

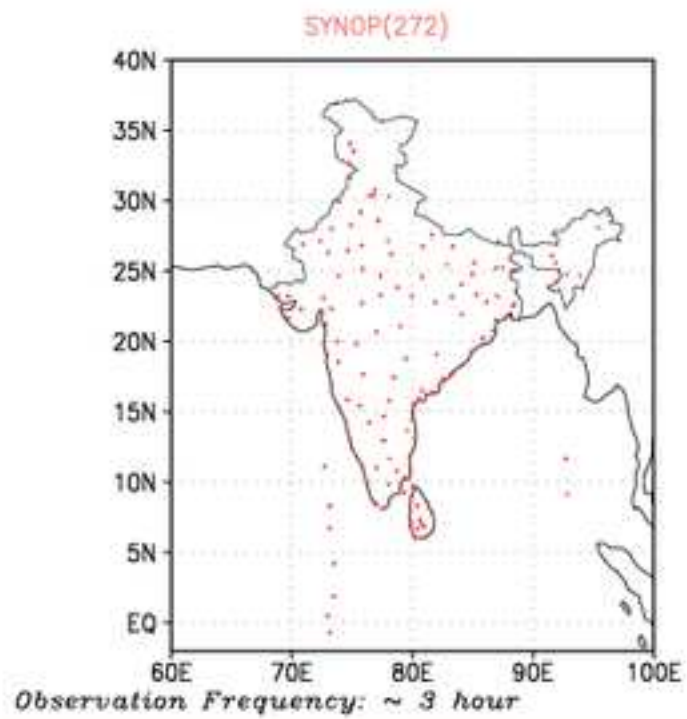
# Observation Monitoring

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

for 20042018 (0000 UTC)

# Indian Observation Coverage

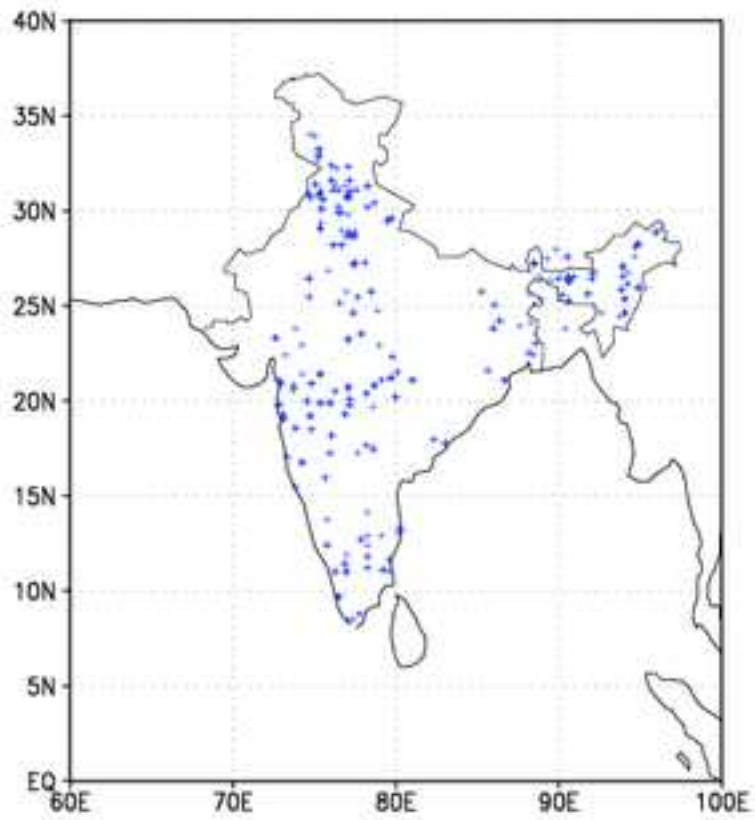
Data Coverage: Surface (20042018 0000UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 272  
(42 & 43 Block)



Data Coverage: Indian AWS (20042018 0000UTC +/- 3 Hrs)

Total Number of Observations Received at NCMRWF: 459

AWS PRESSURE (459)

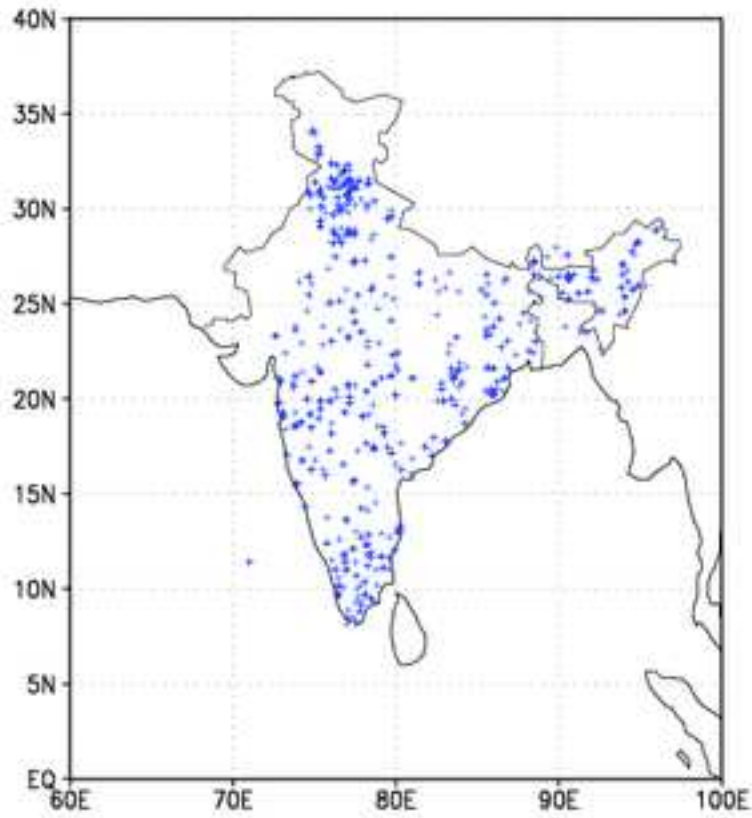


Observation Frequency: ~ 1 hour

Data Coverage: Indian AWS (20042018 0000UTC +/- 3 Hrs)

Total Number of Observations Received at NCMRWF: 856

AWS + ARG (856)

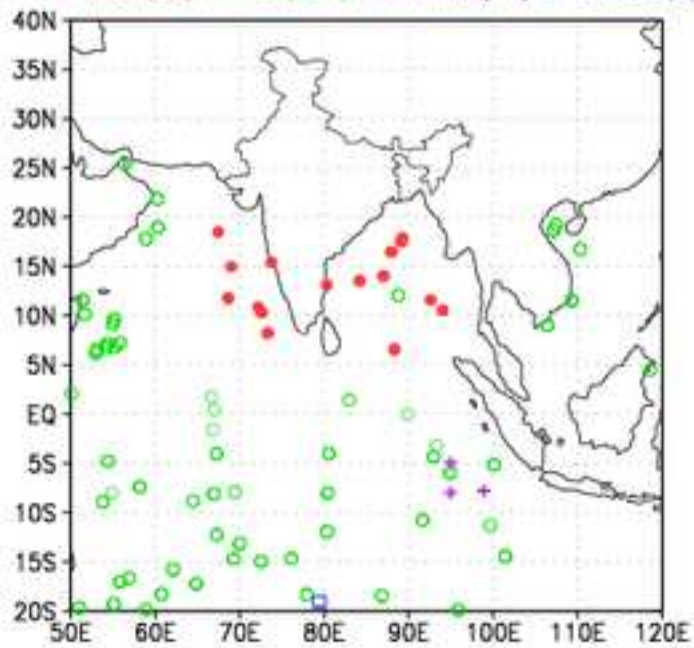


Observation Frequency: ~ 1 hour

Data Coverage: BUOY (20042018 0000UTC +/- 3 Hrs)

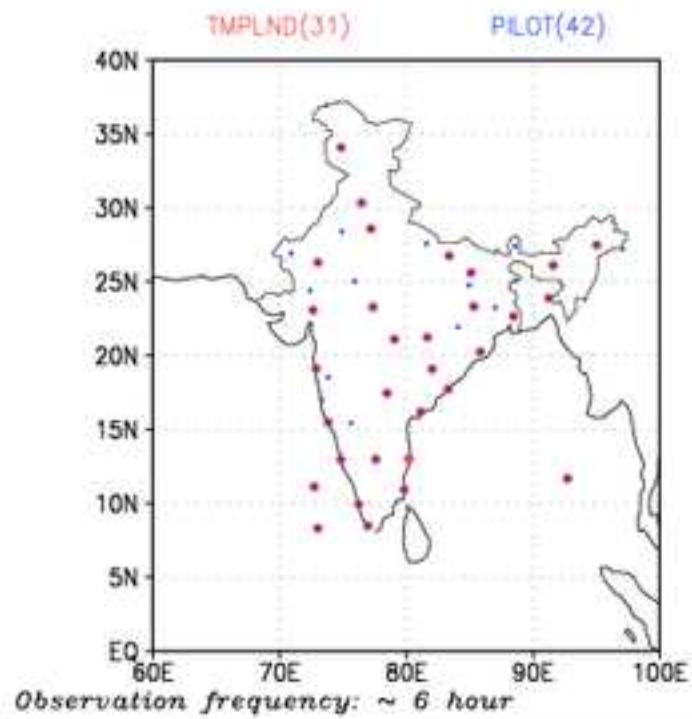
Total Number of Observations Received at NCMRWF: 303

country code in GTS as ● INDIA(26) ○ USA(261) + FRANCE(11) □ OTHERS(5)



