India Meteorological Department

FDP STORM Bulletin No. 110 (24-06-2018)

1. CURRENT SYNOPTIC SITUATION:

NWFC Inference (0300UTC of the day):

♦ Southwest monsoon has further advanced into some parts of north Arabian Sea, Saurashtra & some more parts of Gujarat region and Maharashtra; some parts of West Madhya Pradesh, some more parts of West Bengal and remaining parts of Assam & Meghalaya. The Northern Limit of Monsoon passes through Lat 21°N/ Long 60°E, Lat 21°N/Long 65°E, Veraval, Amreli, Ahmedabad, Khandwa, Amravati, Gondia, Titlagarh, Cuttack, Midnapore, Lat 24°N/ Long 89°E, Jalpaiguri and Lat 27°N/ Long 87°E.

♦ Conditions are becoming favourable for further advance of Southwest Monsoon into some more parts of north Arabian Sea, Gujarat State; remaining parts of Maharashtra; some more parts of Madhya Pradesh, Chhattisgarh; remaining parts of Odisha, West Bengal and some parts of Jharkhand and Bihar during next 48 hours.

♦ Conditions are likely to become favourable for further advance of Southwest Monsoon into some more parts of north Arabian Sea, remaining parts of Madhya Pradesh, Chhattisgarh and some parts of Uttar Pradesh during subsequent 48 hours.

♦ Pre monsoon thunderstorm activity is very likely to commence over parts of northwest India from 26 June.

♦ The Western Disturbance as a trough in mid & upper tropospheric levels with its axis at 5.8 km above mean sea level roughly along Long 74°E to the north of lat. 32°N persists.

♦ The cyclonic circulation over north Haryana & neighbourhood now lies over north west Uttar Pradesh and neighbourhood and extends upto 1.5 km above mean sea level.

♦ The cyclonic circulation over north Konkan & adjoining south Gujarat persists and now seen between 2.1 km and 5.8km above mean sea level.

♦ The off-shore trough at mean sea level from south Gujarat coast to Kerala coast persists.

♦ The cyclonic circulation over northwest Bay of Bengal & neighbourhood persists and now seen between 4.5 km and 5.8 km above mean sea level.

♦ The East West shear zone roughly along latitude 20°N over Indian region between 3.1 and 7.6 km above mean sea level and tilting southwards with height persists.

♦ The cyclonic circulation over south Konkan & neighbourhood between 3.1 and 5.8 above mean sea level has merged with the east west shear zone.

♦ An upper air cyclonic circulation at 1.5 km above mean sea level lies over west Assam and adjoining Sub Himalayan West Bengal.

Satellite Observations during past 24 hrs and current observation:

Current Observation (based on 0600UTC imagery of INSAT 3D):

Clouds descriptions within India:

North: Scattered low/medium clouds with embedded weak convection seen over Jammu & Kashmir, Southeast Haryana, West Central & extreme Northeast Uttar Pradesh. Scattered low/medium clouds over Himachal Pradesh, Uttarakhand, Northwest Uttar Pradesh and Delhi.

East: Scattered low/medium clouds with embedded moderate to intense convection seen over Bihar, Sub-Himalayan West Bengal, Gangetic West Bengal, East Jharkhand, East Odisha, Meghalaya, West Assam. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over rest parts of the region.

West: Scattered to Broken low/medium clouds with embedded moderate to intense convection seen over Gujarat and Southeast West Rajasthan. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over Northeast Rajasthan, Madhya Pradesh, Maharashtra and Goa. Scattered low/medium clouds over rest parts of the region.

South: Scattered low/medium clouds with embedded moderate to intense convection seen over Coastal Andhra Pradesh & North Tamilnadu. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over Telangana, Rayalaseema, South Interior Karnataka, Lakshadweep and Bay Islands. Scattered low/medium clouds over rest parts of the region.

Arabian Sea: Scattered low/medium clouds with embedded intense to very intense convection seen over Gulf of Cambay, East Central adjoining Northeast Arabian Sea between lat 17.0N to 22.0N and east of long 67.0E.

Bay of Bengal & Andaman Sea: Scattered low/medium clouds with embedded moderate to intense convection seen over North OF LAT 10.0N Arakan Coast Gulf of Martban and Andaman Sea.

Past Observation: Not Received

DWR and RAPID Observations:

Light to Moderate echoes observed on DWR Agartala, Bhopal, Goa, Gopalpur, Jaipur, Lucknow and Paradeep and Light echoes over Mumbai, Patiala, Patna and Visakhapatnam around 1732 IST.

RAPID RGB Satellite imagery at 1630 IST indicates significant convection over South Central Uttar Pradesh, Bihar, Jharkhand, Gangetic West Bengal, North Odisha, North Coastal Andhra Pradesh, Madhya Pradesh, South Gujarat, North Madhya Maharashtra and Central Rajasthan.

Environmental Condition (dust etc) and its Forecast based on 00UTC of date:

Higher Dust concentration was observed over northern Africa, Arab countries and western part of India. Dust concentration is expected to decrease over IGP and north India.

Particulate matter concentration is expected to remain in moderate category for next 2 days in Delhi.

