

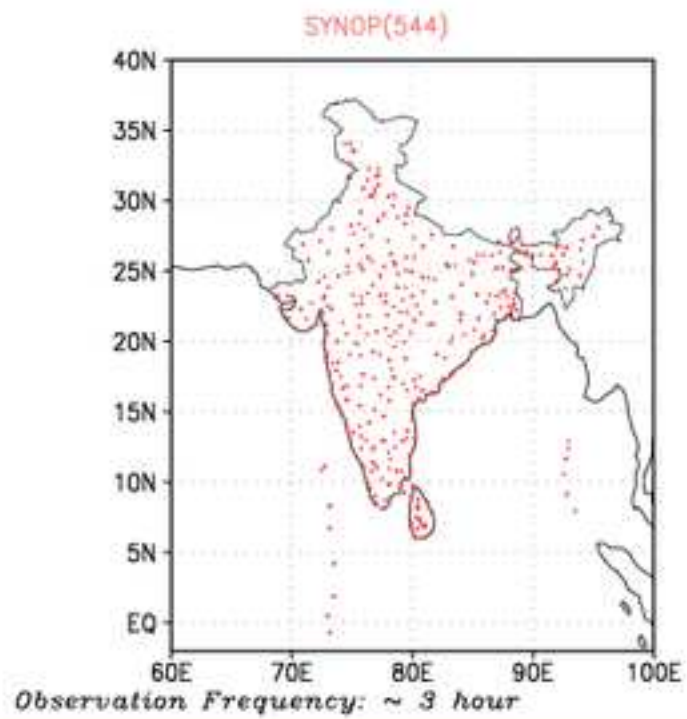
# Observation Monitoring

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

for 22052017 (0600 UTC)

# Indian Observation Coverage

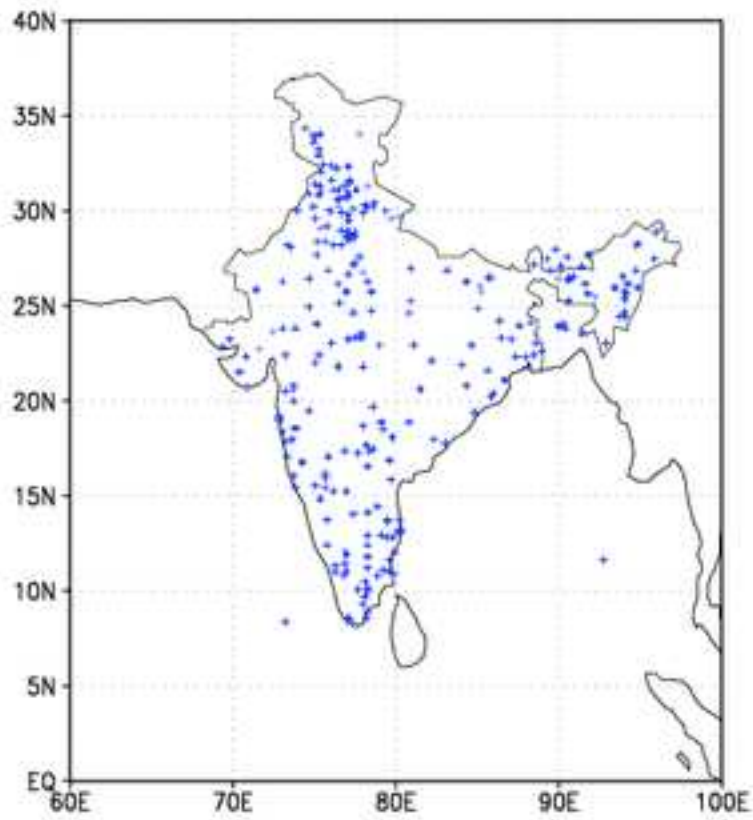
Data Coverage: Surface (22052017 0600UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 544  
(42 & 43 Block)



Data Coverage: Indian AWS (22052017 0600UTC +/- 3 Hrs)

Total Number of Observations Received at NCMRWF: 1083

AWS PRESSURE (1083)

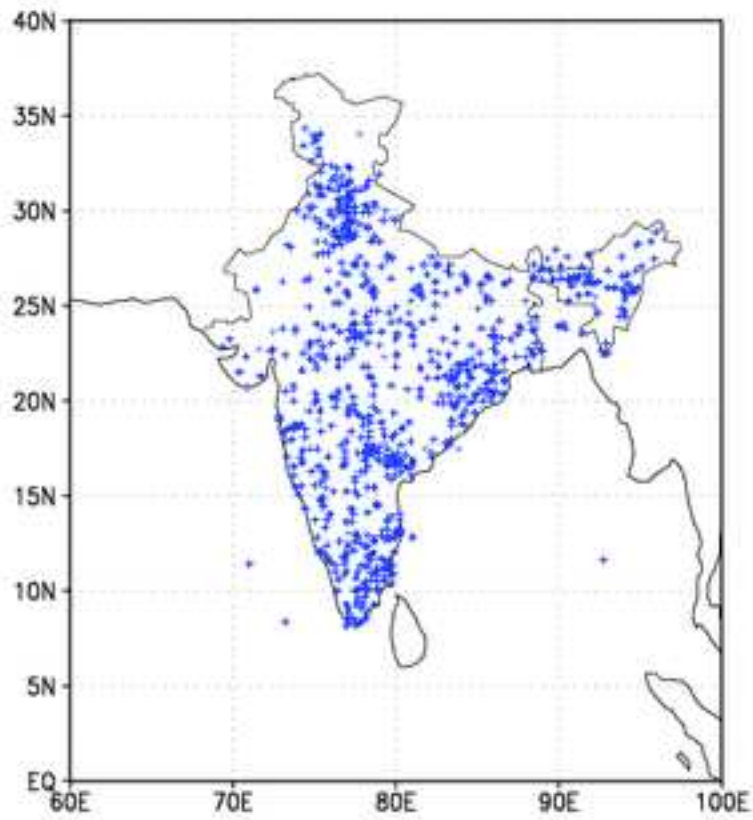


Observation Frequency: ~ 1 hour

Data Coverage: Indian AWS (22052017 0600UTC +/- 3 Hrs)

Total Number of Observations Received at NCMRWF: 3724

AWS + ARG (3724)

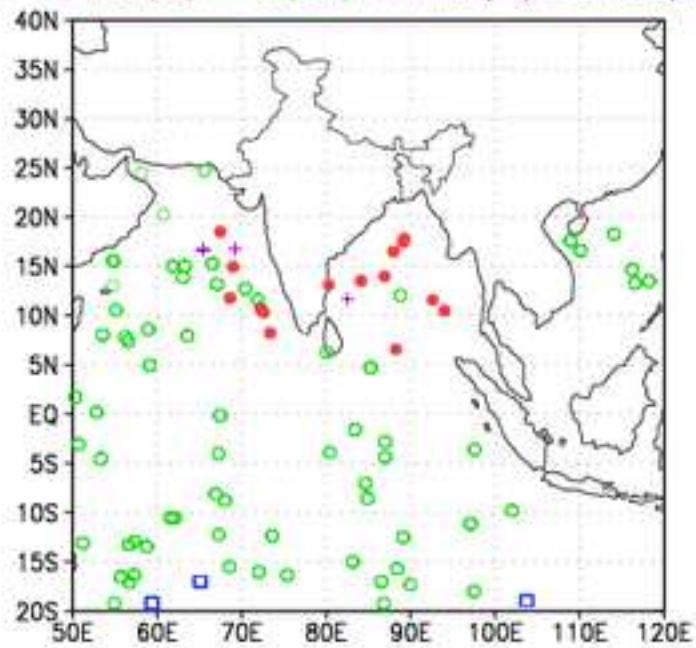


Observation Frequency: ~ 1 hour

Data Coverage: BUOY (22052017 0600UTC +/- 3 Hrs)

