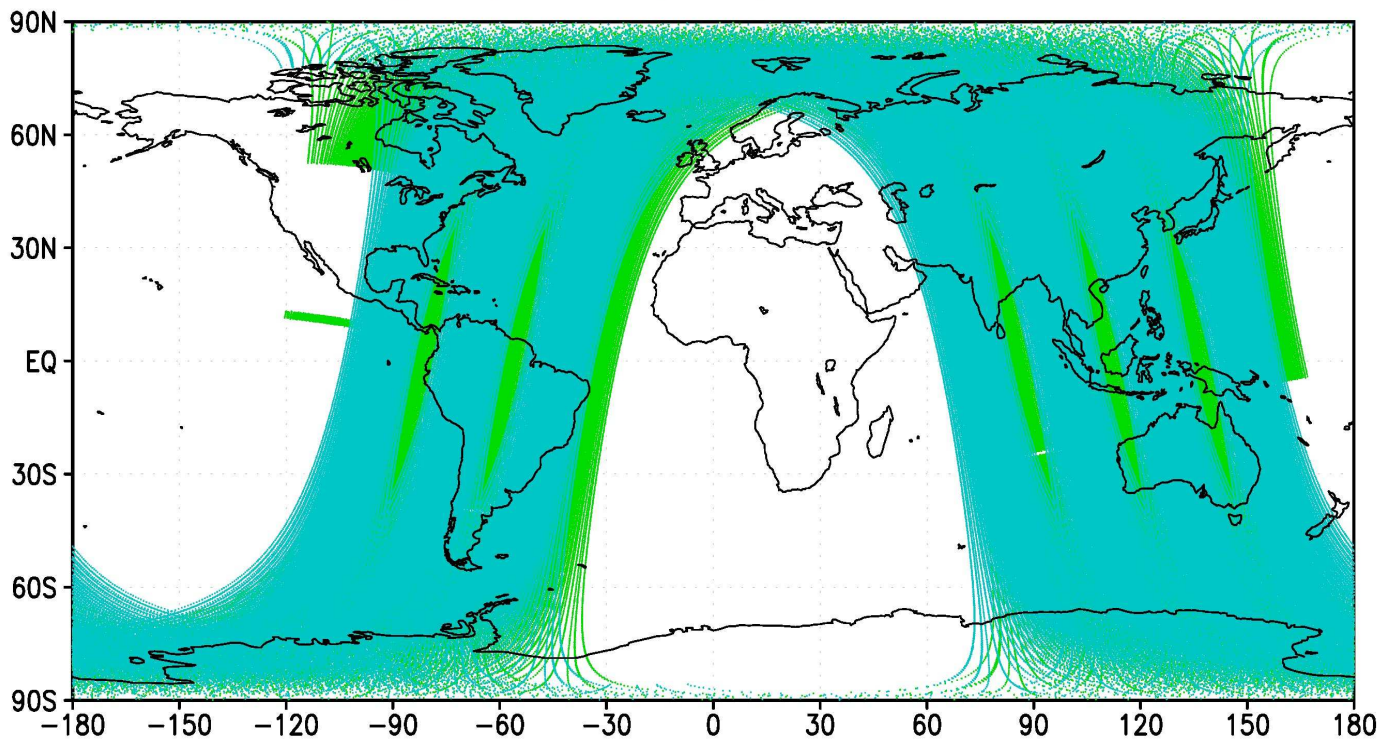
U_CYC

Data Coverage: CrIS (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1422185

NOAA-20(729000)

NPP(693185)