Delhi – SAFAR analysis & Forecast	24.06.2018	25.06.2018
PM10 (micro-g/m^3)	180	171
PM2.5 (micro-g/m^3)	71	68

2. NWP MODEL GUIDANCE:

NCMRWF (NCUM forecast based on 00UTC the day):

1. Weather Systems:

Low level Cycirs, Troughs: 00&12UTC of Day 2-4: At850hPaCYCIR WB and adjoining Bihar moving westwards
00&12UTC of Day 0-2: At700hPaCYCIR over Gujarat adjoining Maharashtra moving northwards in Day-3 and 4
Confluence & wind Discontinuity regions: 00 & 12UTC: NIL

Synoptic systems: 00 &12 UTC of Day 0-3: 850hPa trough over Pakistan and adjoining Gujarat-Rajasthan

2. Location of jet and jet core (>60kt) at 500hPa: Nil

3. Convergence at 850 hPa:

Day/Index: Subdivisions with Lower Level Convergence > 15 x 10^-5 /s

Day0: TN Puducherry,
Day1: TN Puducherry,
Day2: TN Puducherry,
Day3:
Day4:

4. Low level Vorticity:-Positive Vorticity:

Day/Index: Subdivisions with Lower Level Vortex > 15 x 10^-5 /s

Day0: Arunachal Pradesh, Assam Meghalaya, Bihar, Himachal Pradesh, TN Puducherry, Kerala,
Day1: Assam Meghalaya, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, TN Puducherry, Kerala,
Day2: East UP, TN Puducherry, Kerala,
Day3: East UP, TN Puducherry, Kerala,
Day4: Arunachal Pradesh, Assam Meghalaya, Bihar, East UP, West UP, East RJ, West MP, TN Puducherry,

5. Showalter Index: -3 to -4[Very unstable]:

Day/Index: Subdivisions with Showalter Index < -4

Day0: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Gujarat Region, Vidarbha, Chhattisgarh, Coastal AP,
Day1: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Saurashtra Kutch, Vidarbha, Chhattisgarh,
Day2: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Saurashtra Kutch, Vidarbha, Chhattisgarh, Coastal AP,
Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Chhattisgarh,
Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ,

6. Spatial distribution of TTI: TTI >50 [Scattered Thunderstorms few severe]:

Day/Index: Subdivision with Total Totals Index > 52

Day0: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,
Day1: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East MP, Chhattisgarh,
Day2: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ,
Day3: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,
Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

7. Spatial distribution of K Index :> 35[Very Unstable thunderstorm likely]:

Day/Index: Subdivisions with K Index > 40

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Chhattisgarh,
Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Marathwada, Chhattisgarh, Coastal AP, Rayalaseema, TN Puducherry,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Gujarat Region, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka,
Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Chhattisgarh, Rayalaseema,

8. Rainfall and thunder storm activity:

Day/Index: Subdivisions with Precipitation > 2 cm

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Bihar, Jammu Kashmir, Odisha, West MP, Gujarat Region, Konkan Goa, Madhya Maharashtra, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Bihar, Odisha, Gujarat Region, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Coastal AP, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Odisha, East MP, Gujarat Region, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, East RJ, Odisha, West MP, East MP, Gujarat Region, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Coastal Karnataka

3. IOP ADVISORY FOR 24 and 48Hrs:

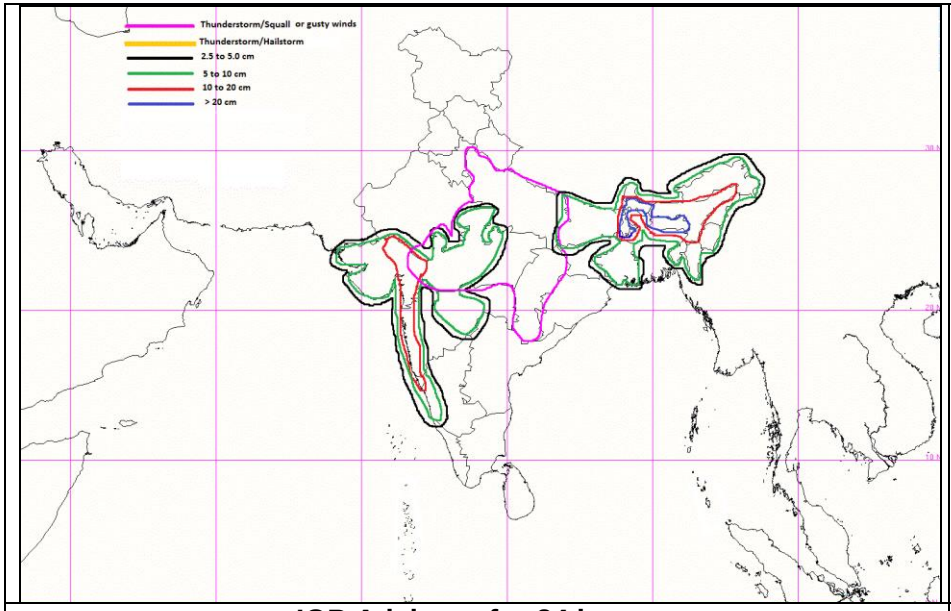
Summary and Conclusions:

- Synoptic analysis indicates that the off shore trough at mean sea level runs from South Gujarat Coast to Kerala coast. Also, a cyclonic circulation lies over North Konkan & adjoining south Gujarat between 2.1 km and 5.8 km above mean sea level. In addition East-west shear zone runs roughly along latitude 20.0°N over India region between 3.1 and 7.1 km. A consequence of these conditions Gujarat region, Konkan & Goa may experience heavy to very heavy rain at isolated are on Day-1. The intensity of rain is likely to decrease over these areas on Day-2. Under the influence of these systems isolated heavy rain is also likely over West Madhya Pradesh, Saurashtra& Gujarat region, Marathwada on Day-1 and East Madhya Pradesh, Saurashtra, Gujarat region, South Madhya Maharashtra, Coastal Karnataka and Kerala on Day-2. Madhya Pradesh and Chhattisgarh also experience Thunderstorm with gusty wind on Day-1.
- Synoptic analysis also indicates the presence of a Western Disturbance as a trough in mid & upper tropospheric levels with its axis at 5.8 km above mean sea level running roughly along long. 74°E to the north of lat. 32°N. Also, a cyclonic circulation lies over northwest Uttar Pradesh & neighbourhood and extends upto 1.5 km above mean sea level. Under the influence of these conditions Uttar Pradesh may experience isolated Duststorm/thunderstorm on Day 1 & Day 2. Thunder accompanied with hail and squall is also likely at isolated places over Uttarakhand on Day-2.
- In addition, an upper air cyclonic circulation lies over West Assam and adjoining Sub-Himalayan West Bengal extending upto 1.5 km above mean sea level. As a result extremely heavy rain likely over Sub-Himalayan West Bengal and Meghalaya, very heavy over Assam and isolated heavy over Arunachal Pradesh, Nagaland Manipur, Mizoram, Tripura, on Day-1, on Day-2, very heavy rain likely over Assam & Meghalaya, Sub-Himalayan West Bengal and isolated heavy over Nagaland Manipur, Mizoram, Tripura, and Sikkim.
- The presence of cyclonic circulation over Northwest Bay of Bengal & neighbourhood persists and now seen between 4.5 km and 5.8 km above mean sea level may cause isolated heavy rainfall over Gangetic West Bengal and Bihar on Day-1.

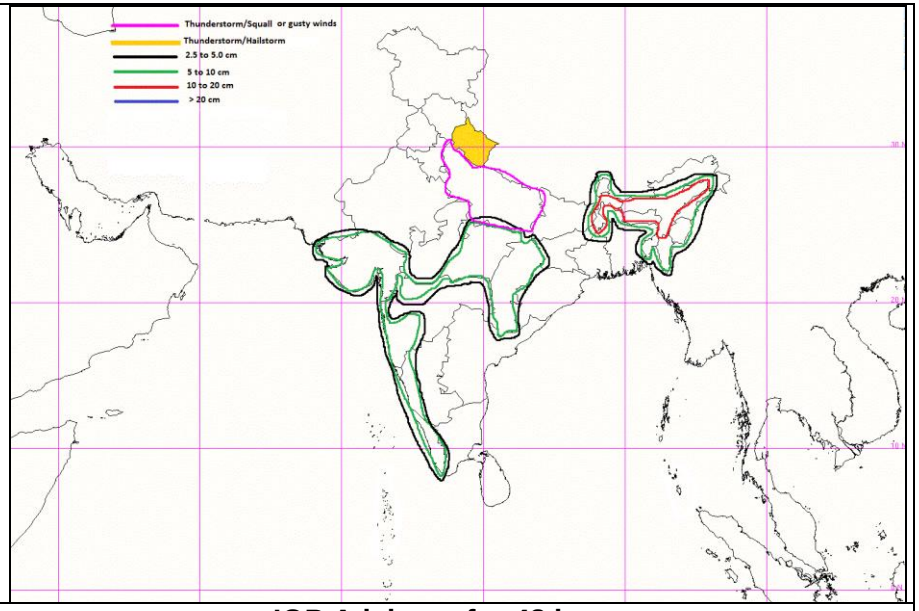
IOP Area for Day-1 & Day-2:

24 hour Advisory for IOP:	48 hour Advisory for IOP:
Significant Rainfall: Coastal Karnataka Konkan & Goa, Marathwada, Gujarat, Saurashtra & Kutch West Madhya Pradesh, Sub Himalayan West Bengal & Sikkim, Gangetic West Bengal, Bihar, Arunachal Pradesh, Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura **Thunderstorm with squall or gusty winds:** Uttar Pradesh, Madhya Pradesh, Chhattisgarh **Thunderstorm with squall and hail** Nil **Duststorm:** Uttar Pradesh	**Significant Rainfall:** Kerala, Coastal Karnataka Konkan & Goa, South Madhya Maharashtra, Gujarat, Saurashtra & Kutch East Madhya Pradesh, Chhattisgarh Sub Himalayan West Bengal & Sikkim Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura **Thunderstorm with squall or gusty winds:** Uttar Pradesh **Thunderstorm with squall and hail** Uttarakhand **Duststorm:** Uttar Pradesh