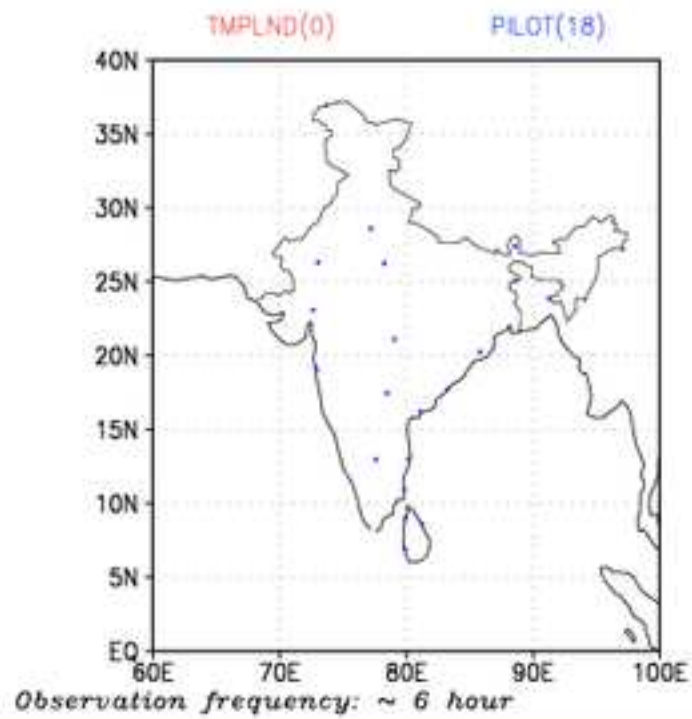
Total Number of Observations Received at NCMRWF: 428

country code in GTS as ● INDIA(28) ○ USA(360) + FRANCE(18) □ OTHERS(22)



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

Data Coverage: Sonde (22052017 0600UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 18  
(42 & 43 Block)



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

SYN0P

Avg=  
Today\_Cnt=  
Dep= %

BUOY

Avg=  
Today\_Cnt=  
Dep= %

AWS+ARG

Avg=  
Today\_Cnt=  
Dep= %

RS/RW

Avg=  
Today\_Cnt=  
Dep= %

PILOT

Avg=  
Today\_Cnt=  
Dep= %

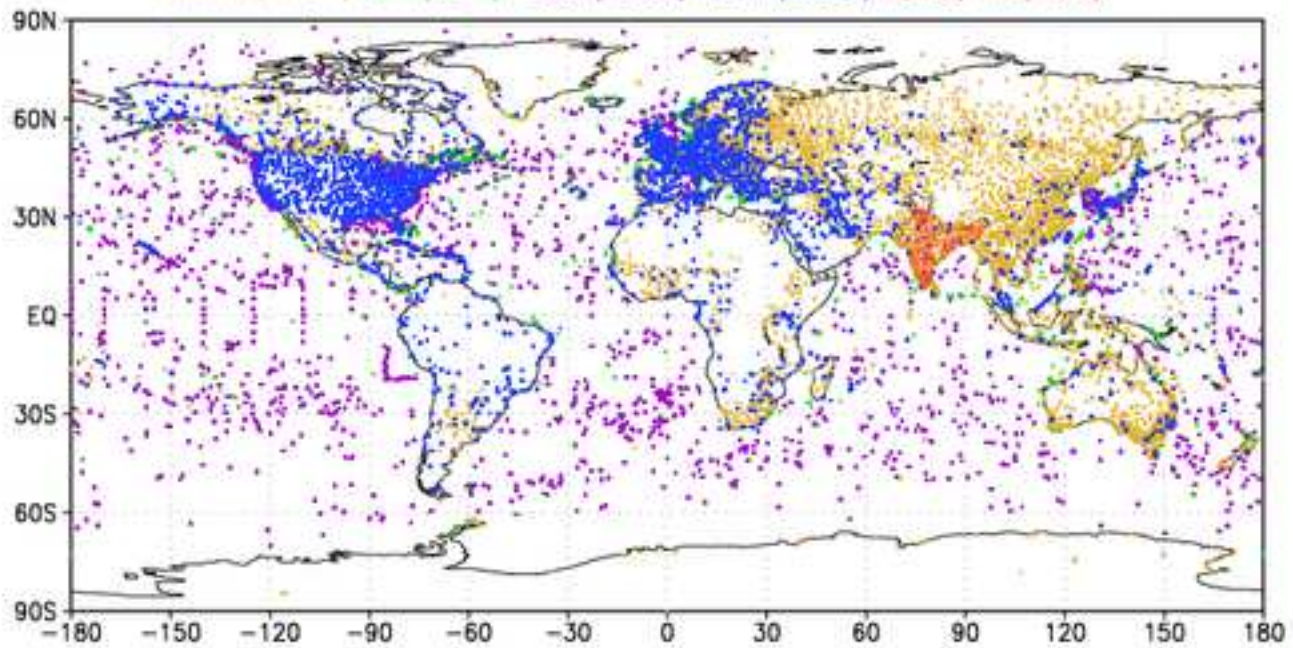


# Global Observation Coverage

Data Coverage: Surface (22052017 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 55119

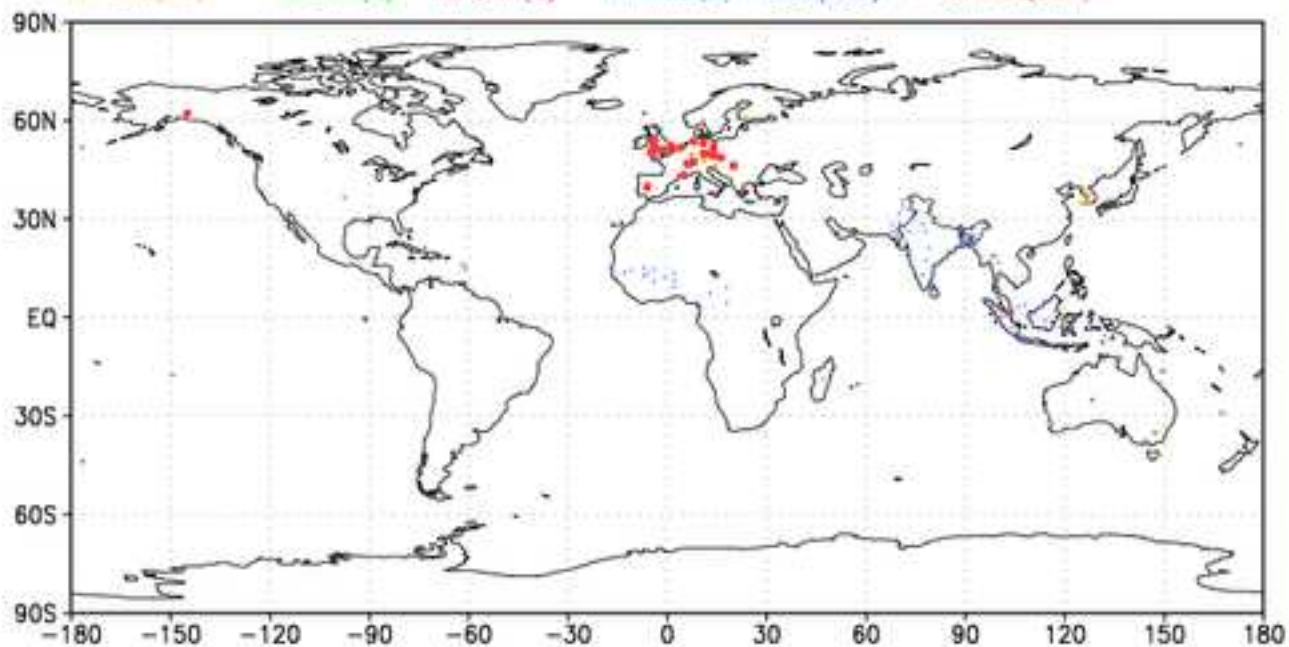
LNDSYN(14908) SHIP(2249) BUOY(13700) METAR(19889) MOBILE/AWS(4373)