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

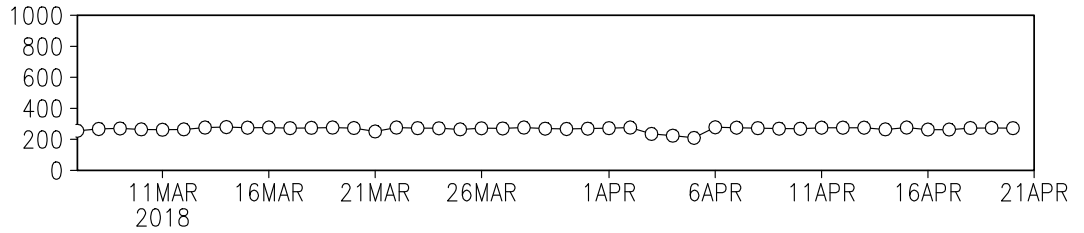
Data Coverage: Sonde (20042018 0000UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 73  
(42 & 43 Block)



# Count for different types of observation (Over Indian Region) for the last 45 days (valid for 00 UTC)

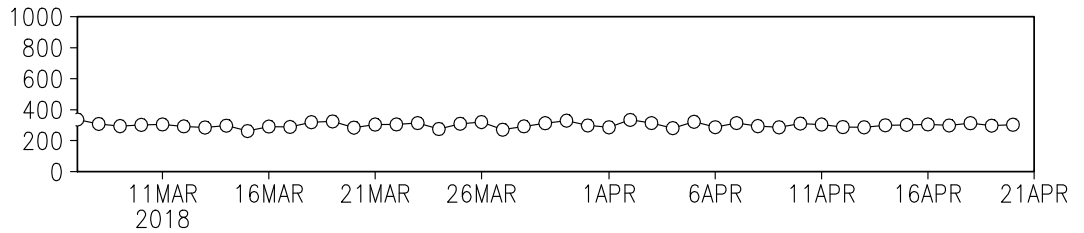
## SYNOP

Avg=273  
Today\_Cnt=272  
Dep=-0. %



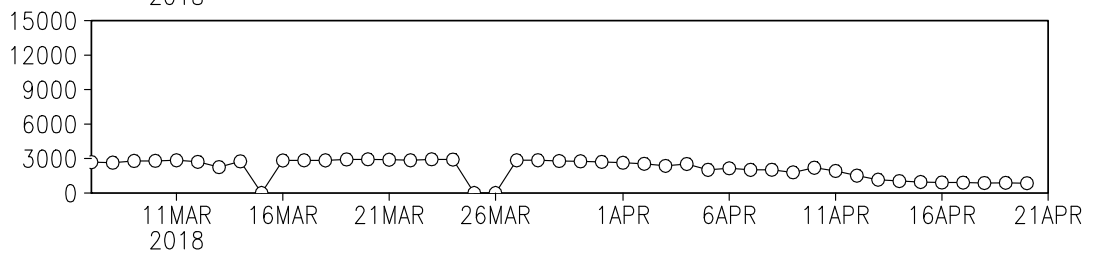
## BUOY

Avg=313  
Today\_Cnt=303  
Dep=-3. %



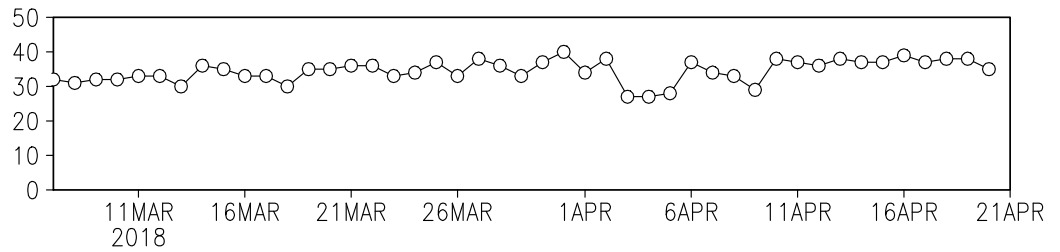
## AWS+ARG

Avg=2710  
Today\_Cnt=856  
Dep=-68. %



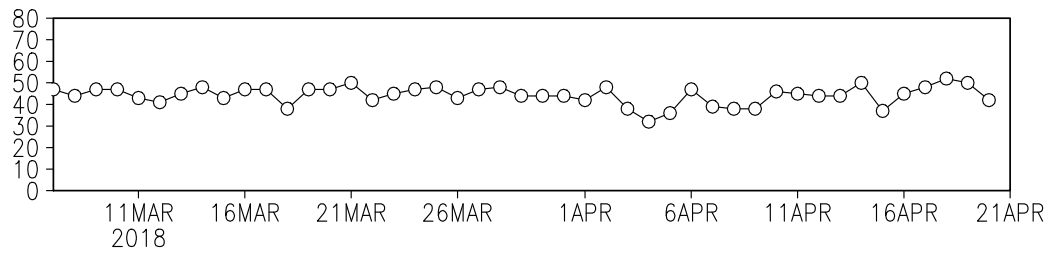
## RS/RW

Avg=36  
Today\_Cnt=35  
Dep=-3. %



## PILOT

Avg=46  
Today\_Cnt=42  
Dep=-9. %



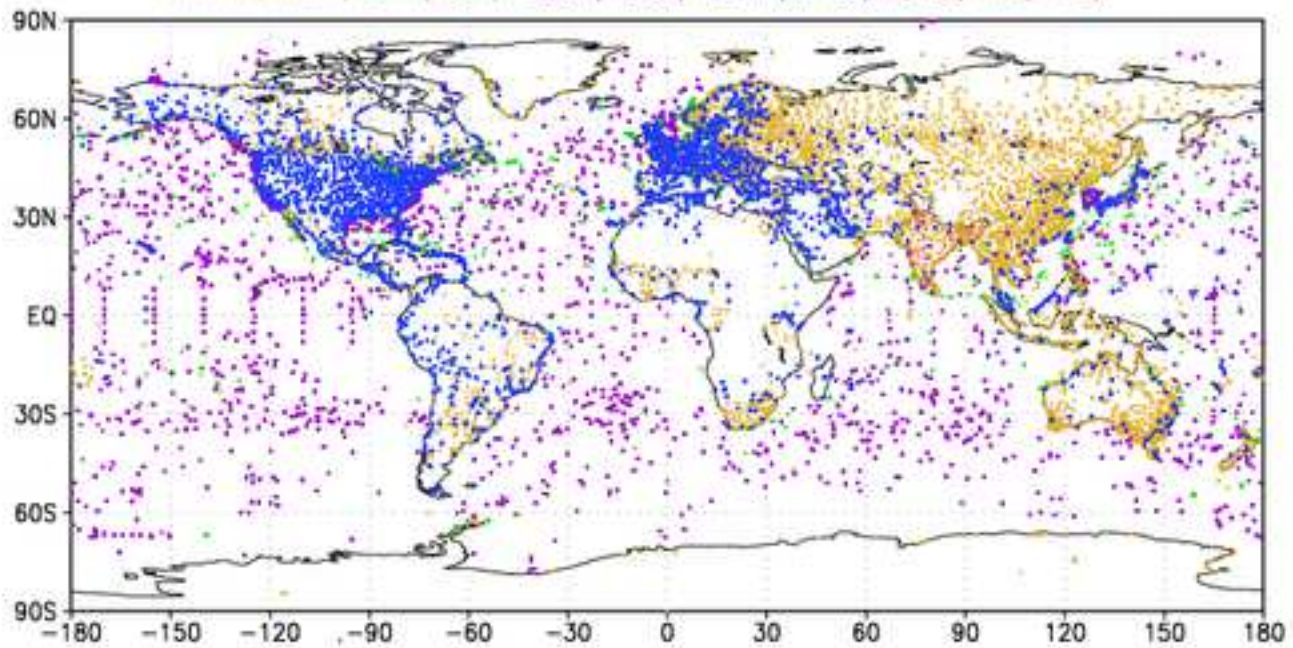


# Global Observation Coverage

Data Coverage: Surface (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 43272

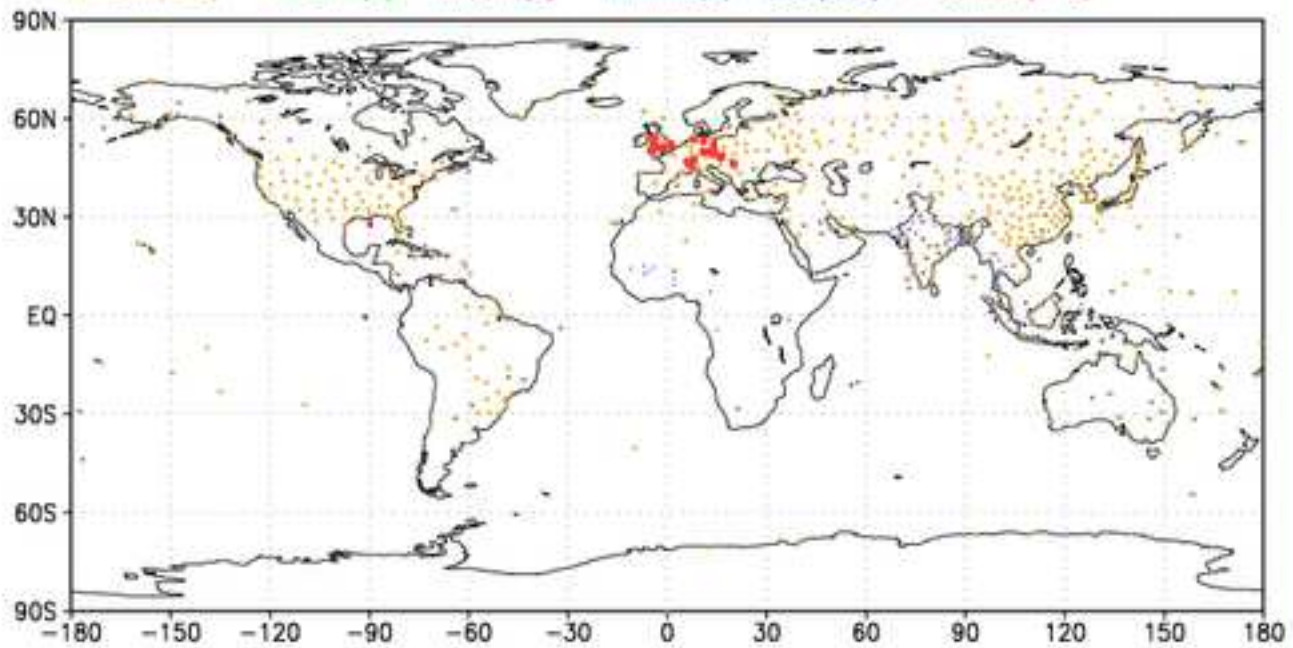
LNDSYN(13258) SHIP(1837) BUOY(10359) METAR(16406) MOBILE/AWS(1412)