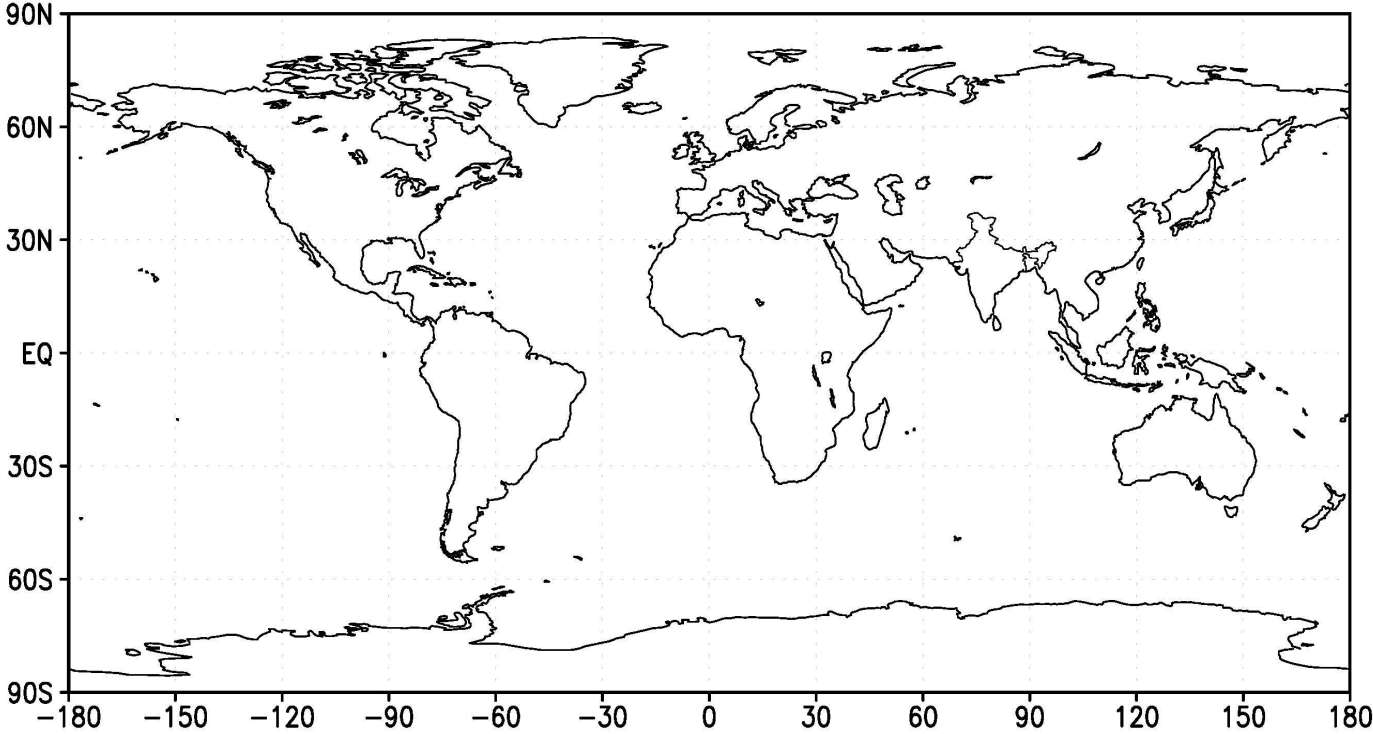
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: AIRS (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF(UM): 0

AQUA(0)





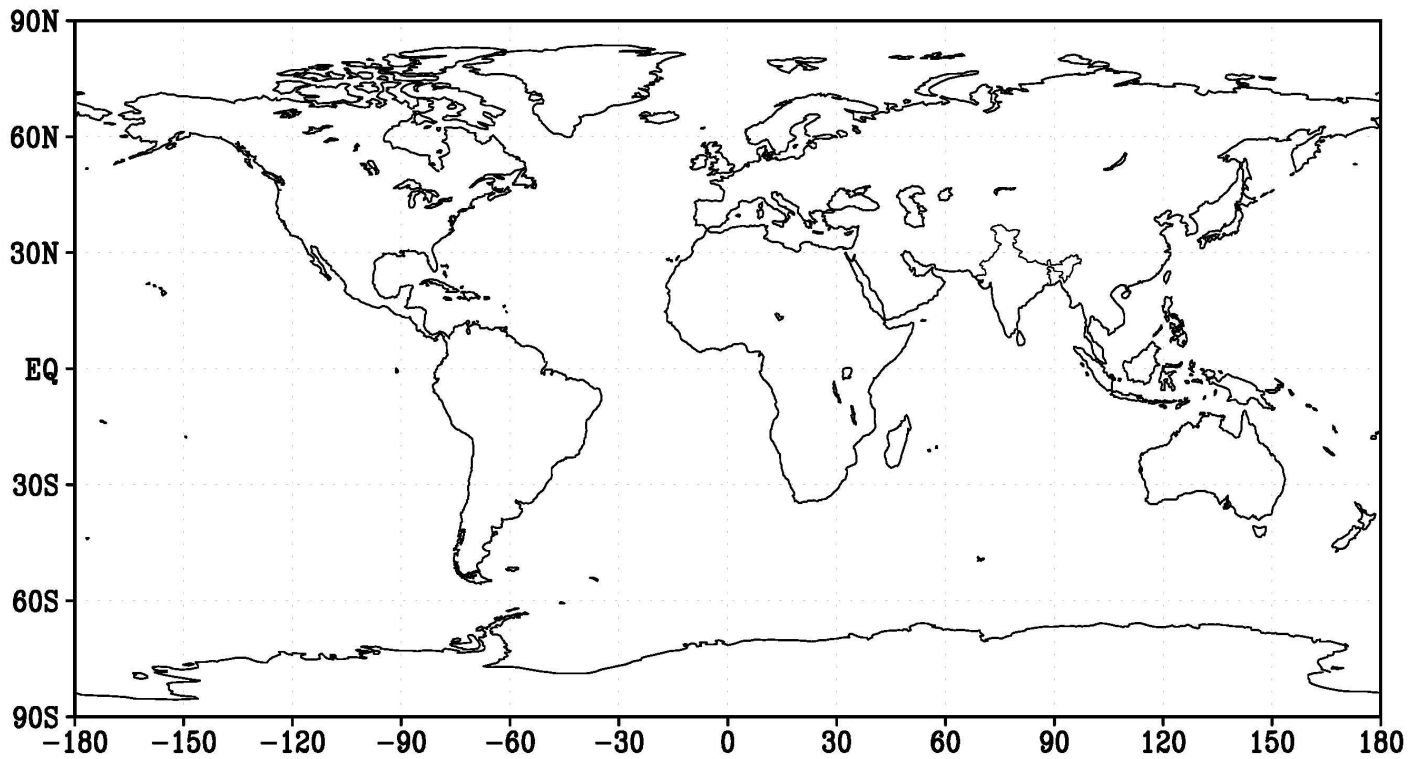
NCMRWF OBSERVATIONS MONITORING

U_CYC

Data Coverage: UV radiances (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 0