Data Coverage: Sonde (22052017 0600UTC +/- 03Hrs)

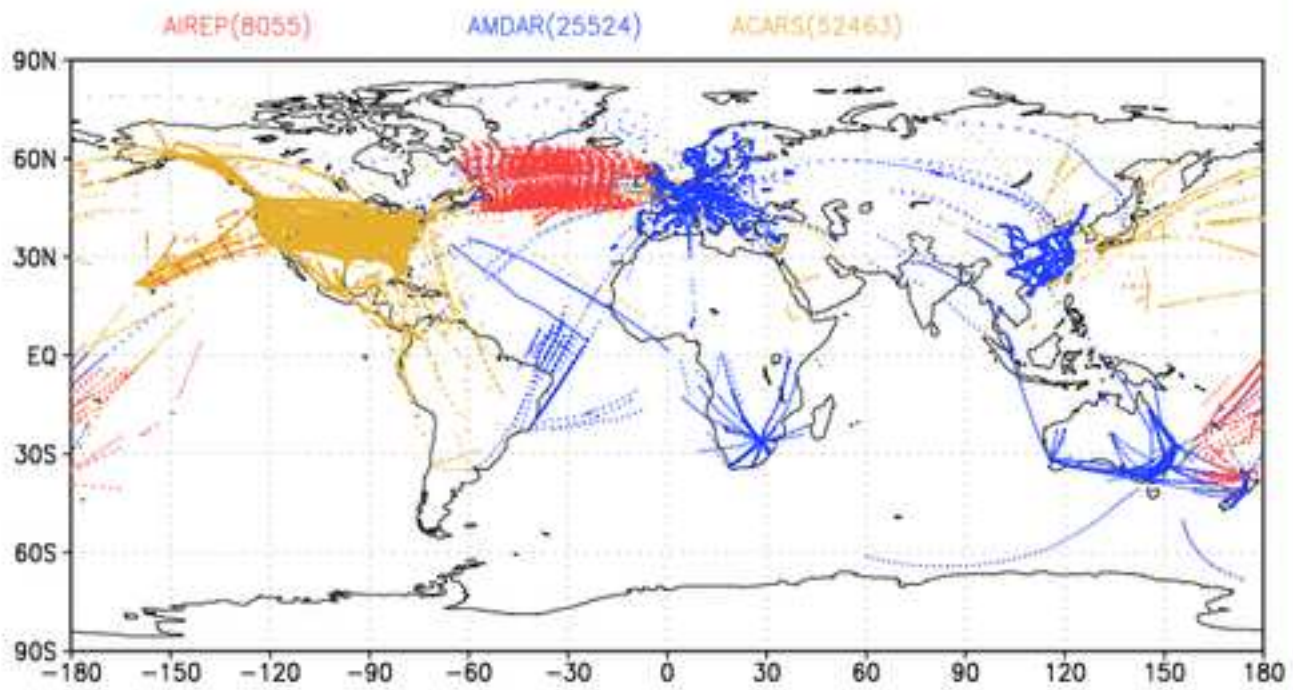
Total Number of Observations Received at NCMRWF: 729

TMP LND(48)    TMP SHP(0)    TMP DRP(0)    TMP MDB(0)    PILOT(130)    PROFILER(551)



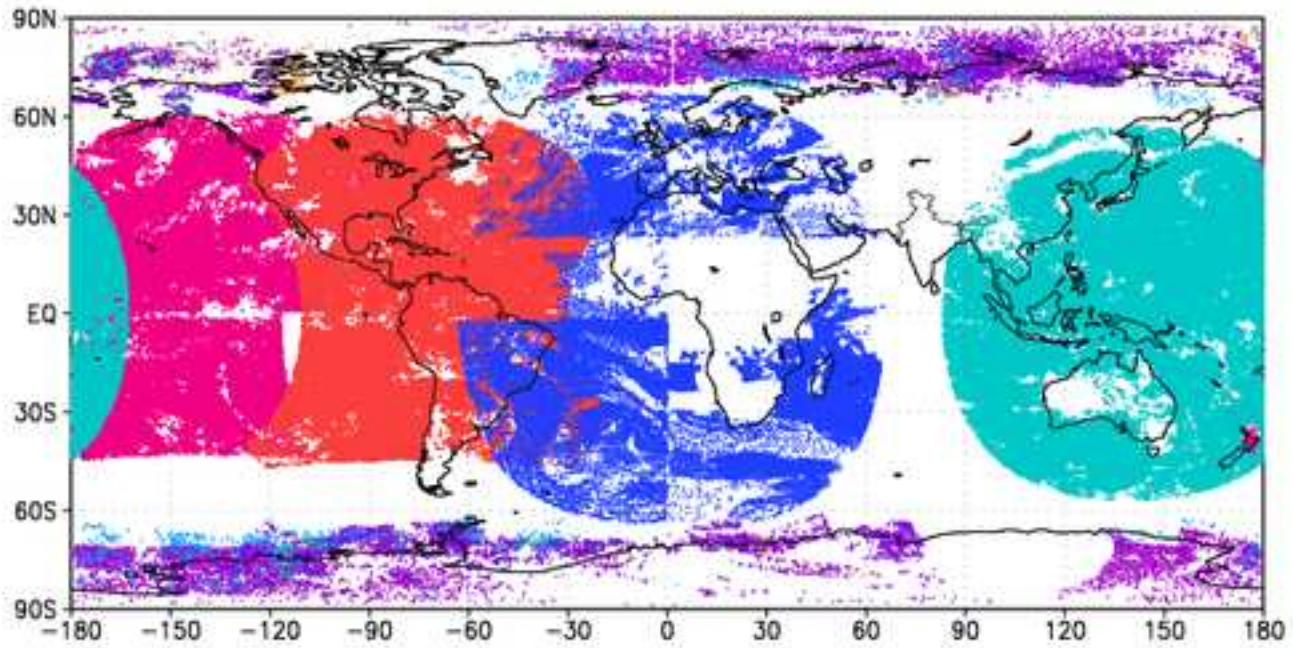
Data Coverage: AIRCFT (22052017 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 86042