Data Coverage: Sonde (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1266

TMP LND(622)   TMP SHP(0)   TMP DRP(3)   TMP MDB(0)   PILOT(223)   PROFILER(418)



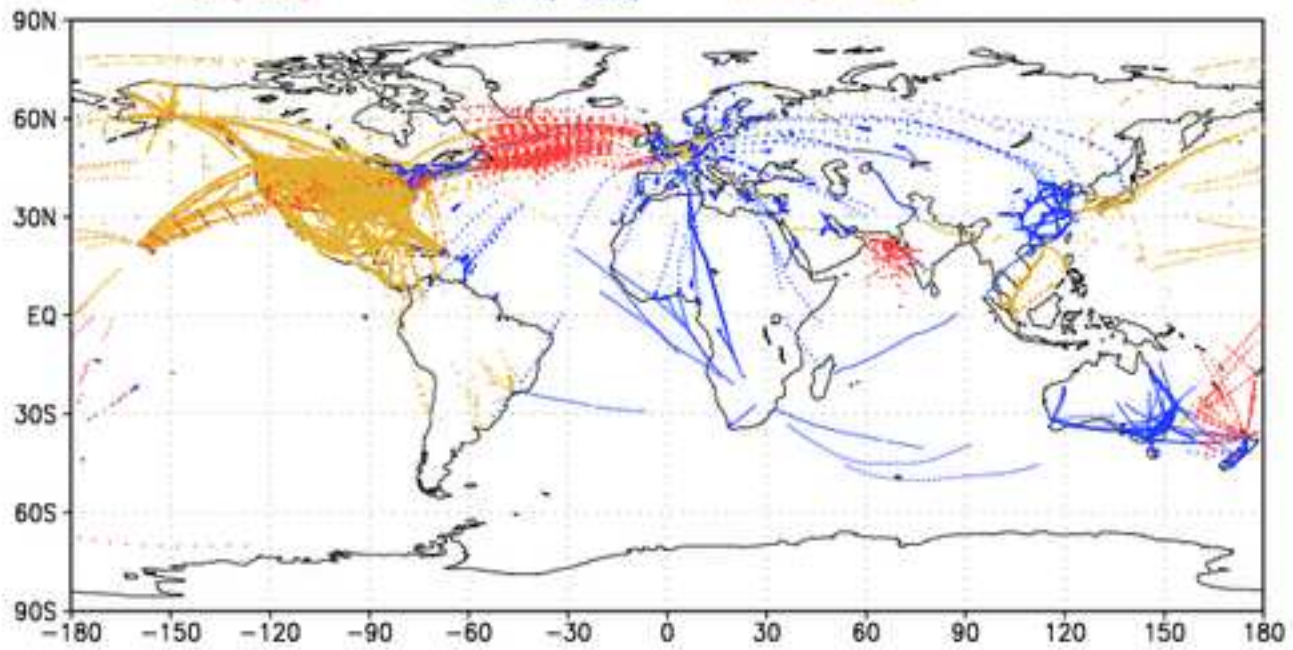
Data Coverage: AIRCFT (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 167310

AIREP(4355)

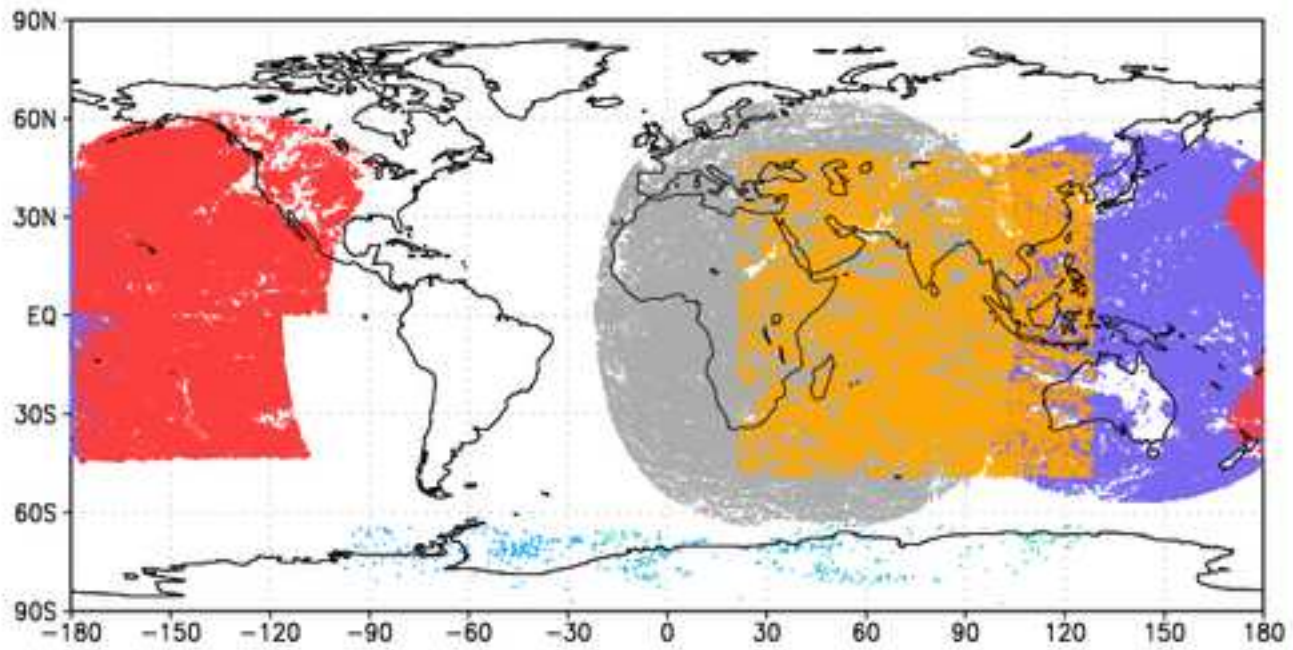
AMDAR(11523)

ACARS(151432)



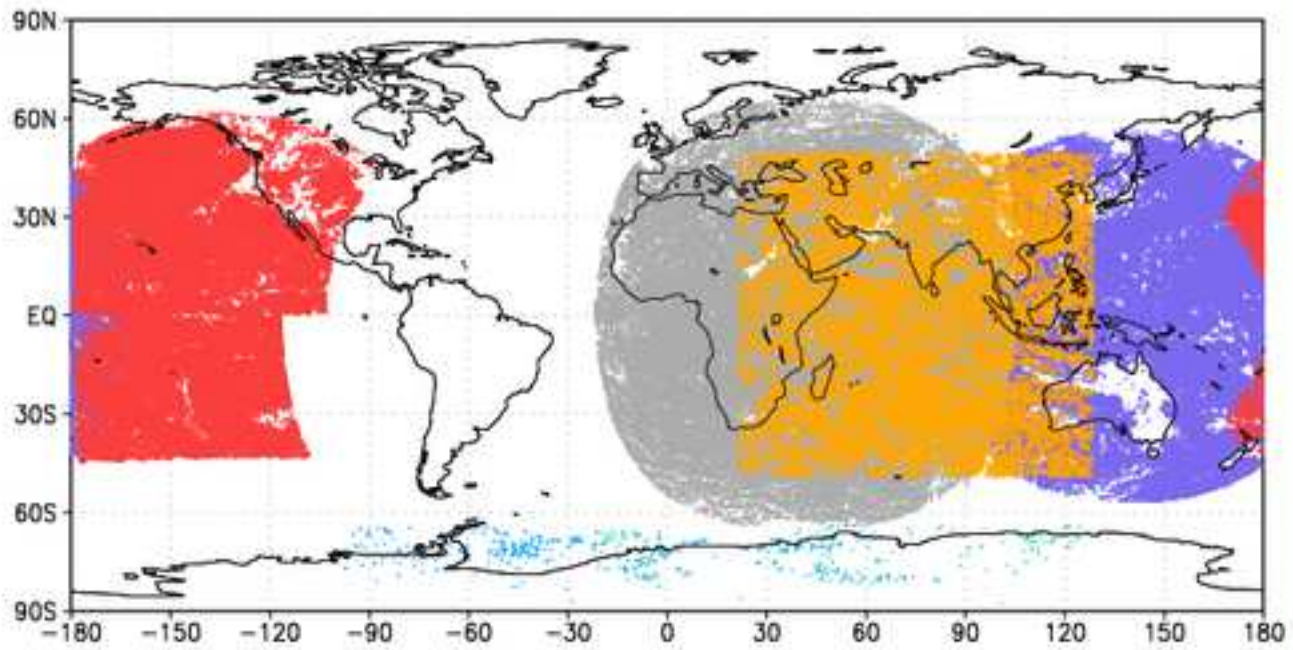
Data Coverage: AMV (20042018 0000UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 495545