SBUV-NOAA19(0)





NCMRWF OBSERVATIONS MONITORING

U_CYC

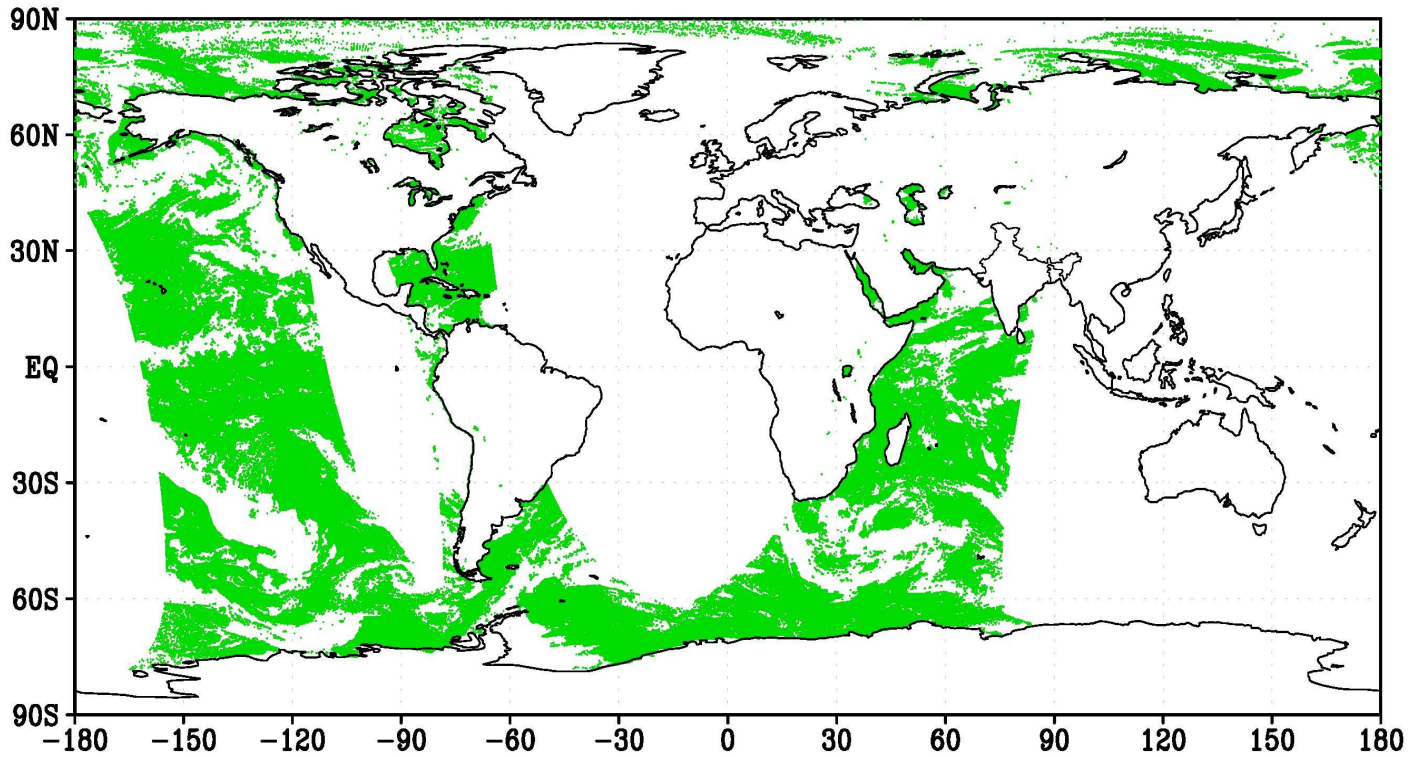
Data Coverage: AVHRR NCEP-BT (02072024 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 2899238

NOAA18(2899238)

METOP-B(0)

METOP-C(0)