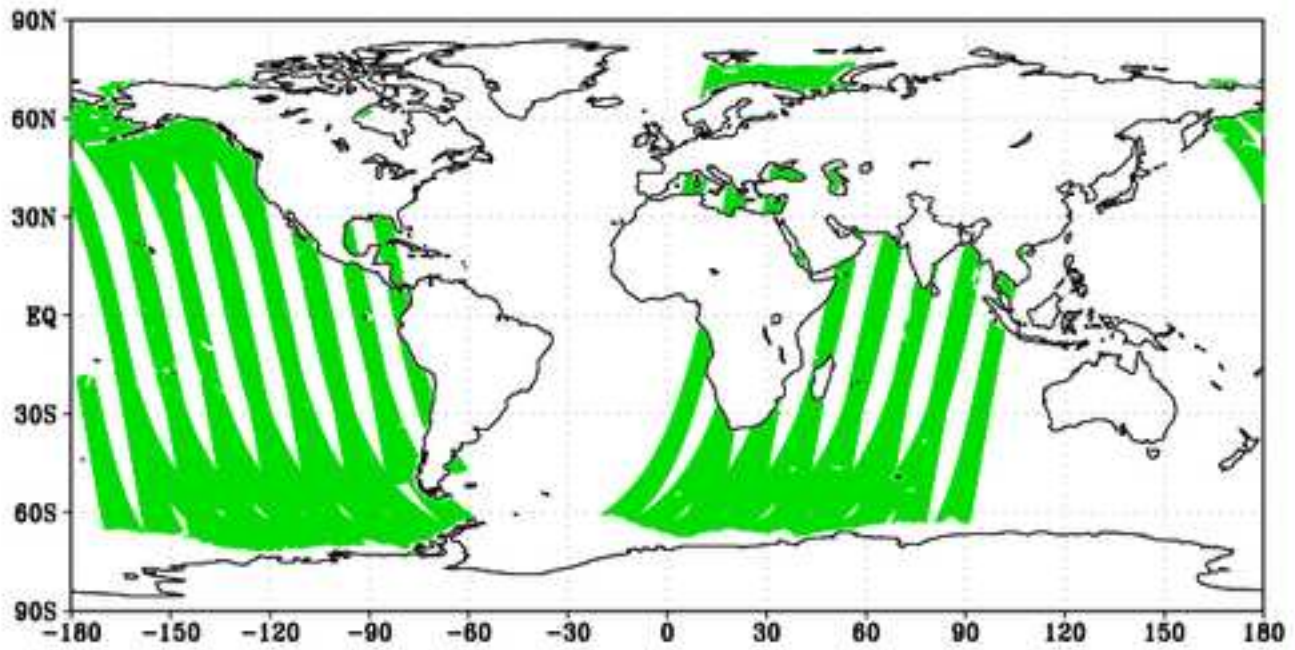
Data Coverage: AMV (22052017 0600UTC +/- 03Hrs)  
Total Number of Observations Received at NCMRWF: 701926

GOES-15(177190) GOES-13(230910) METEOSAT-7(0) METEOSAT-8(0)  
METEOSAT-10(44952) GMS/MTSAT(172194) MODIS/Terra(2214) MODIS/Aqua(12168)  
METOP(7698) NOAA-15(0) NOAA-16(0) NOAA-18(412) NOAA-19(1664)



Data Coverage: ASCAT winds (22052017 06UTC +/- 03Hrs)

ASCAT (238141)



Data Coverage: SAT RADIANCE (22052017 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 3600541

NOAA15(57510)

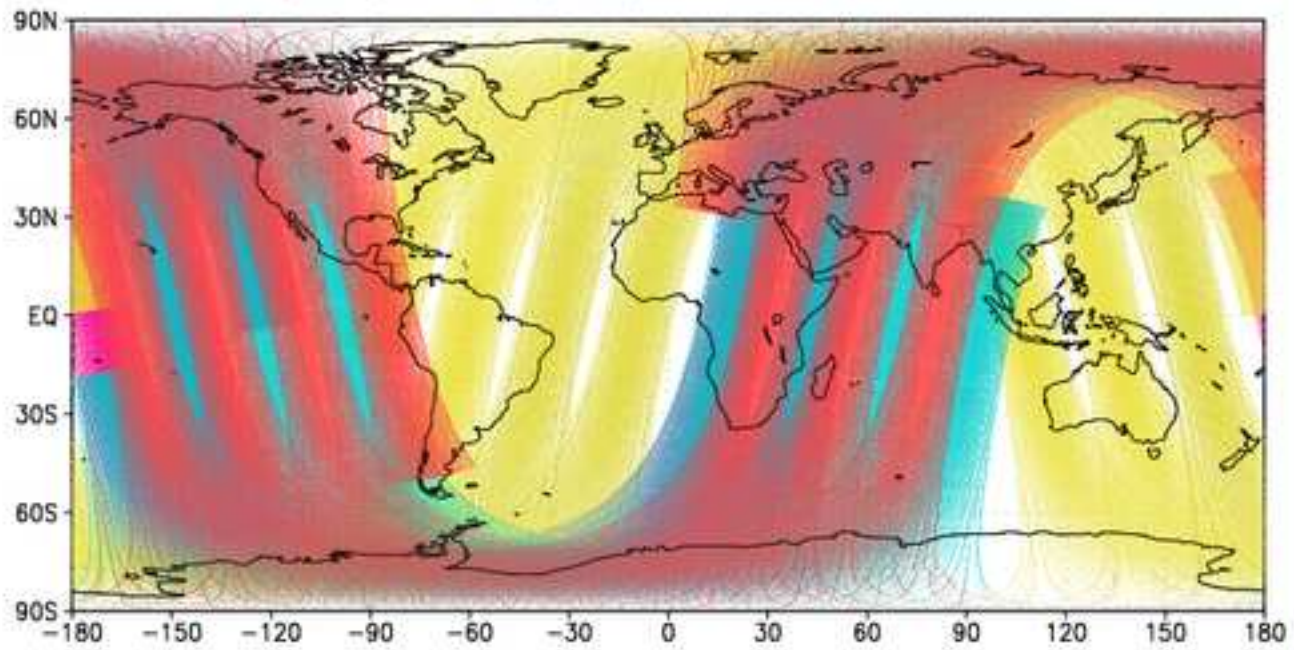
NOAA18(0)

NOAA18(596828)

NOAA18(304210)

METOP1(983418)

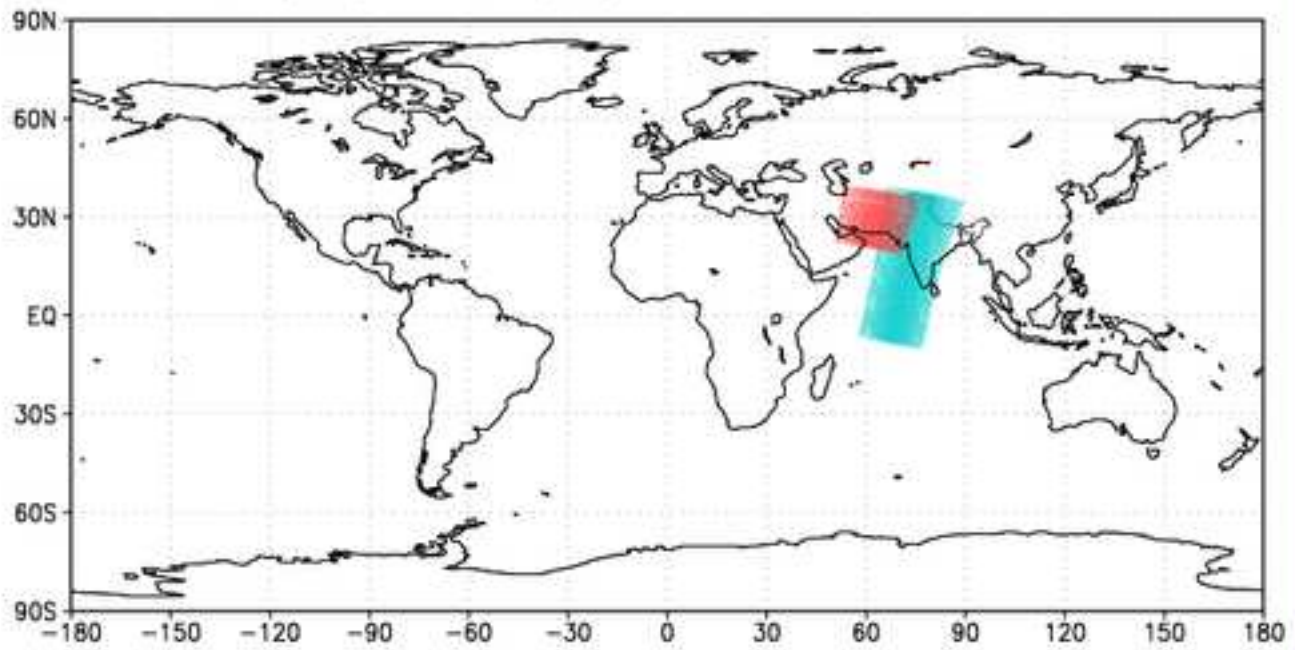
METOP2(078545)