GOES-15(146941) GOES-13(0) INSAT-3D(33213) METEOSAT-8(180821)  
METEOSAT-10(0) HIMAWARI-8(153962) MODIS/Terra(0) MODIS/Aqua(0)  
METOP(0) NOAA-15(0) NOAA-18(0) NOAA-18(165) NOAA-19(443)



Data Coverage: AMV (20042018 0000UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 495545

GOES-15(146941) GOES-13(0) INSAT-3D(33213) METEOSAT-8(180821)  
METEOSAT-10(0) HIMAWARI-8(153962) MODIS/Terra(0) MODIS/Aqua(0)  
METOP(0) NOAA-15(0) NOAA-18(0) NOAA-18(165) NOAA-19(443)



# Data Coverage: SAT RADIANCE (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 1793557

NOAA15(24191)

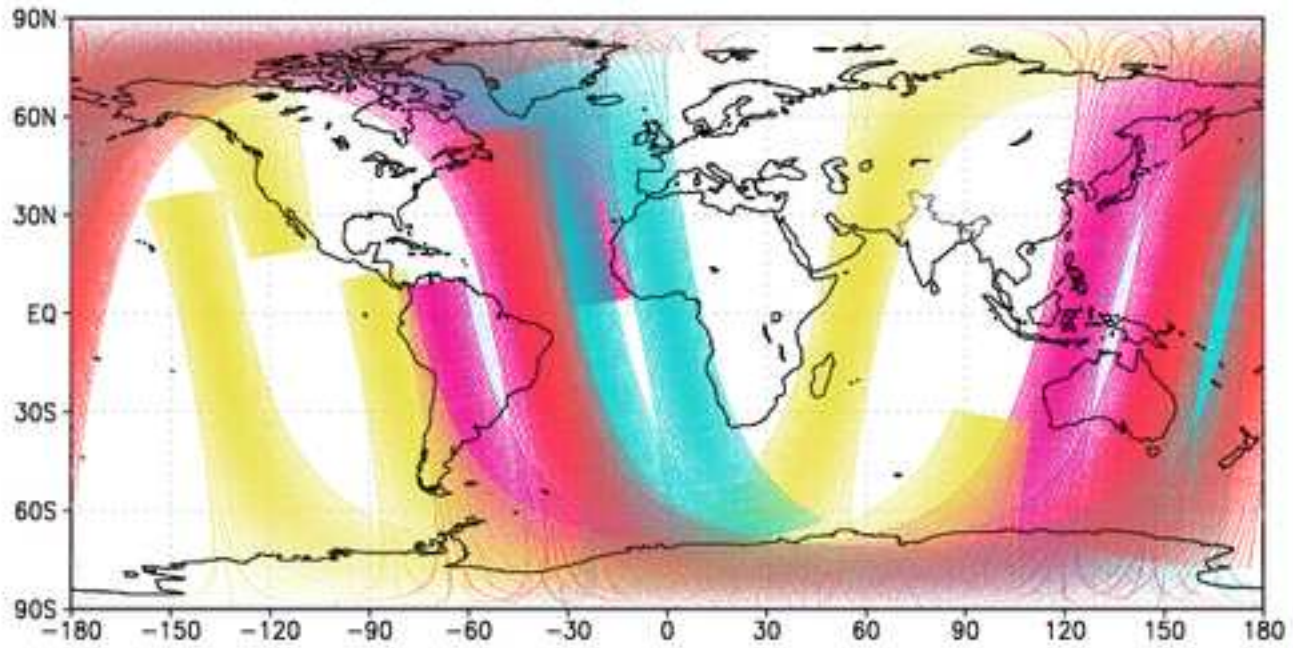
NOAA18(0)

NOAA19(561659)

NOAA18(18378)

METOP1(396056)

METOP2(393355)



Data Coverage: SAT RADIANCE (EARS+IMD RARS) (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 329533

NOAA15(0)

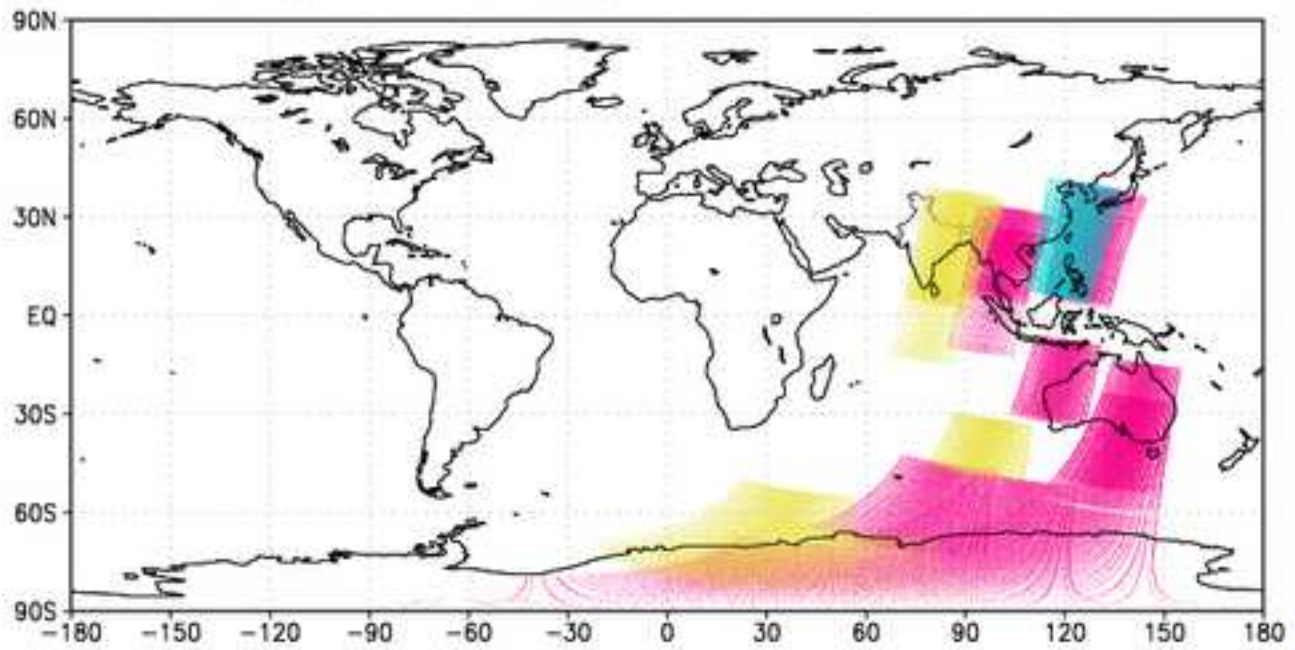
NOAA18(0)

NOAA18(221052)

NOAA18(82057)

METOP1(0)

METOP2(28424)



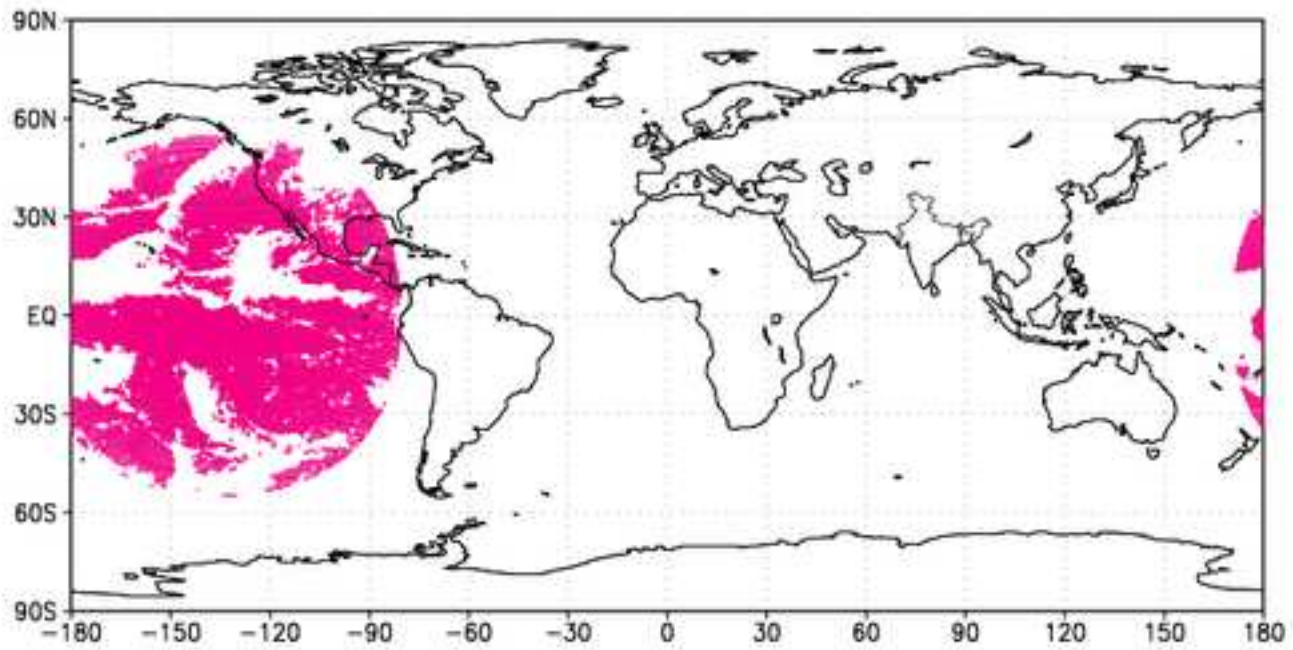


Data Coverage: GOES CSBT (20042018 0000UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 25457