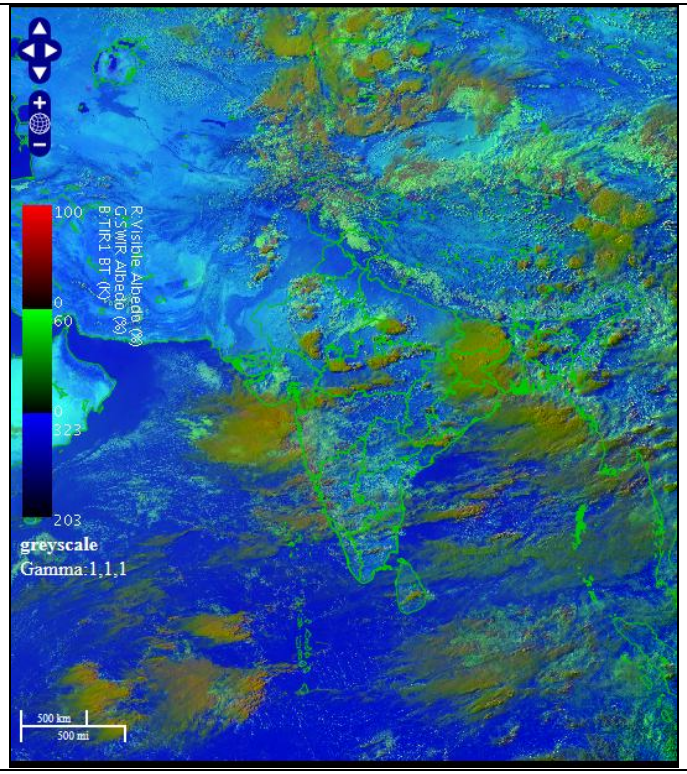
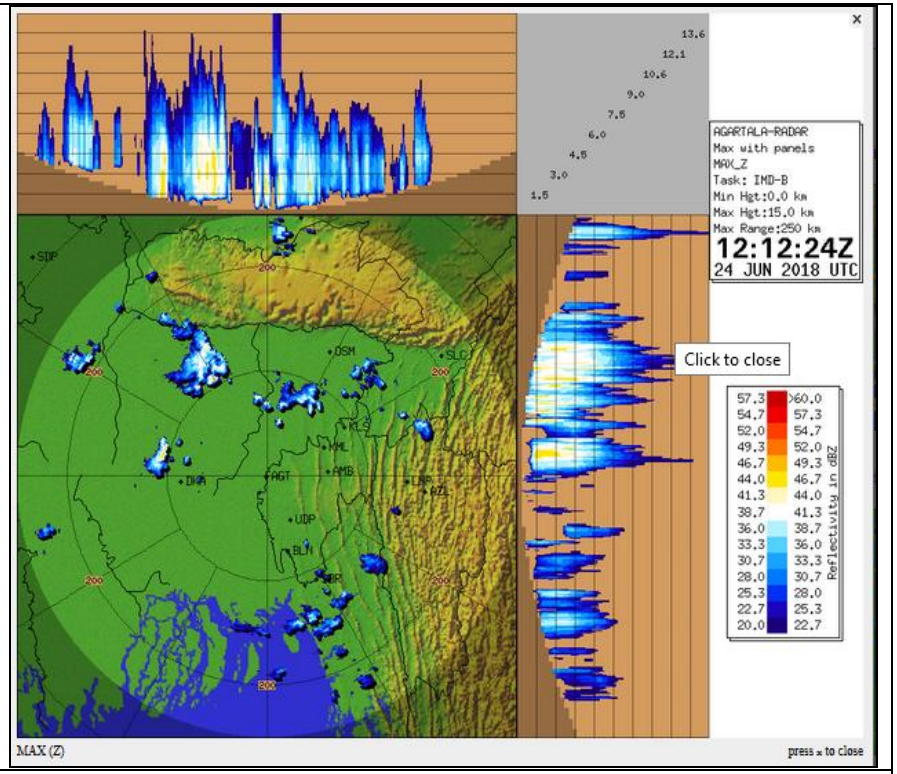
Graphical Presentation of Potential Areas for Severe Weather:

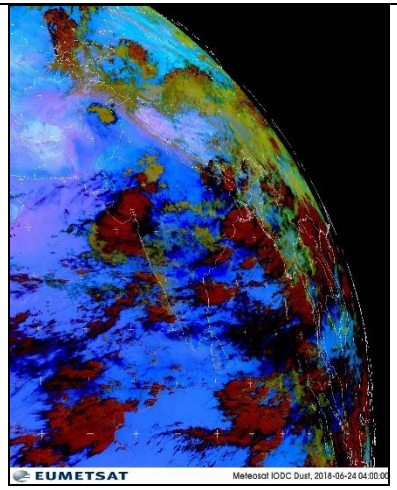


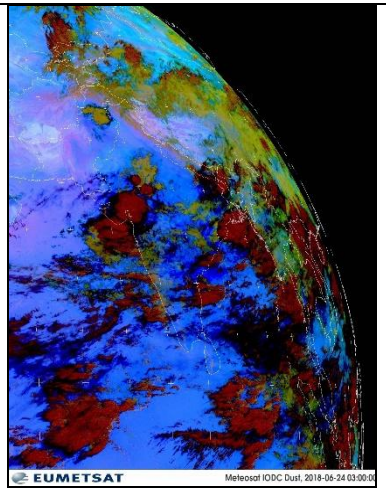
IOP Advisory for 24 hours

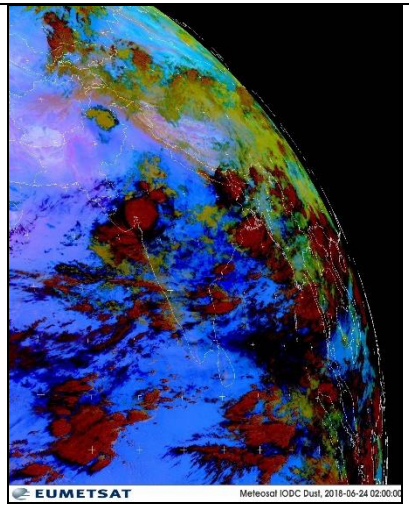


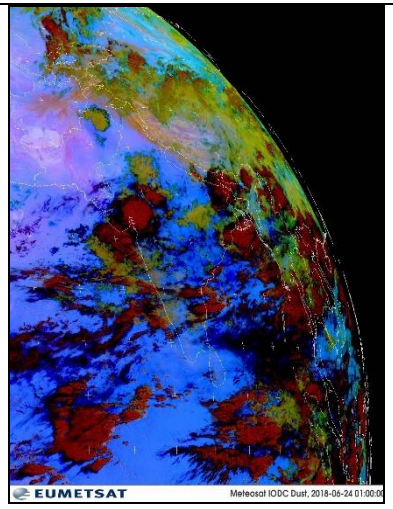
IOP Advisory for 48 hours

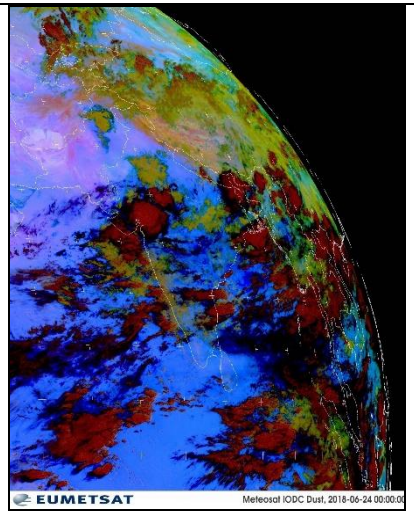
	
RAPID RGB Satellite Imagery at 1630 IST	**DWR Agartala reflectivity at 1732 IST**

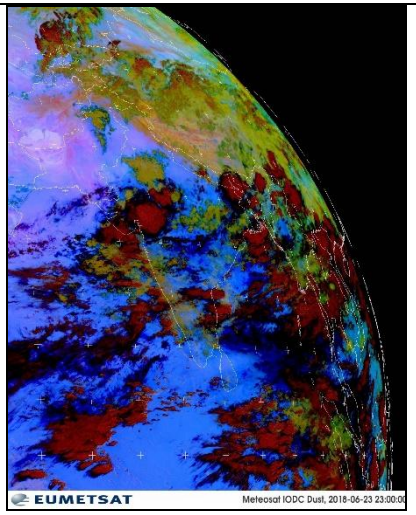




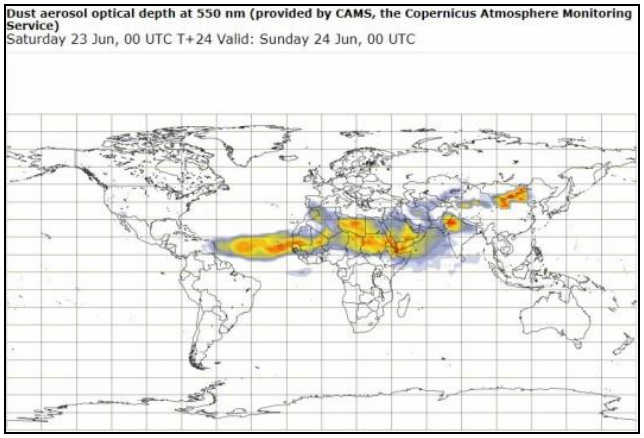
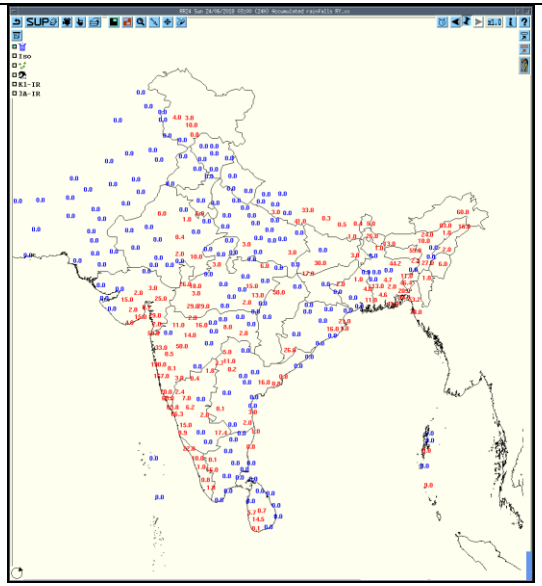