Data Coverage: SAT RADIANCE (EARS+IMD RARS) (22052017 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 48876

NOAA15(0)      NOAA18(0)      NOAA19(0)      NOAA18(0)  
METOP1(13042)      METOP2(35834)



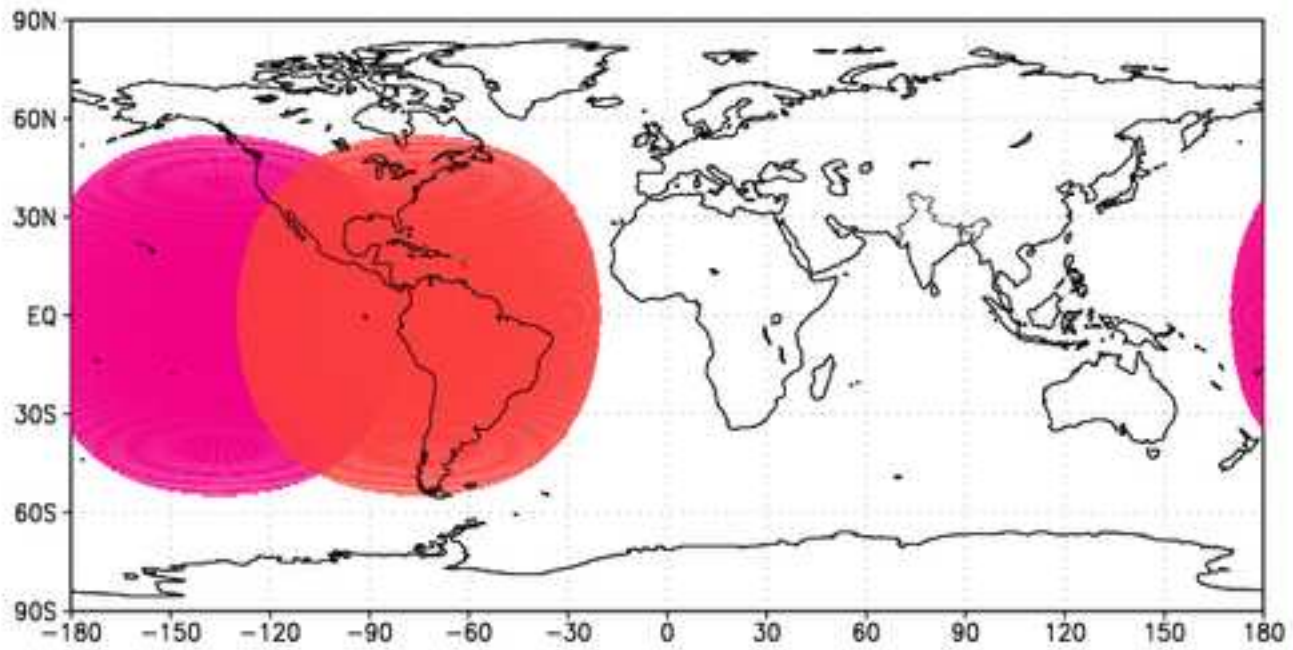


Data Coverage: GOES CSBT (22052017 0600UTC +/- 03Hrs)

Total Number of Observations Received at NCMRWF: 84777

GOES-15(42392)

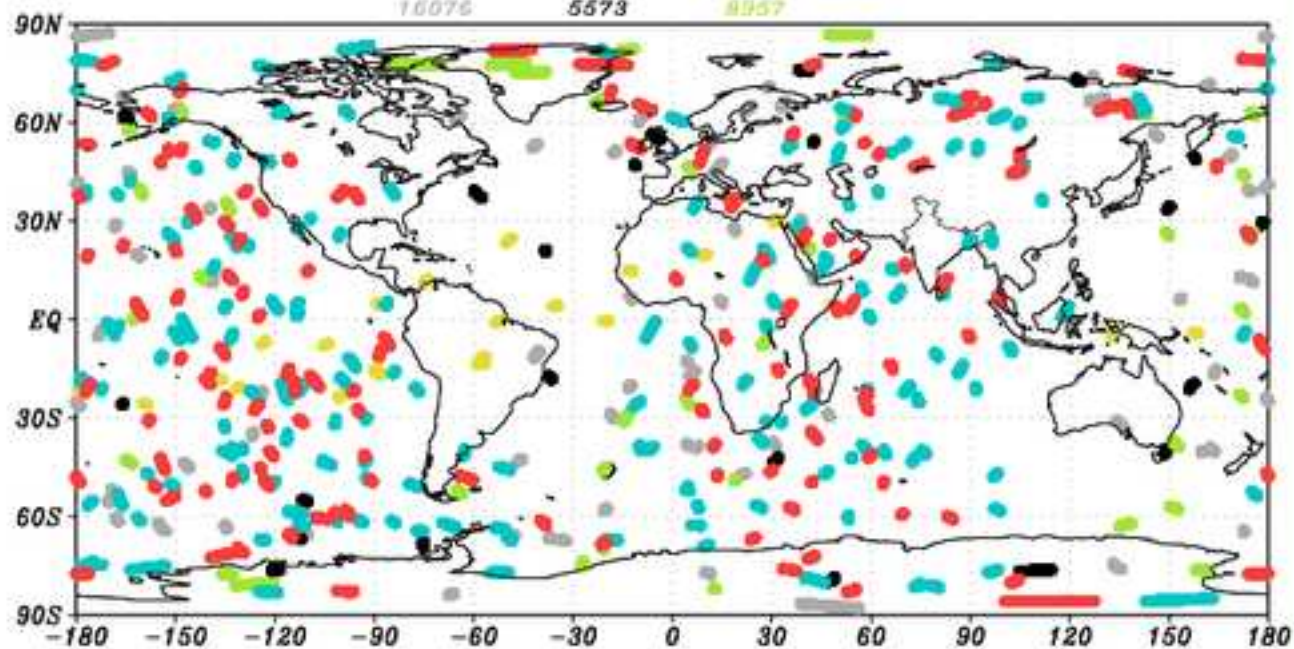
GOES-13(42385)



Data Coverage:GPSRO (22052017 0600UTC +/-03Hrs)

Total Number of Observations Received at NCMRWF: 108040

GRACE-A	METOP-B	METOP-A	COSMIC-1	COSMIC-2	COSMIC-3	COSMIC-4	COSMIC-5	COSMIC-6
0	32144	41110	0	0	4160	0	0	0
	TerraSAR-X	TenDEM-X	GRACE-B					
	16076	5573	8957					