GOES-15(25457)

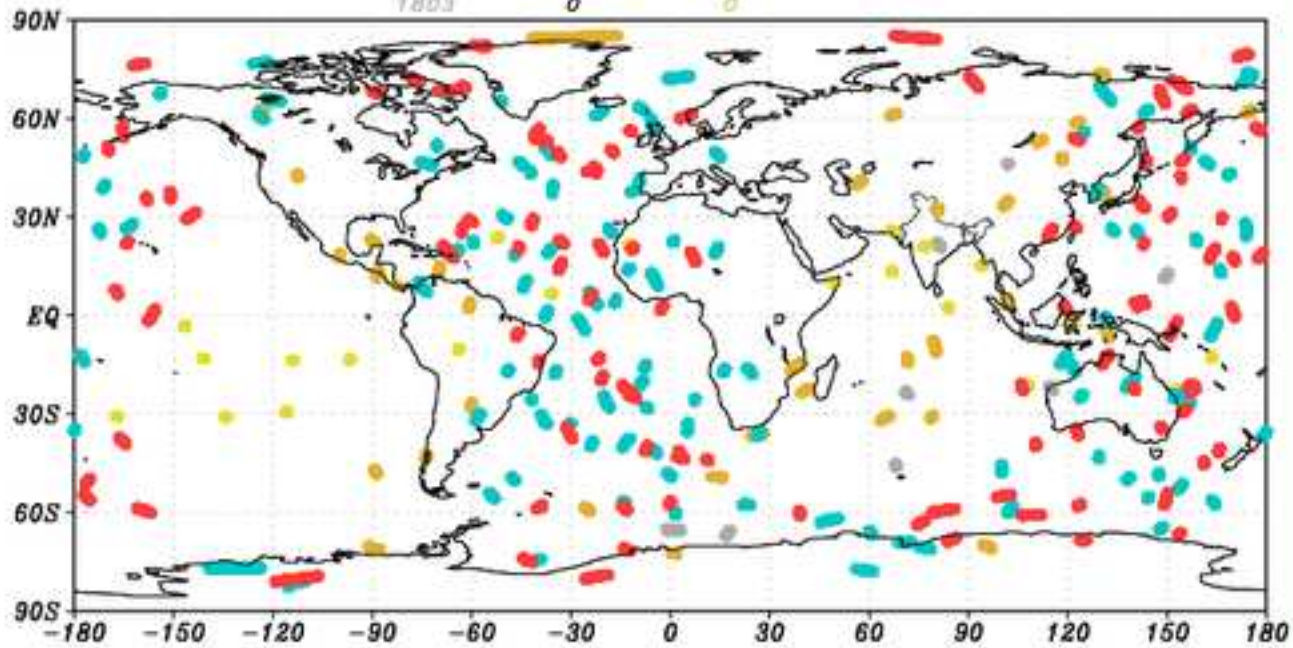
GOES-13(0)



Data Coverage:GPSRO (20042018 0000UTC +/-03Hrs)

Total Number of Observations Received at NCMRWF: 68541

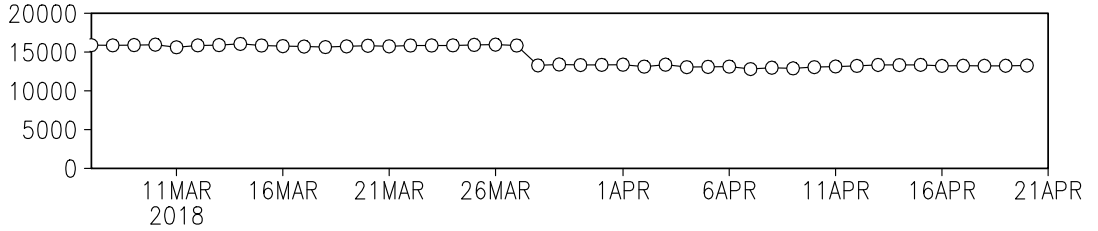
GRACE-A	METOP-B	METOP-A	COSMIC-1	COSMIC-2	COSMIC-3	COSMIC-4	COSMIC-5	COSMIC-6
0	26304	25842	0	0	4957	0	0	10535
		TerraSAR-X	TenDEM-X	GRACE-B				
		1803	0	0				