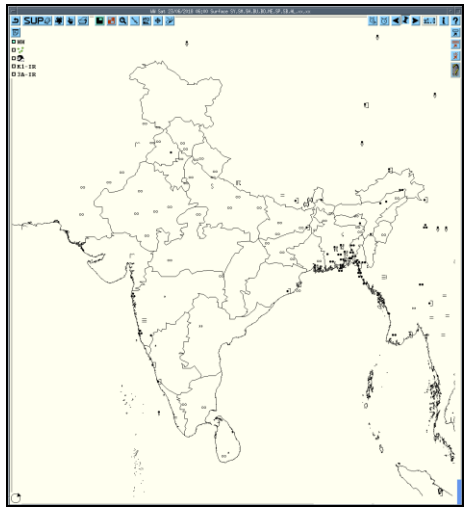
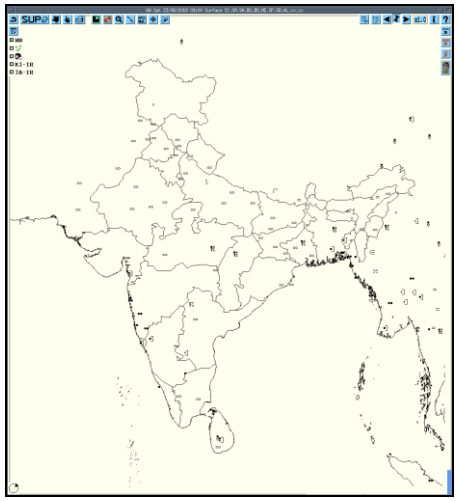
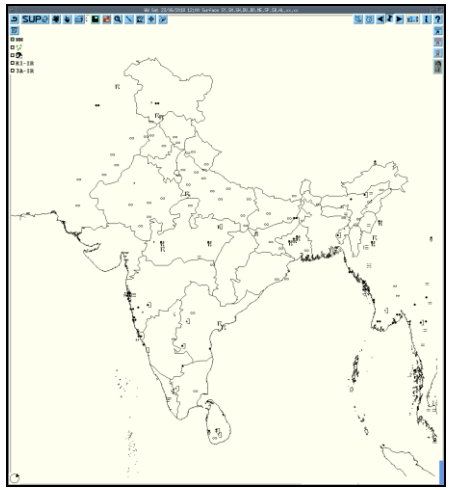
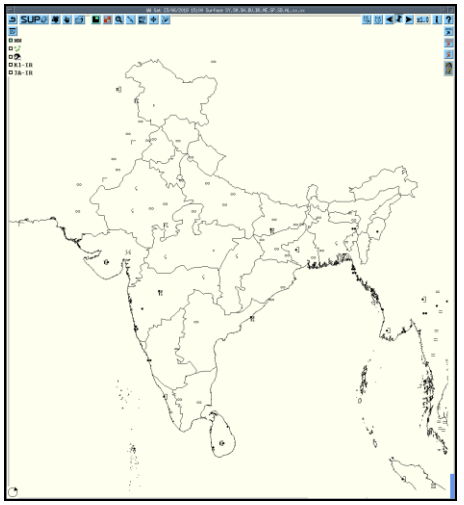
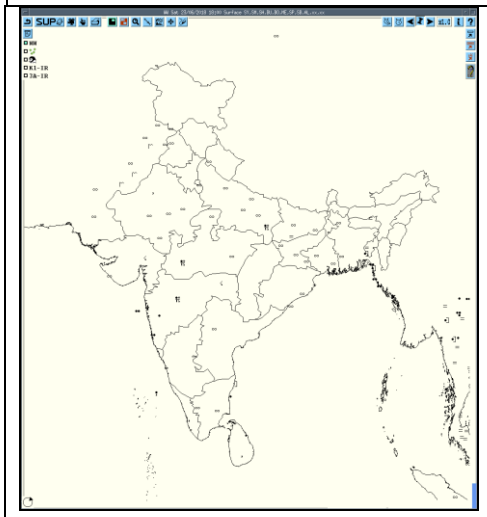
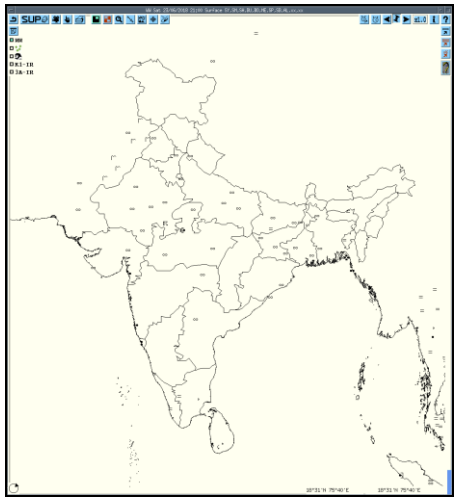
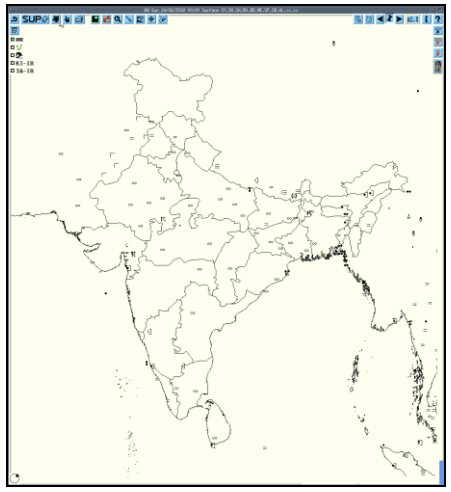
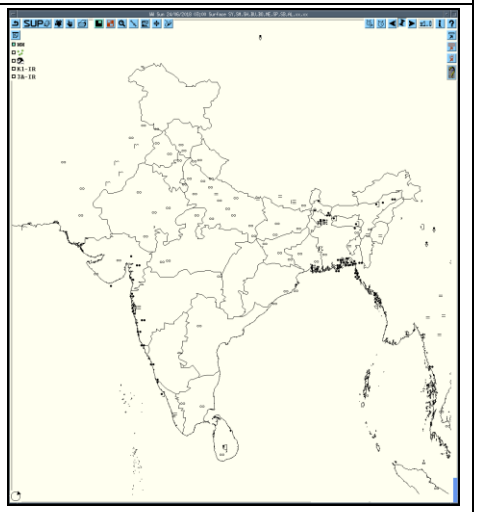