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

SYNOP

Avg=  
Today\_Cnt=  
Dep= %

SHIP

Avg=  
Today\_Cnt=  
Dep= %

BUOY

Avg=  
Today\_Cnt=  
Dep= %

AIRCRAFT

Avg=  
Today\_Cnt=  
Dep= %

RS/RW

Avg=  
Today\_Cnt=  
Dep= %

PILOT

Avg=  
Today\_Cnt=  
Dep= %

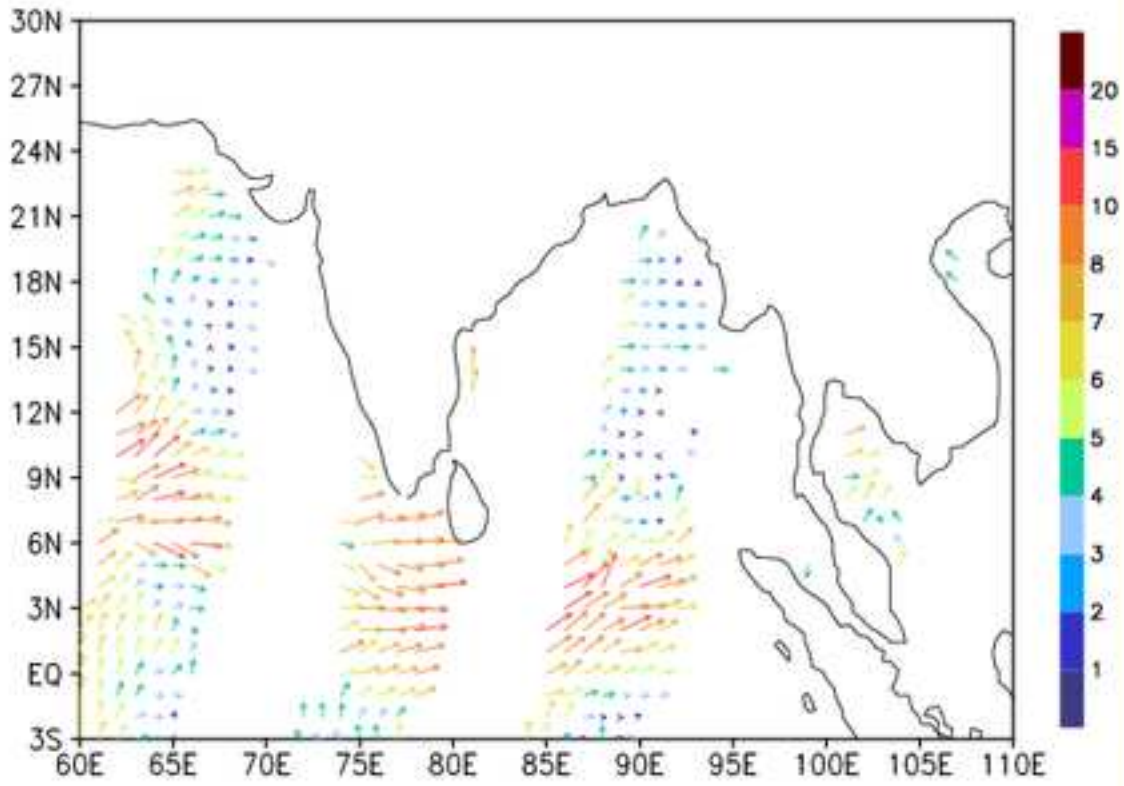
AMV

Avg=  
Today\_Cnt=  
Dep= %

SCATTEROMETER WIND VECTORS

RECEIVED AT NCMRWF (20170522 06Z)

ASCAT WINDS (22052017 06 UTC):NCMRWF



# INSAT-3D

## ATMOSPHERIC MOTION VECTORS (AMV)

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

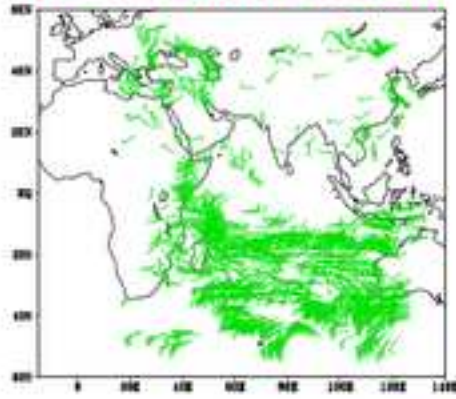
WATER VAPOUR WINDS (WV)

VISIBLE WINDS (VIS) }

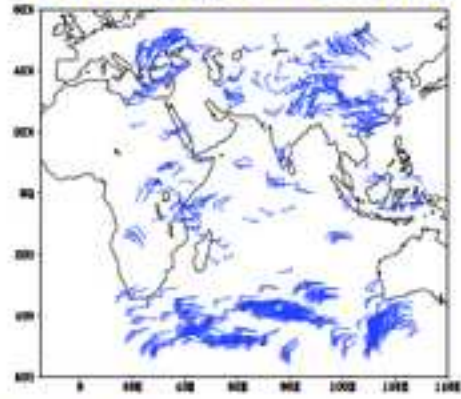
AMV DEVIATION  
(OBSERVATION - FIRST GUESS)

INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) (22052017 0600UTC)

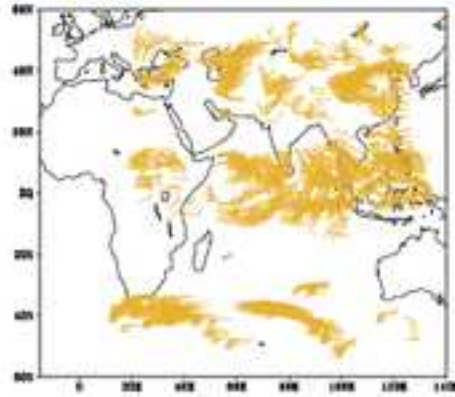
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)



High Level (Above 400 hPa)



INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) (22052017 0600UTC)

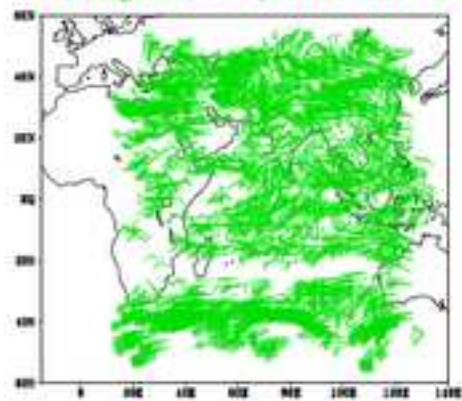
Low Level (Below 700 hPa)

Mid Level (700 - 401 hPa)

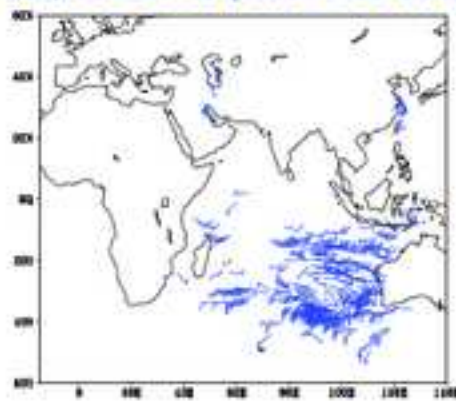


INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) (22052017 0600UTC)

WV, High Level (Above 400 hPa)

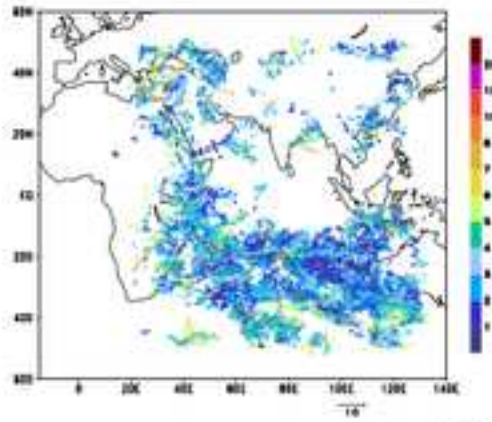


VIS, Low Level (Below 700 hPa)