## Count for different types of observation (Global) for the last 45 Days (valid for 00 UTC)

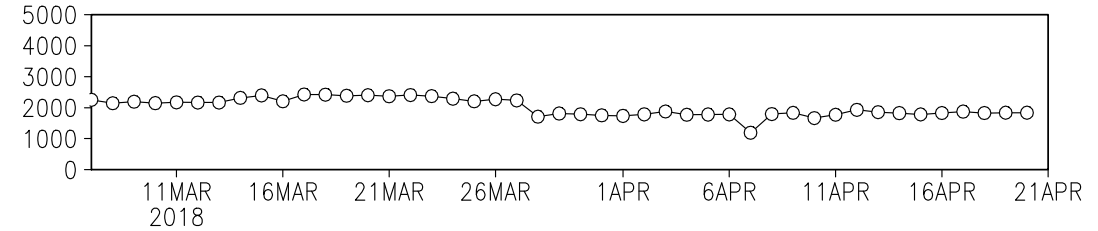
### SYNOP

Avg=15830  
Today\_Cnt=13258  
Dep=-16. %



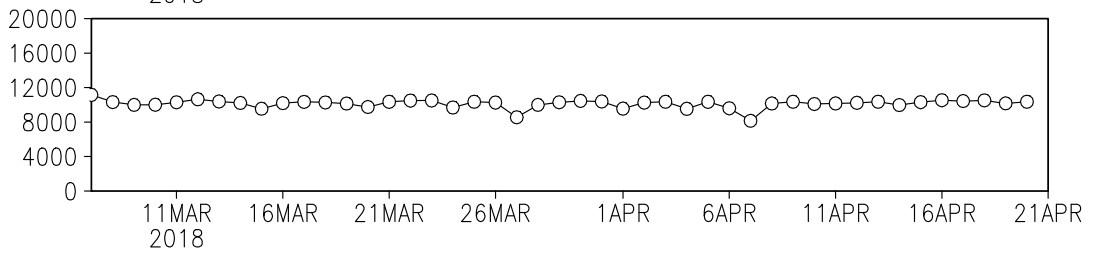
### SHIP

Avg=2280  
Today\_Cnt=1837  
Dep=-19. %



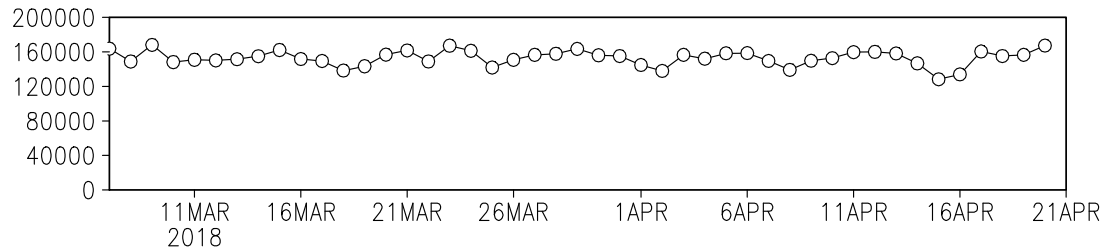
### BUOY

Avg=10361  
Today\_Cnt=10359  
Dep=-0. %



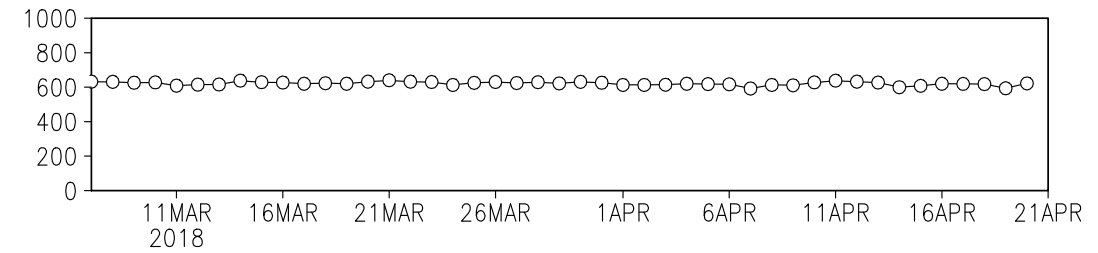
### AIRCRAFT

Avg=162307  
Today\_Cnt=167310  
Dep=3. %



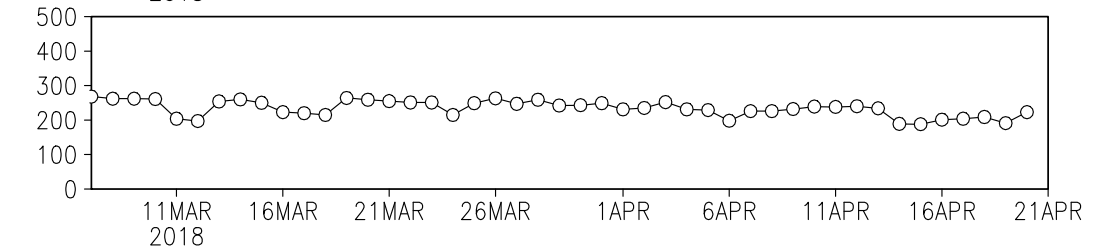
### RS/RW

Avg=629  
Today\_Cnt=622  
Dep=-1. %



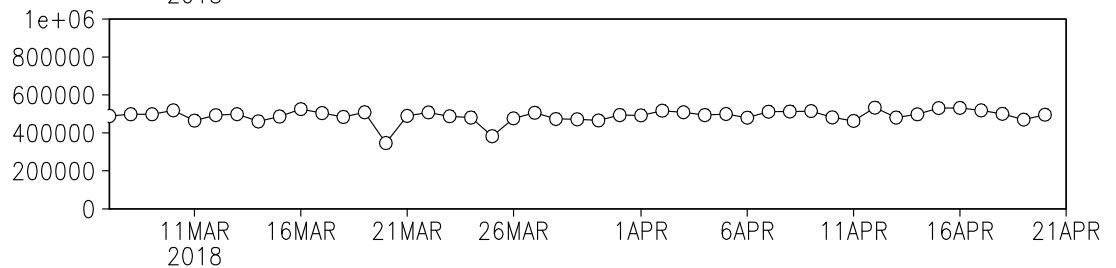
### PILOT

Avg=251  
Today\_Cnt=223  
Dep=-11. %



### AMV

Avg=508338  
Today\_Cnt=495545  
Dep=-3. %



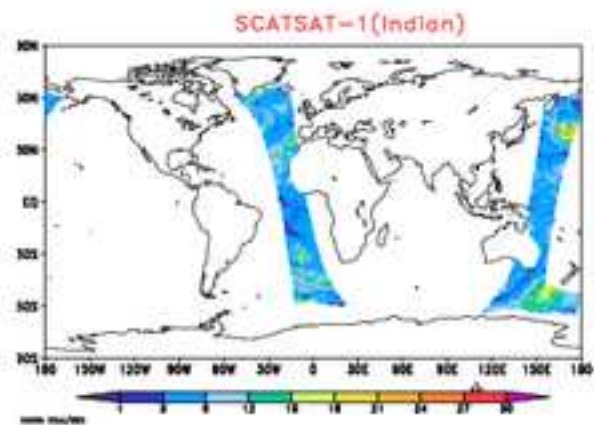
SCATTEROMETER WIND VECTORS

RECEIVED AT NCMRWF (20180420 00Z)

SCATTEROMETER SURFACE WINDS (20042018 0000UTC +/- 03Hrs)

ASCAT:Metop-A

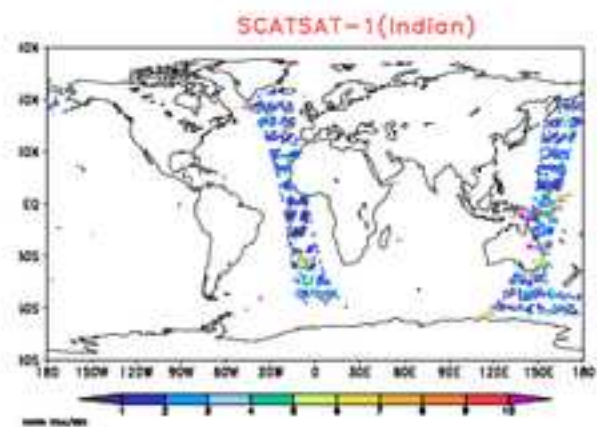
ASCAT:Metop-B



OBSERVATION—FIRST GUESS (20042018 00 UTC):NCMRWF

ASCAT:Metop-A

ASCAT:Metop-B



# INSAT-3D

## ATMOSPHERIC MOTION VECTORS (AMV)

{ INFRA-RED WINDS [IR (10.8 & 3.8)]

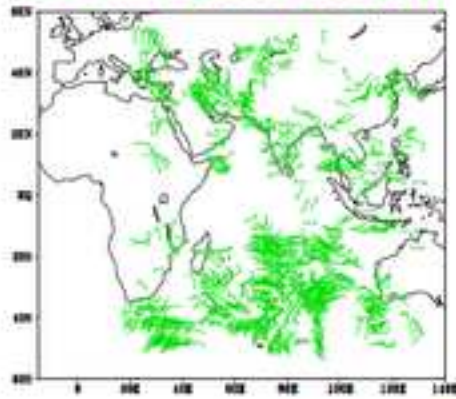
WATER VAPOUR WINDS (WV)

VISIBLE WINDS (VIS) }

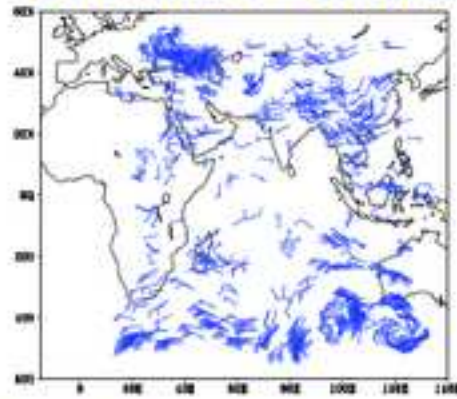
AMV DEVIATION  
(OBSERVATION - FIRST GUESS)

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) (20042018 0000UTC)

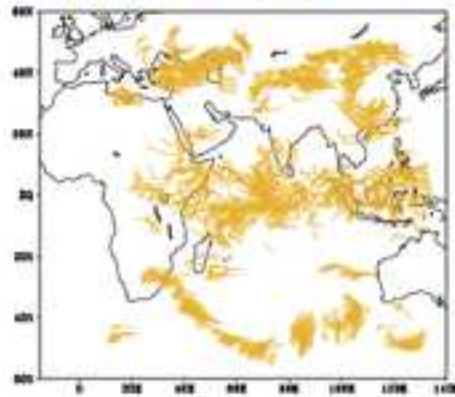
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)



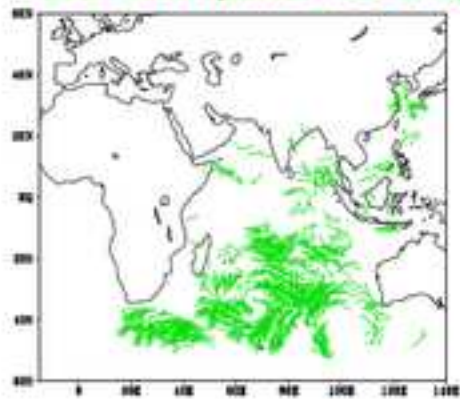
High Level (Above 400 hPa)



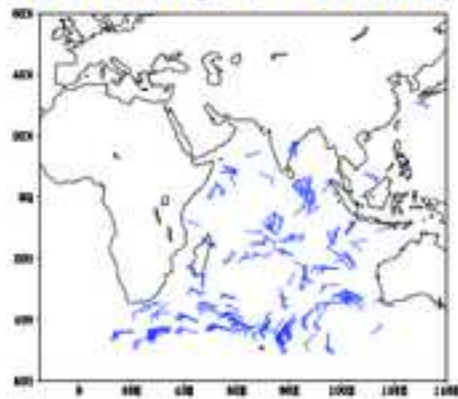


INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) (20042018 0000UTC)

Low Level (Below 700 hPa)



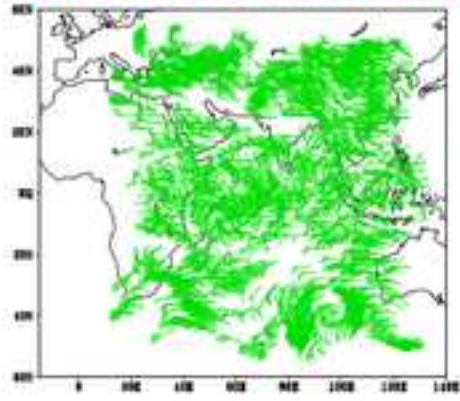
Mid Level (700 - 401 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) (20042018 0000UTC)

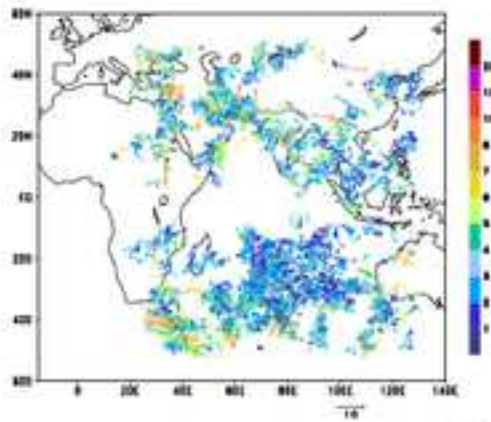
WV, High Level (Above 400 hPa)

VIS, Low Level (Below 700 hPa)

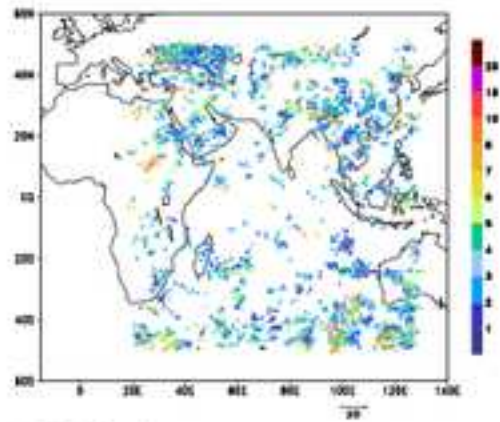


INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) DEVIATION (20042018 0000UTC)