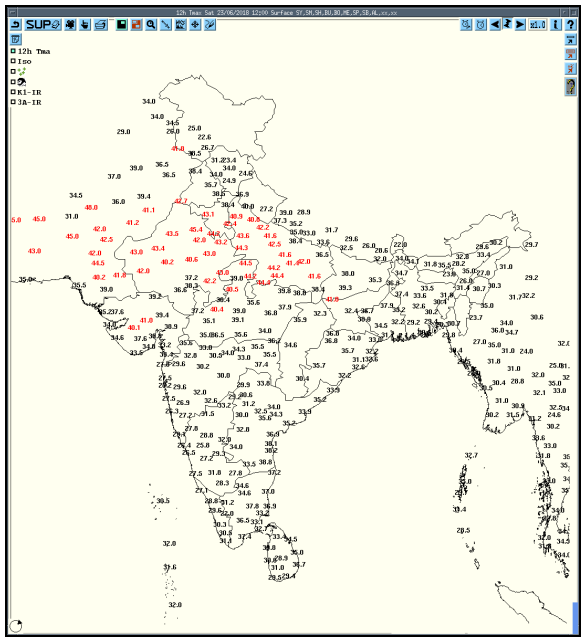


Observed Satellite Dust Images of today

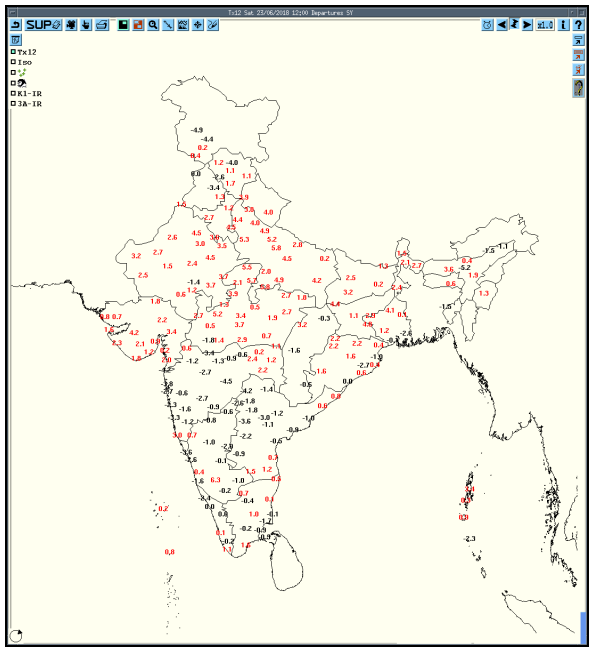
	
Dust Forecast	**Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today**

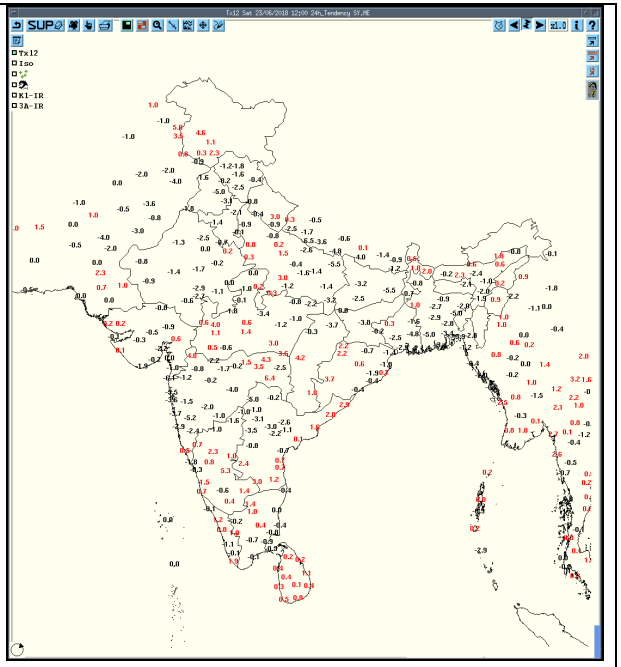
3hourly Past weather at 06, 09, 12, 15, 18, 21 UTC of yesterday and 00 & 03 hrs UTC of today