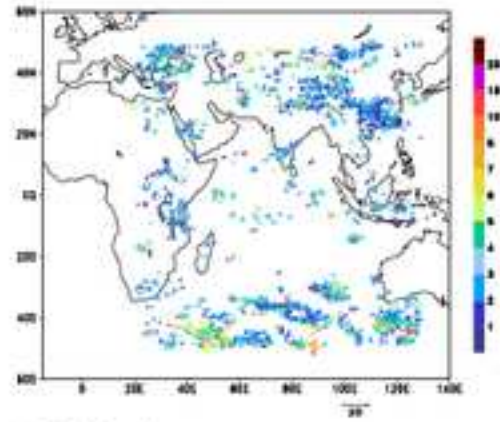


INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,10.8) DEVIATION (22052017 0600UTC)

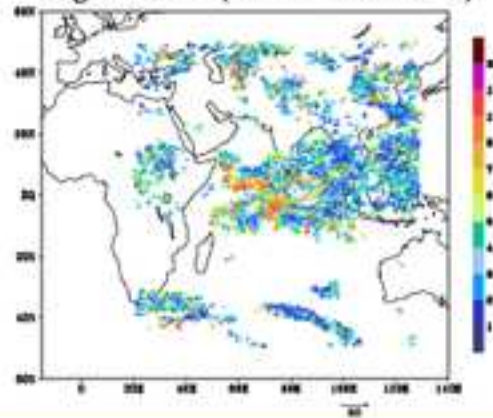
Low Level (Below 700 hPa)



Mid Level (700 - 401 hPa)



High Level (Above 400 hPa)



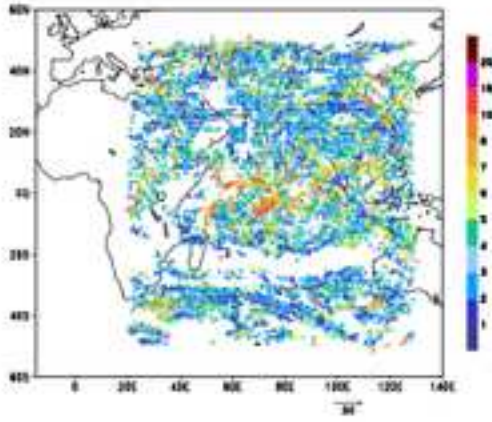
INSAT-3D ATMOSPHERIC MOTION VECTORS (IR,3.8) DEVIATION (22052017 0600UTC)

Low Level (Below 700 hPa)

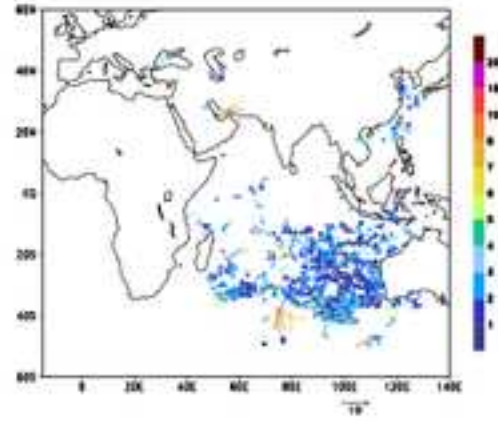
Mid Level (700 - 401 hPa)

INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (22052017 0600UTC)

WV, High Level (Above 400 hPa)

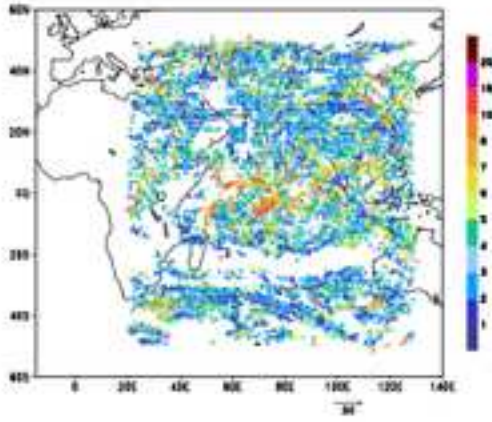


VIS, Low level (Below 700 hPa)

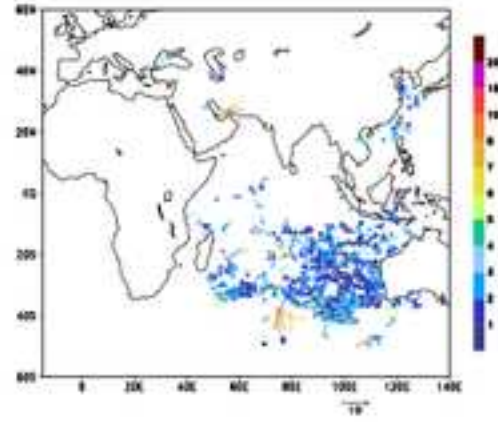


INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (22052017 0600UTC)

WV, High Level (Above 400 hPa)

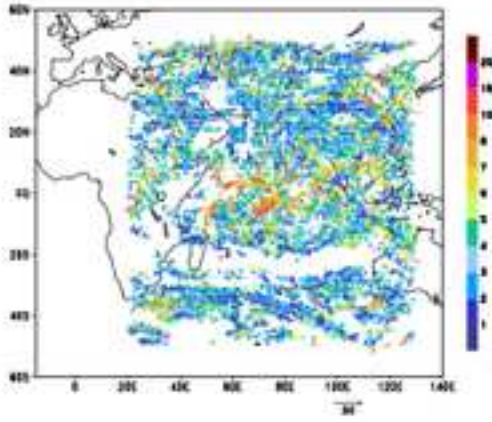


VIS, Low level (Below 700 hPa)

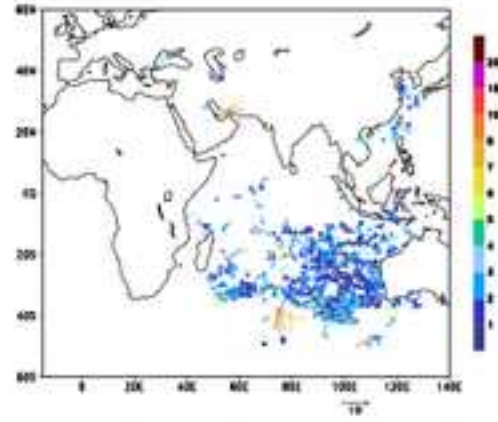


INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (22052017 0600UTC)

WV, High Level (Above 400 hPa)

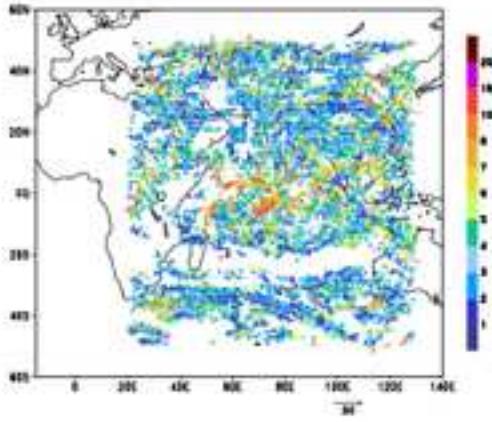


VIS, Low level (Below 700 hPa)