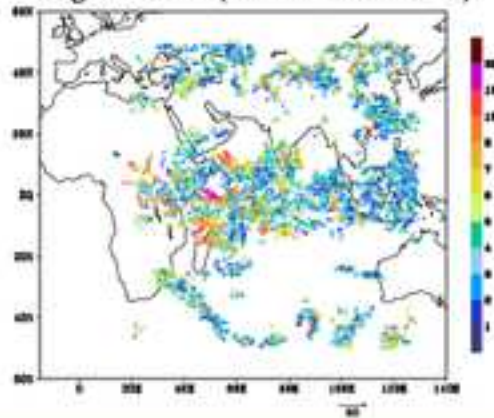
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)

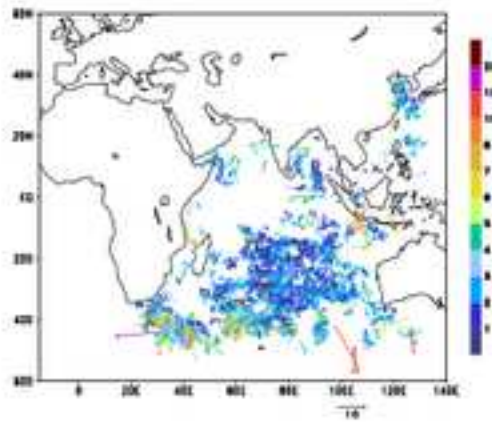


High Level (Above 400 hPa)

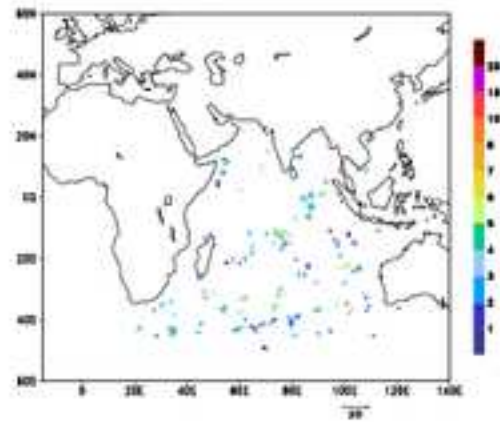


INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) DEVIATION (20042018 0000UTC)

Low Level (Below 700 hPa)



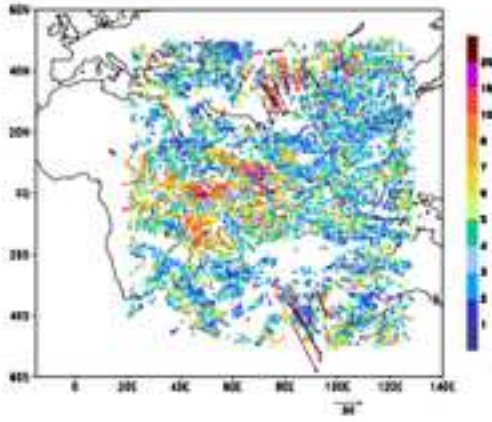
Mid Level (700 - 401 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (20042018 0000UTC)

WV, High Level (Above 400 hPa)

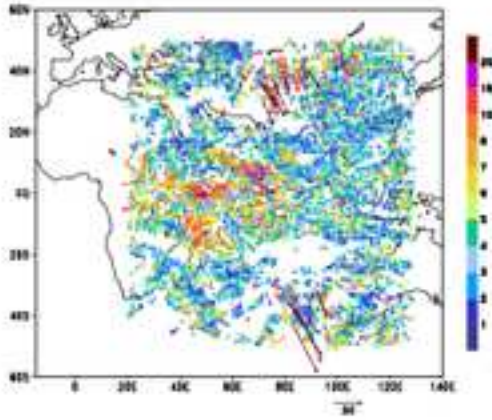
VIS, Low level (Below 700 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (20042018 0000UTC)

WV, High Level (Above 400 hPa)

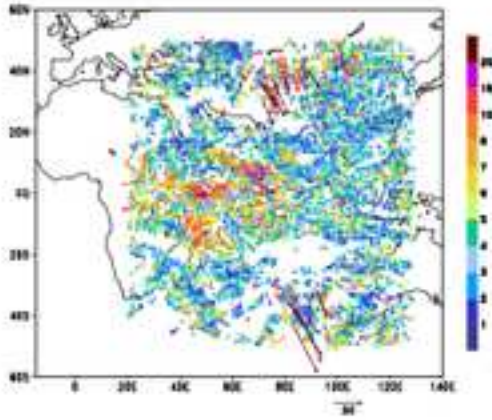
VIS, Low level (Below 700 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (20042018 0000UTC)

WV, High Level (Above 400 hPa)

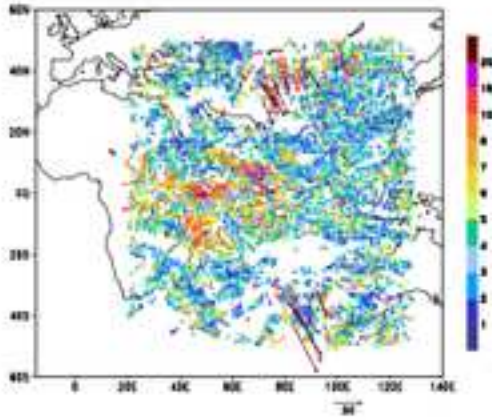
VIS, Low level (Below 700 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (20042018 0000UTC)

WV, High Level (Above 400 hPa)

VIS, Low level (Below 700 hPa)

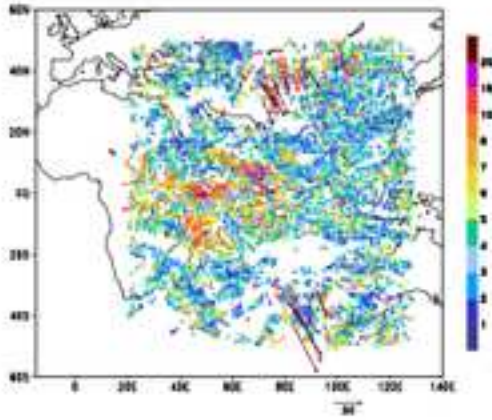




INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (20042018 0000UTC)

WV, High Level (Above 400 hPa)

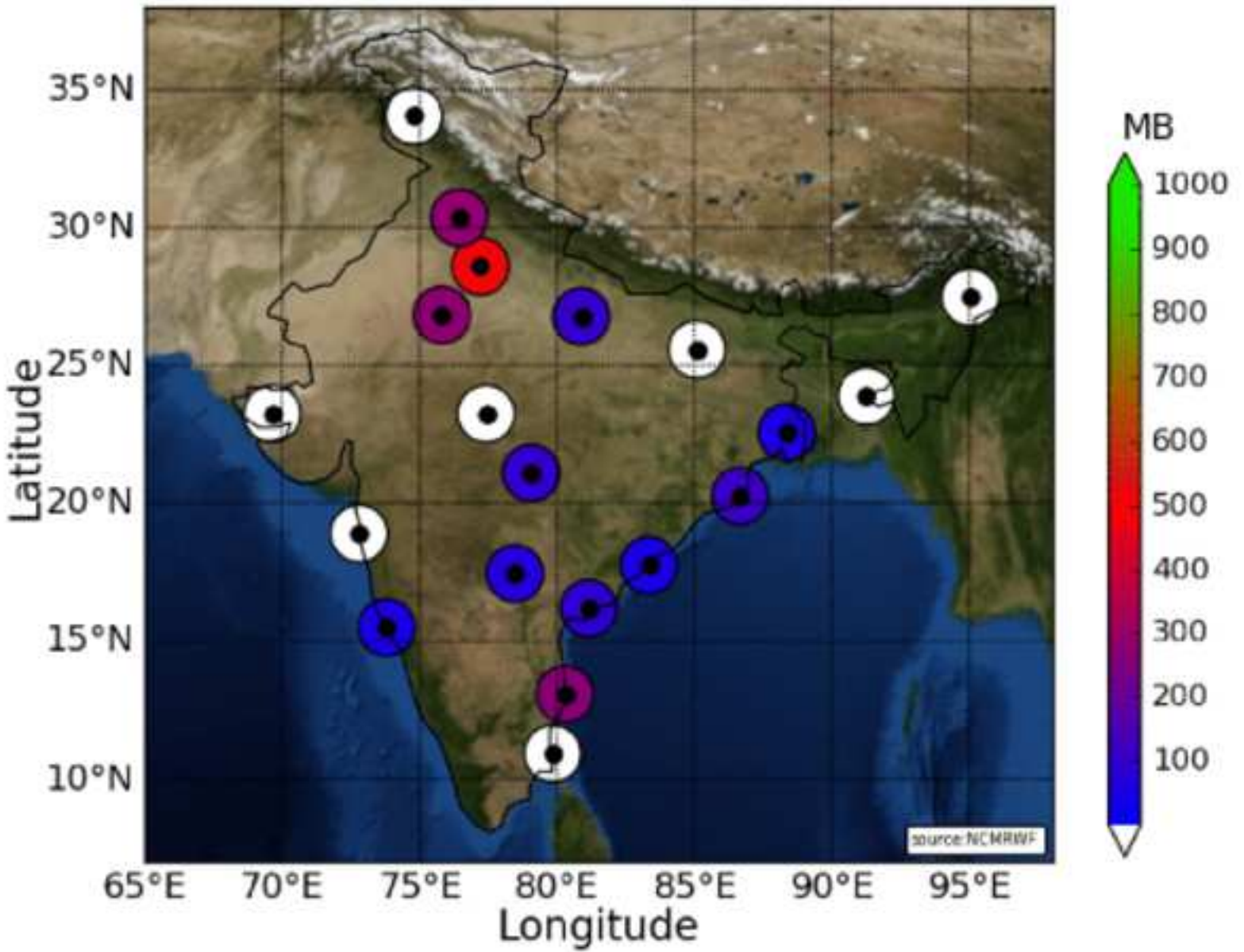
VIS, Low level (Below 700 hPa)