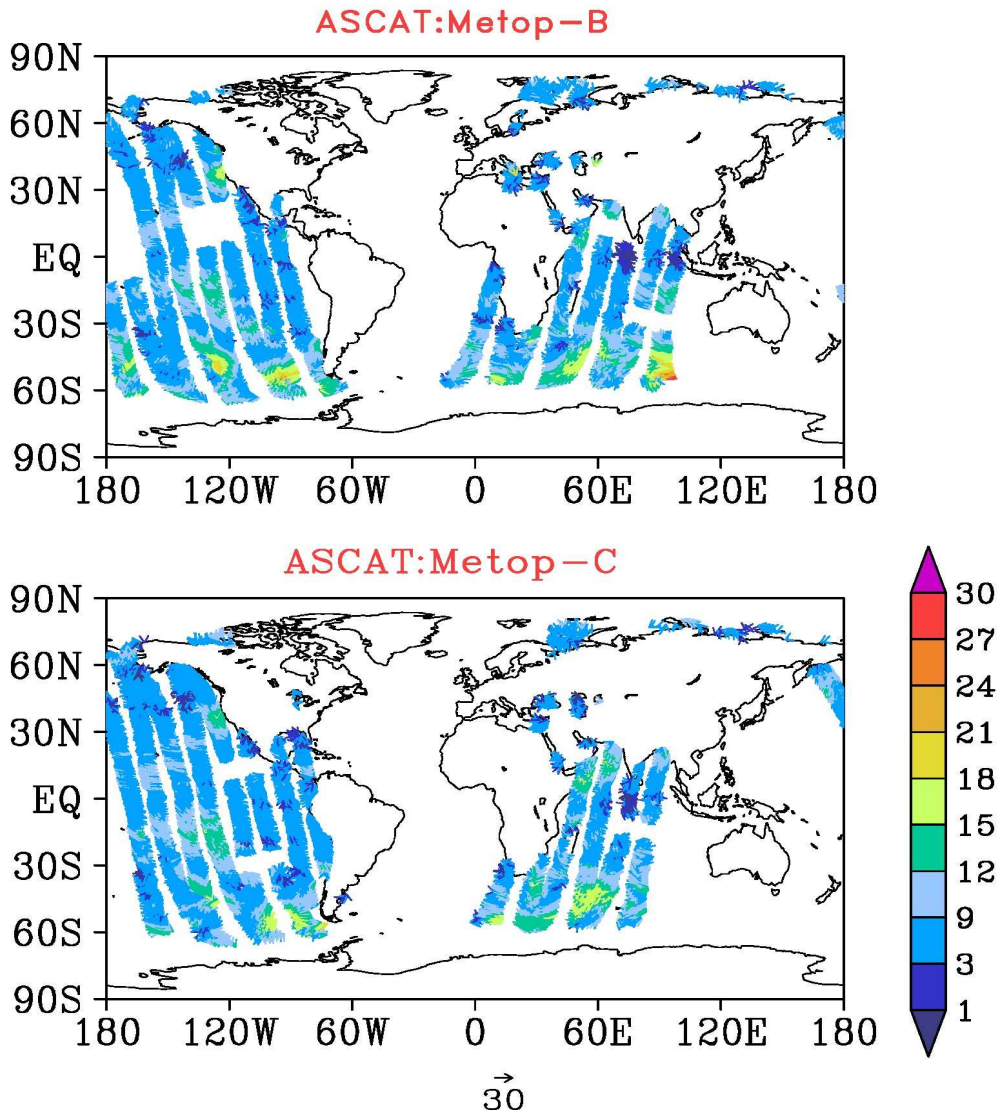
SCATTEROMETER WIND VECTORS

RECEIVED AT NCMRWF (20240702 06Z)



NCMRWF OBSERVATIONS MONITORING

SCATTEROMETER SURFACE WINDS (02072024 0600UTC +/- 03Hrs)