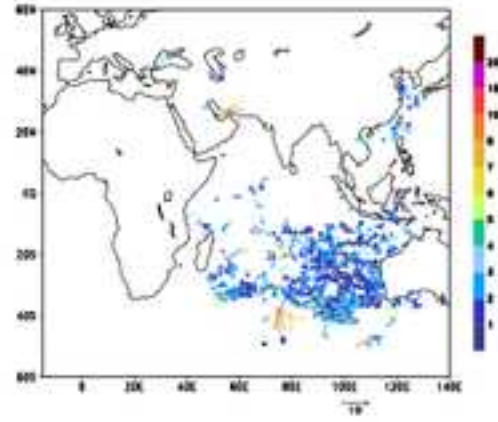


INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (22052017 0600UTC)

WV, High Level (Above 400 hPa)

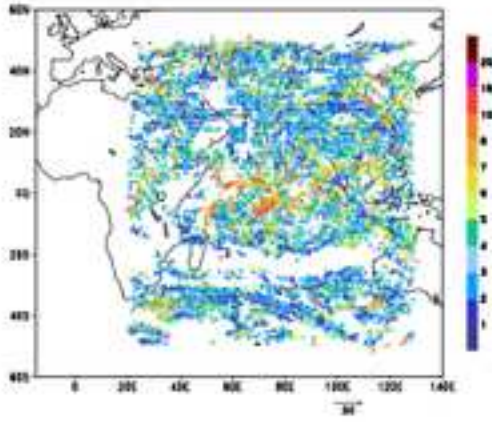


VIS, Low level (Below 700 hPa)

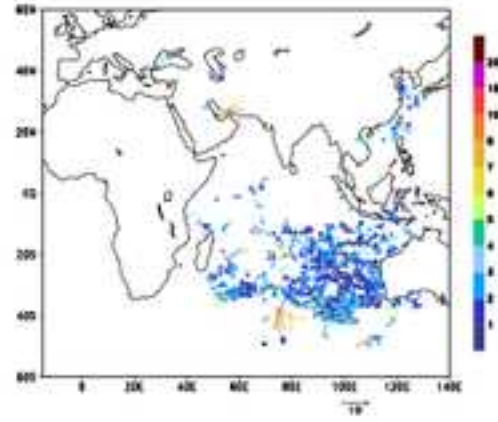


INSAT-3D ATMOSPHERIC MOTION VECTORS (WV & VIS) DEVIATION (22052017 0600UTC)

WV, High Level (Above 400 hPa)



VIS, Low level (Below 700 hPa)

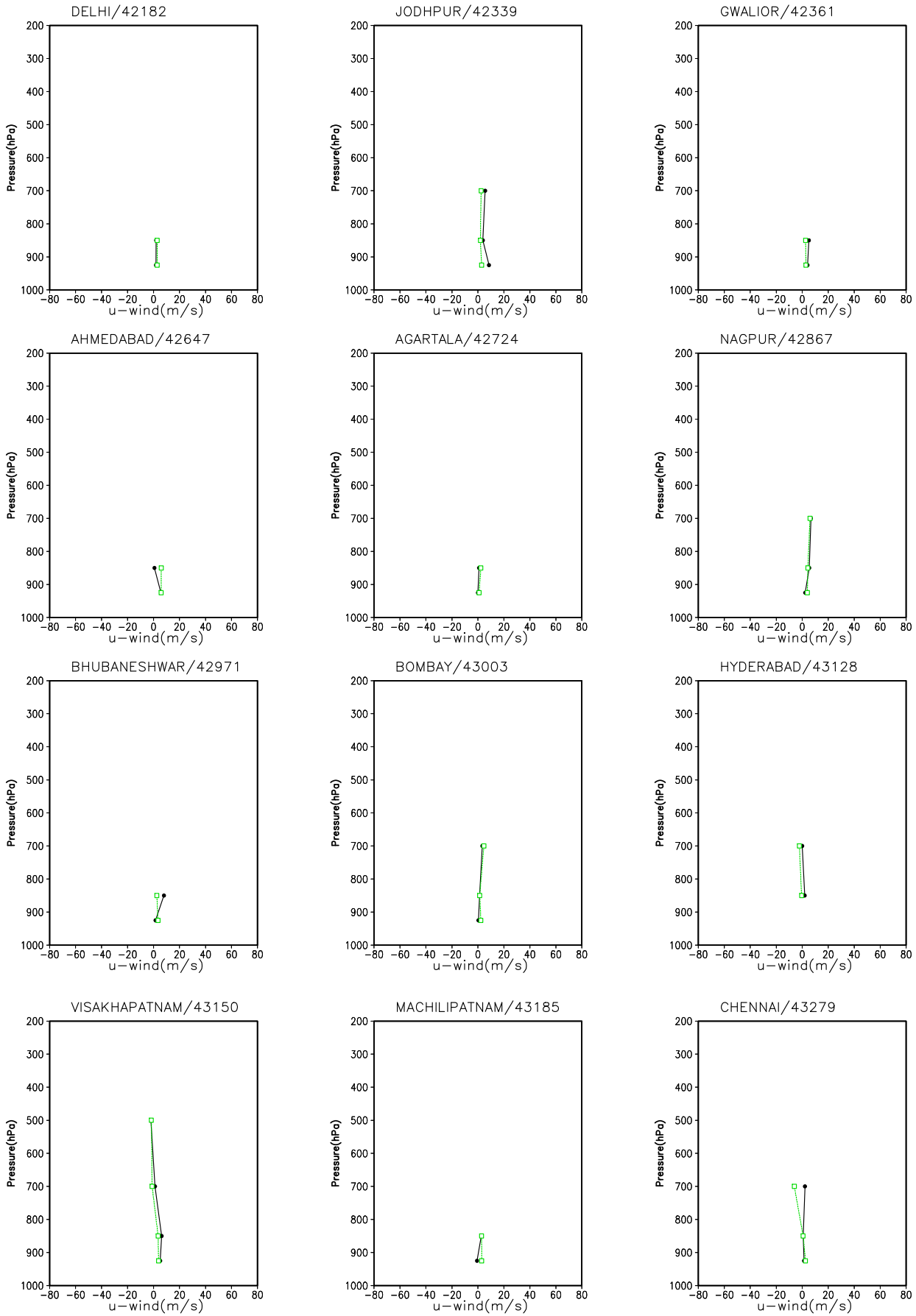




# Quality of Indian PIBAL Observations

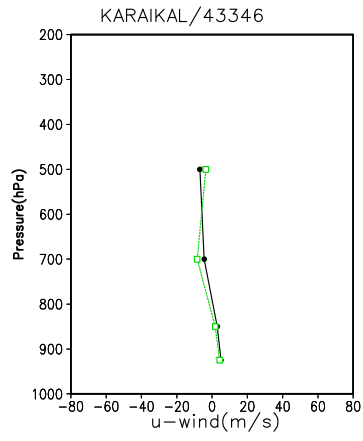
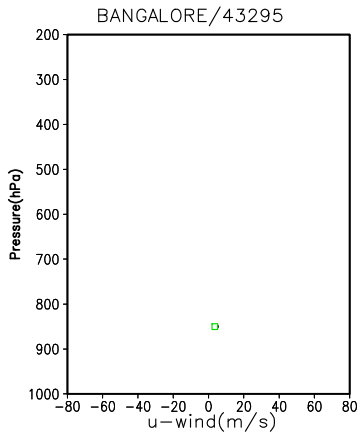
Maximum height reported  
by PIBAL ascents

Zonal Wind Rejections by NGFS GDAS



Observed ( — ) and 1st-guess ( — ) Zonal wind (m/s) for 06UTC 22052017

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



Observed ( — ) and 1st-guess ( — ) Zonal wind (m/s) for 06UTC 22052017  
 × -- denotes the rejection of observation by NGFS GDAS  
 (plotted for standard pressure levels only)