# Indian Doppler Weather Radar Data Monitoring

# Volume of DWR observations received at NCMRWF

Date: 20180420 at : 00UTC

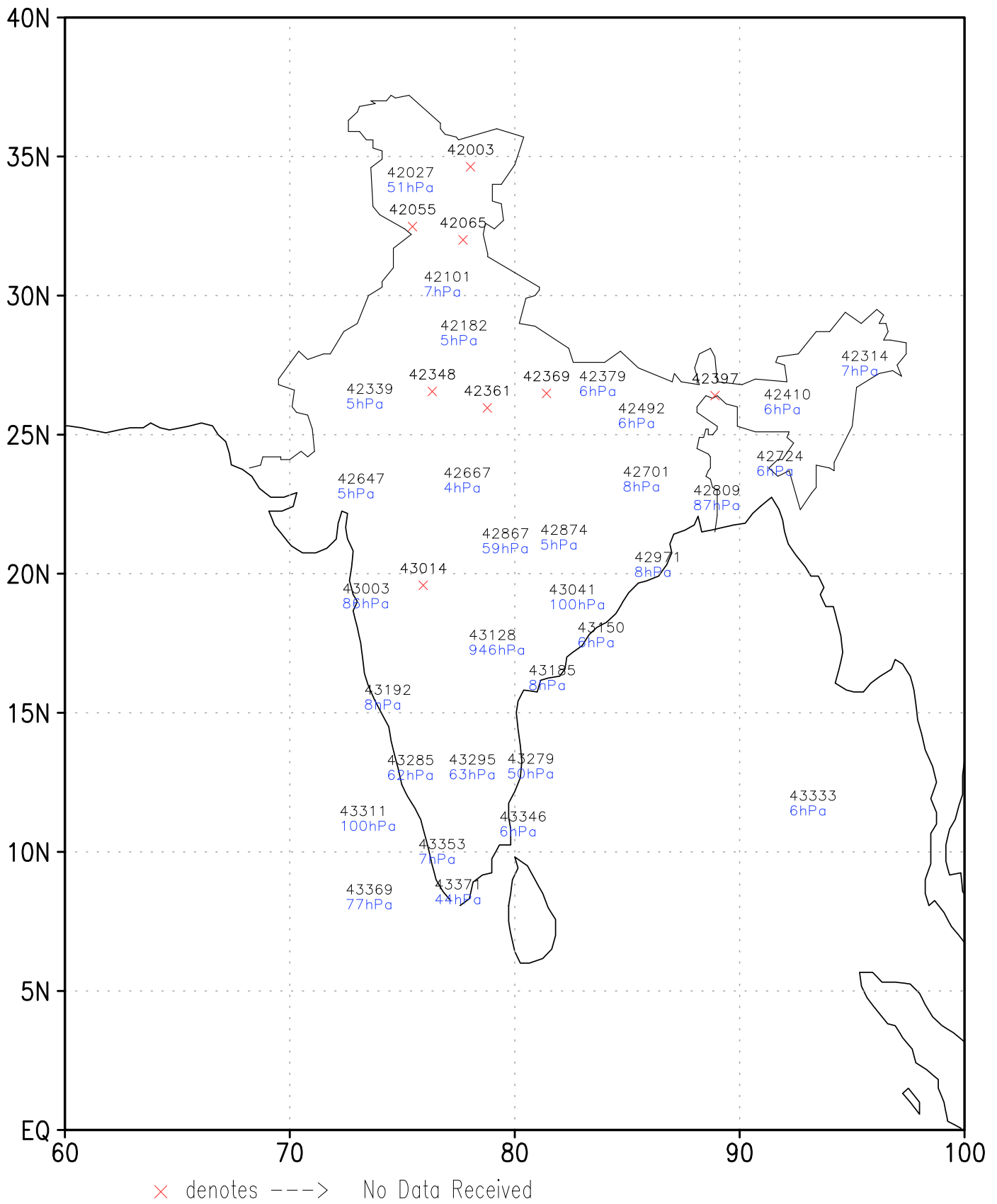


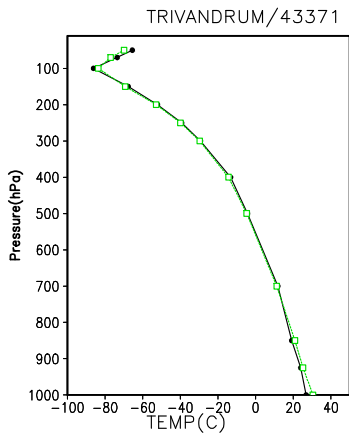
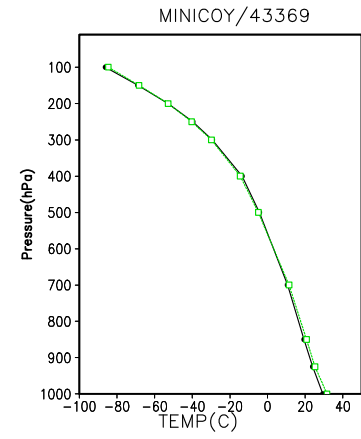
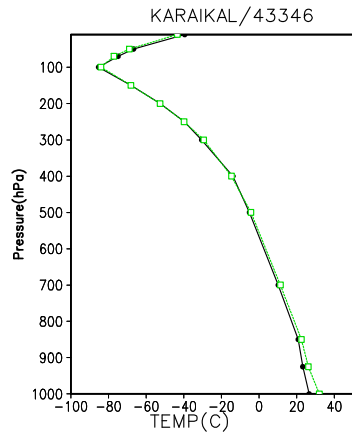
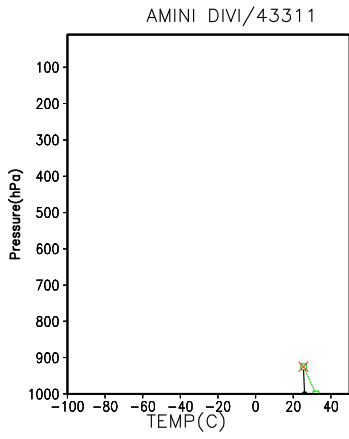
# Quality of Indian RS/RW Observations

Maximum height reported  
by RS/RW ascents

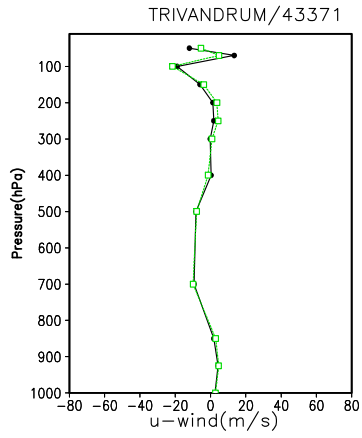
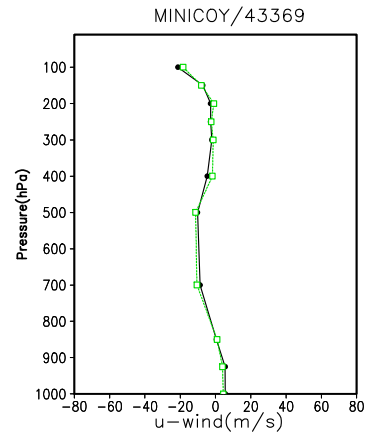
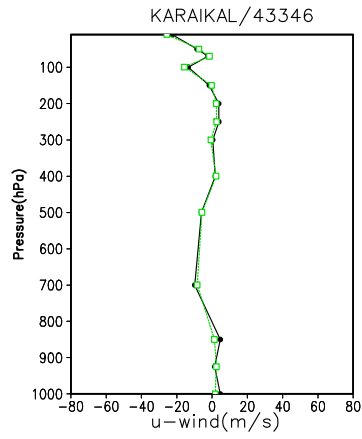
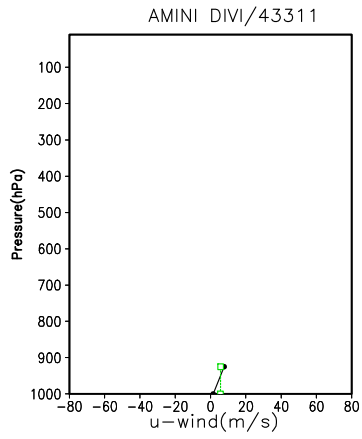
Temperature and Zonal Wind  
Rejections by NGFS GDAS

# Highest Level Reported by RS/RW (20042018 0000UTC +/- 03Hrs)





Observed ( — ) and 1st-guess ( — ) Temperature (Deg C) for 00UTC 20042018  
 × -- denotes the rejection of observation by NGFS GDAS  
 ( plotted for standard pressure levels only)



Observed ( — ) and 1st-guess ( — ) Zonal wind (m/s) for 00UTC 20042018

× -- denotes the rejection of observation by NGFS GDAS  
 ( plotted for standard pressure levels only )