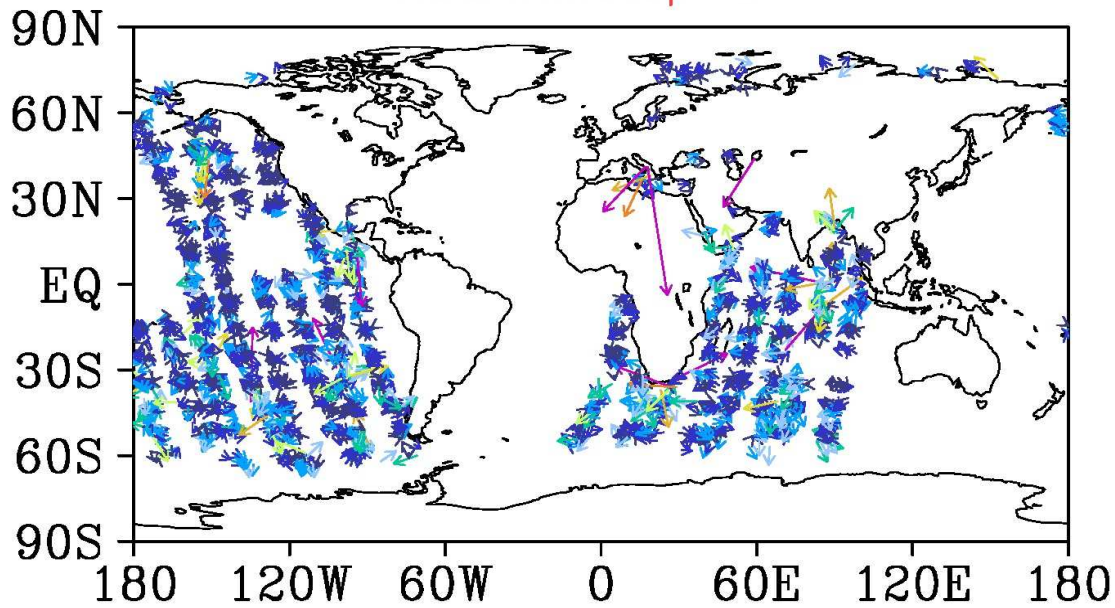




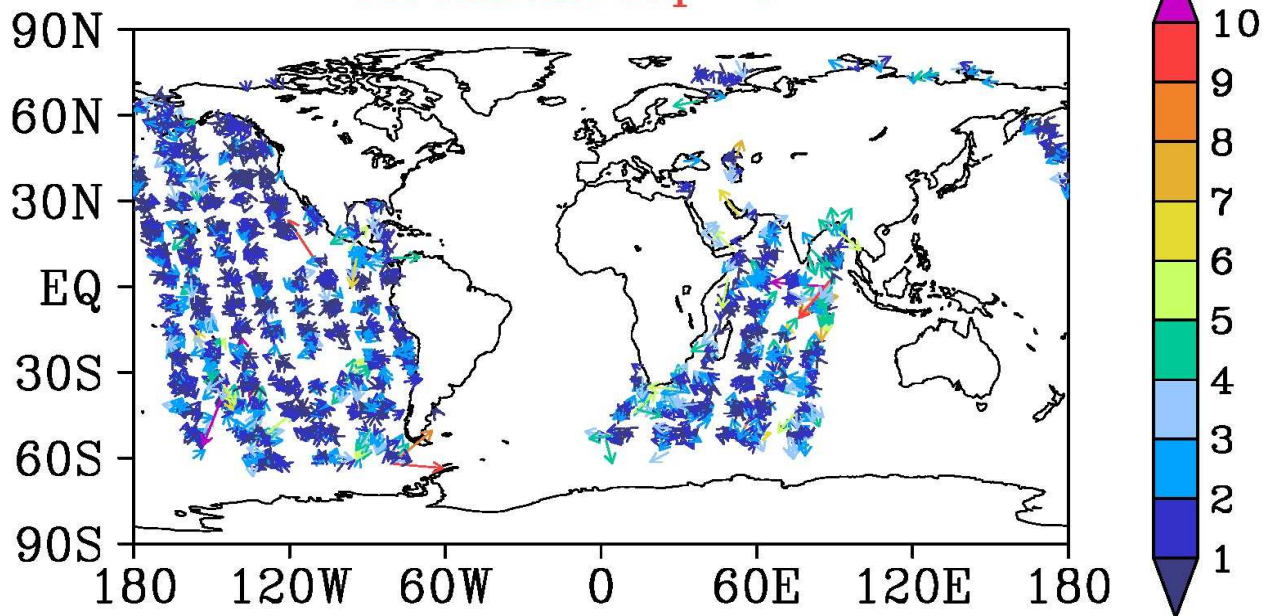
NCMRWF OBSERVATIONS MONITORING

OBSERVATION—FIRST GUESS (02072024 06 UTC):NCMRWF

ASCAT:Metop-B



ASCAT:Metop-C





ATMOSPHERIC MOTION VECTORS (AMVs)

INFRARED (IR) WINDS

WATER VAPOUR (WV) WINDS

VISIBLE (VIS) WINDS

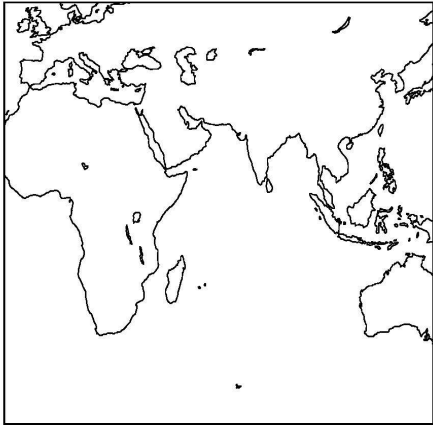
AMV DEVIATION
(OBSERVATION – FIRST GUESS)



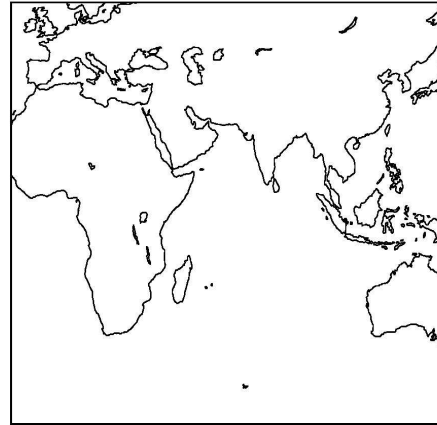
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) (02072024 0600UTC)

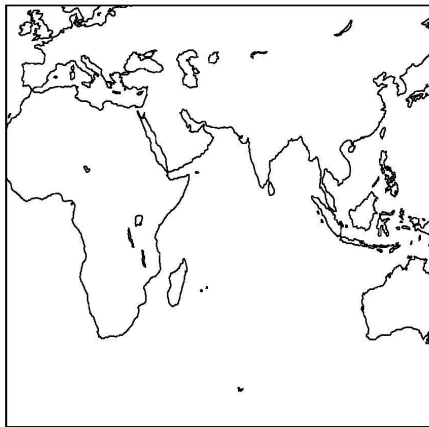
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)



High Level (Above 400 hPa)





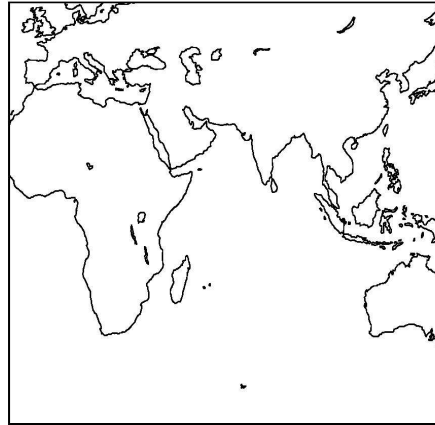
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) (02072024 0600UTC)

Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)

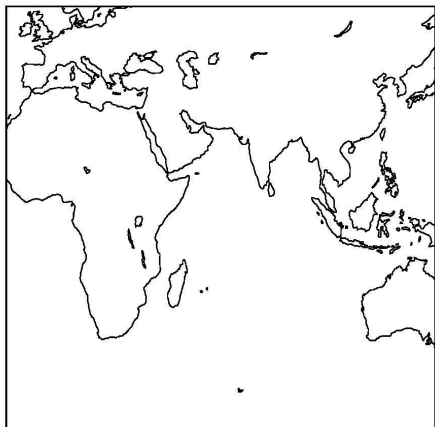




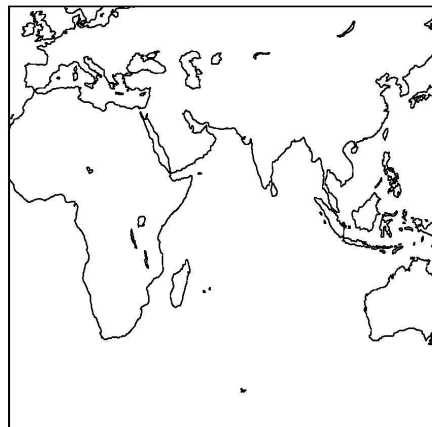
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) (02072024 0600UTC)

WV, High Level (Above 400 hPa)



VIS, Low Level (Below 700 hPa)

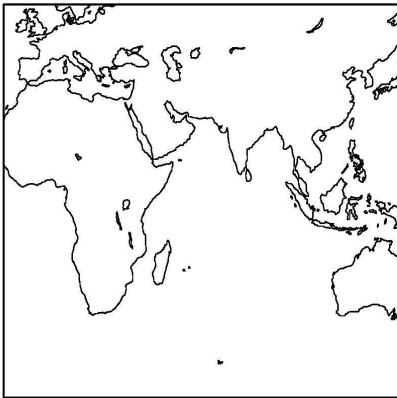




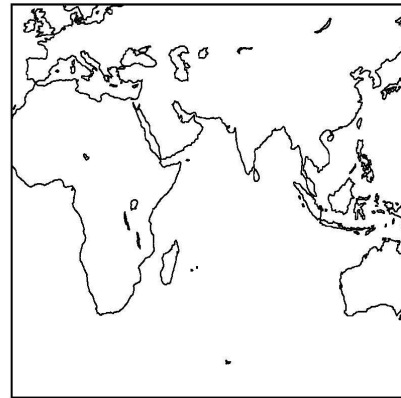
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) DEVIATION (02072024 0600UTC)

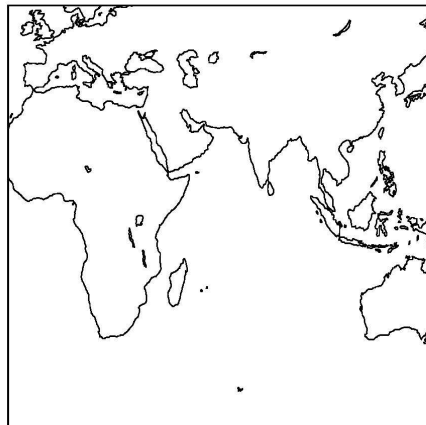
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)



High Level (Above 400 hPa)

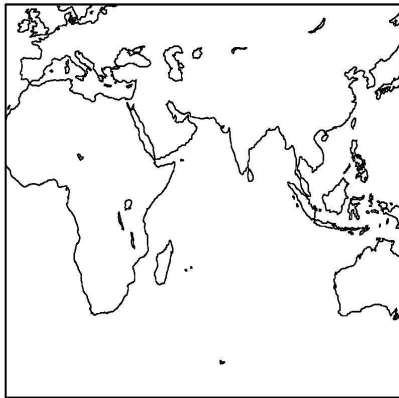




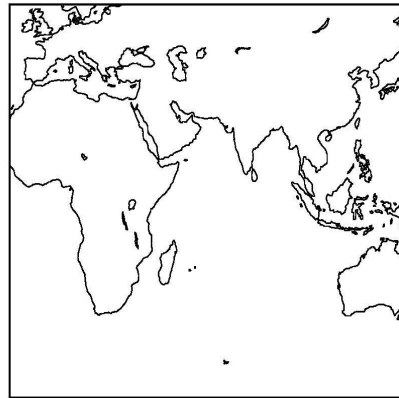
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) DEVIATION (02072024 0600UTC)

Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)

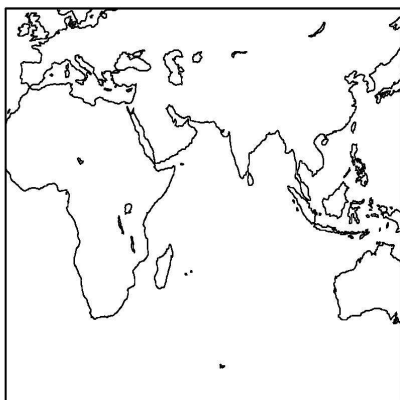




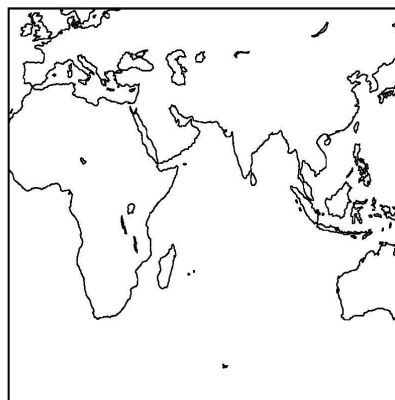
NCMRWF OBSERVATIONS MONITORING

INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (02072024 0600UTC)

WV, High Level (Above 400 hPa)



VIS, Low level (Below 700 hPa)

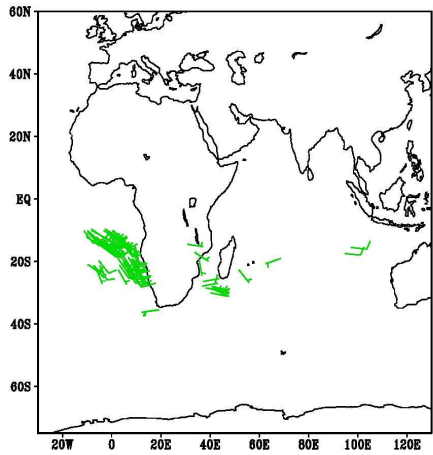




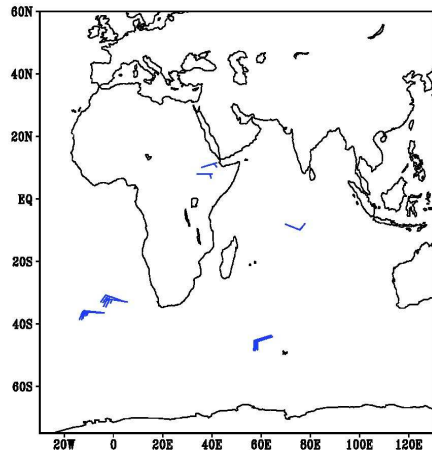
NCMRWF OBSERVATIONS MONITORING

METEOSAT-9 ATMOSPHERIC MOTION VECTORS (IR)(02072024 0600UTC)

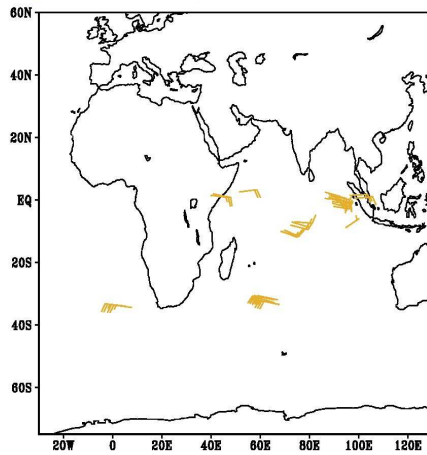
Low level (Below 700 hPa)



Mid Level (700 - 401 hPa)



High Level (Above 400 hPa)

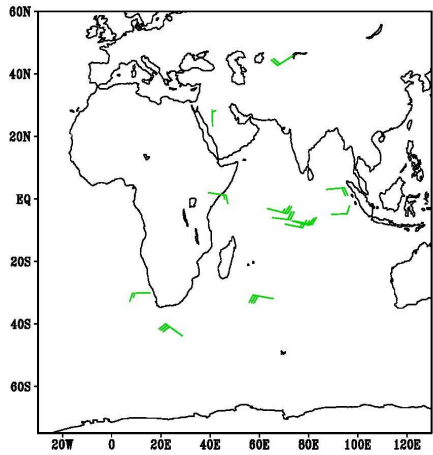




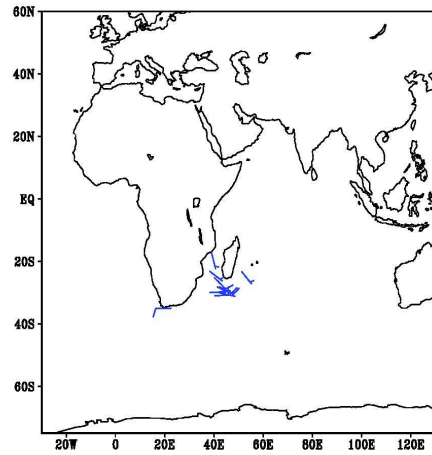
NCMRWF OBSERVATIONS MONITORING

METEOSAT-9 ATMOSPHERIC MOTION VECTORS (WV & VIS)(02072024 0600UTC)

WV, High Level (Above 400 hPa)



VIS, Low Level (Below 700 hPa)

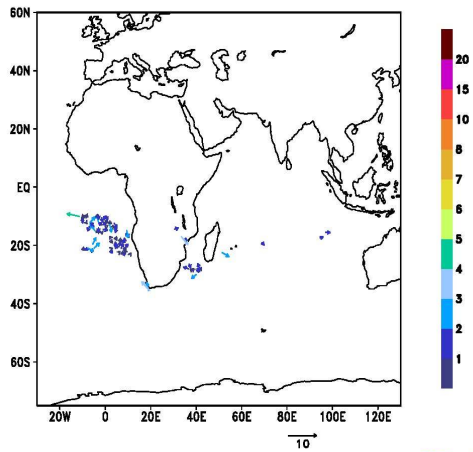




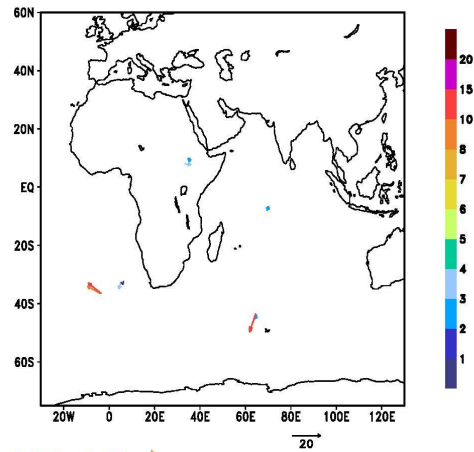
NCMRWF OBSERVATIONS MONITORING

METEOSAT-9 ATMOSPHERIC MOTION VECTORS (IR) DEVIATION (02072024 0600UTC)

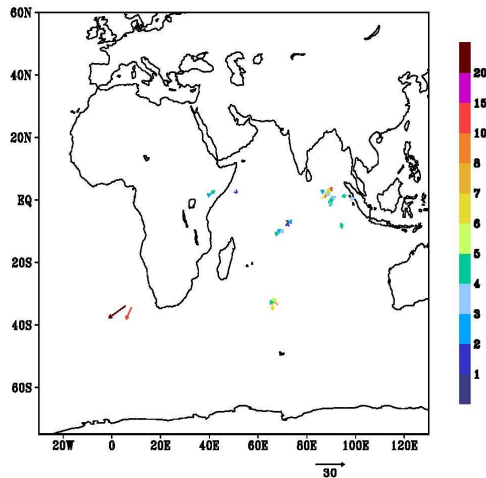
Low Level (Below 700 hPa)



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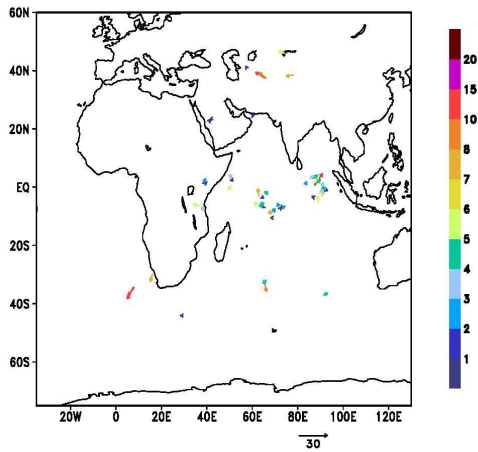




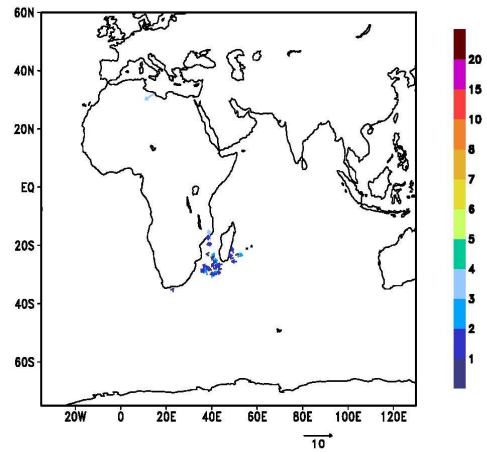
NCMRWF OBSERVATIONS MONITORING

METEOSAT-9 ATMOSPHERIC MOTION VECTORS(WV & VIS) DEVIATION (02072024 0600UTC)

WV, High Level (Above 400 hPa)



VIS, Low level (Below 700 hPa)





Indian Doppler Weather Radar Data Monitoring



NCMRWF OBSERVATIONS MONITORING

Volume of DWR observations received at NCMRWF
Date: 20240702 at : 06 UTC