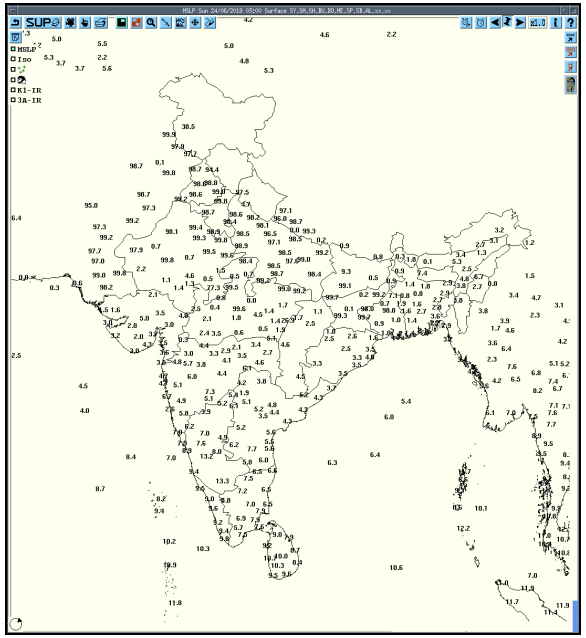
Tmax



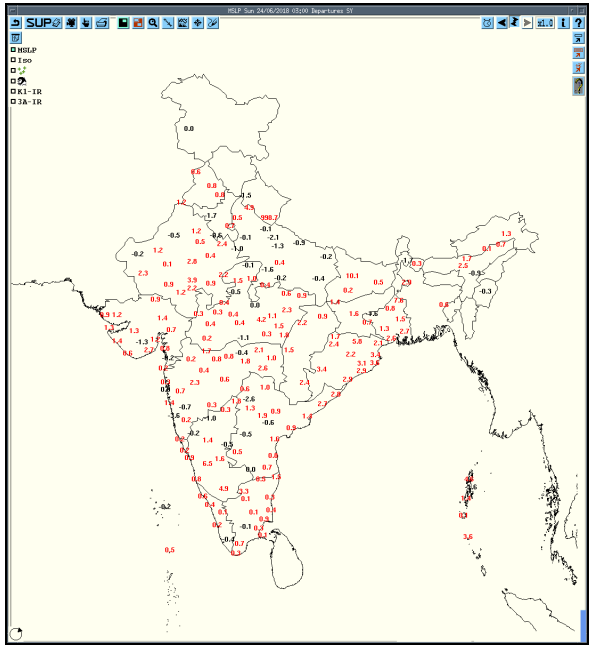
Departure Tmax



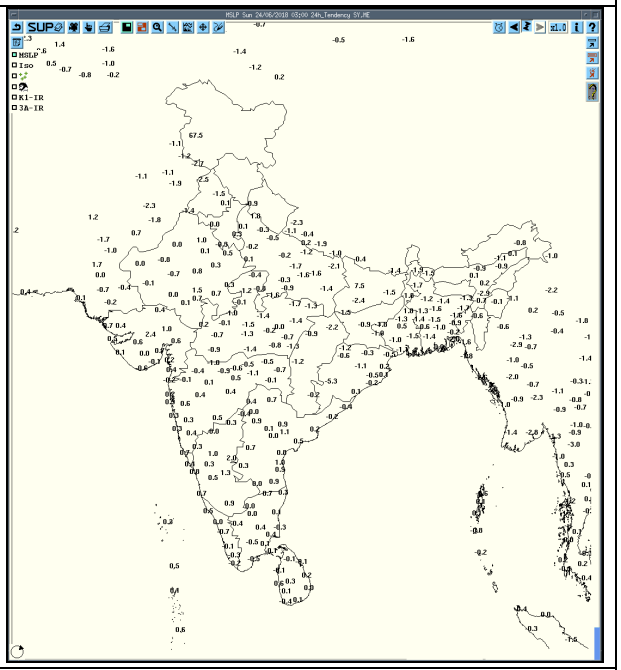
Tendency Tmax



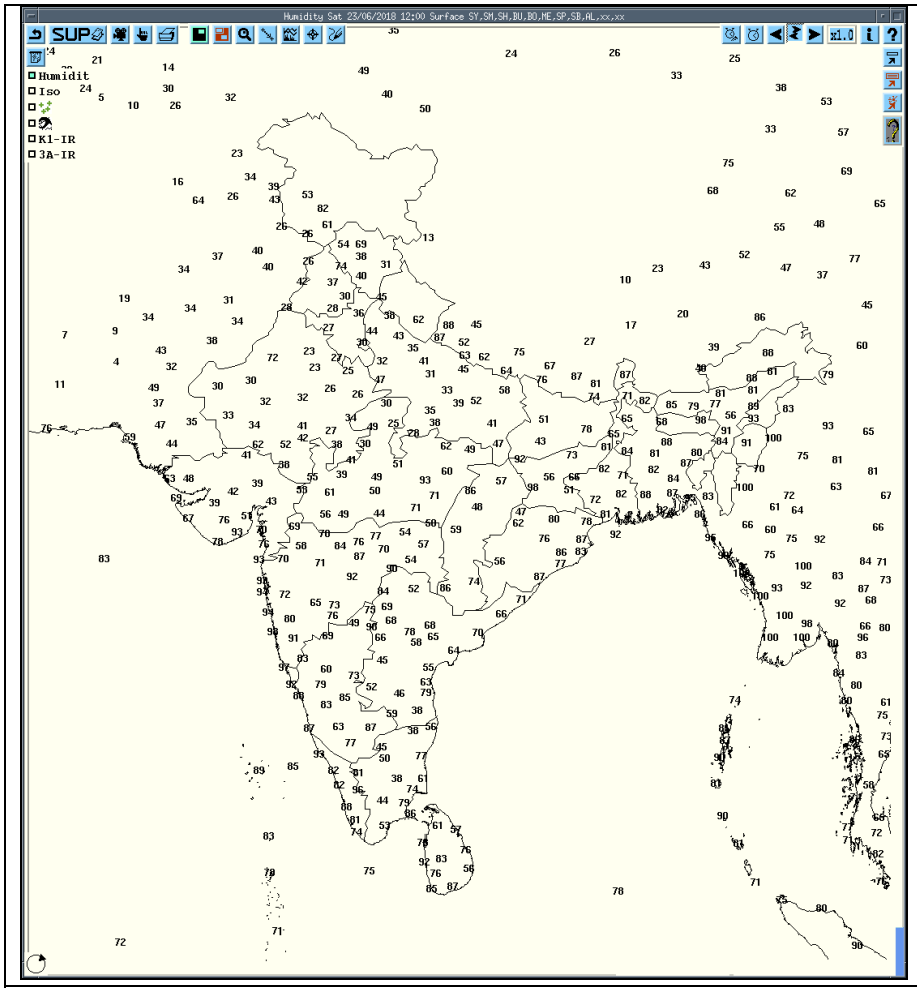
MSLP



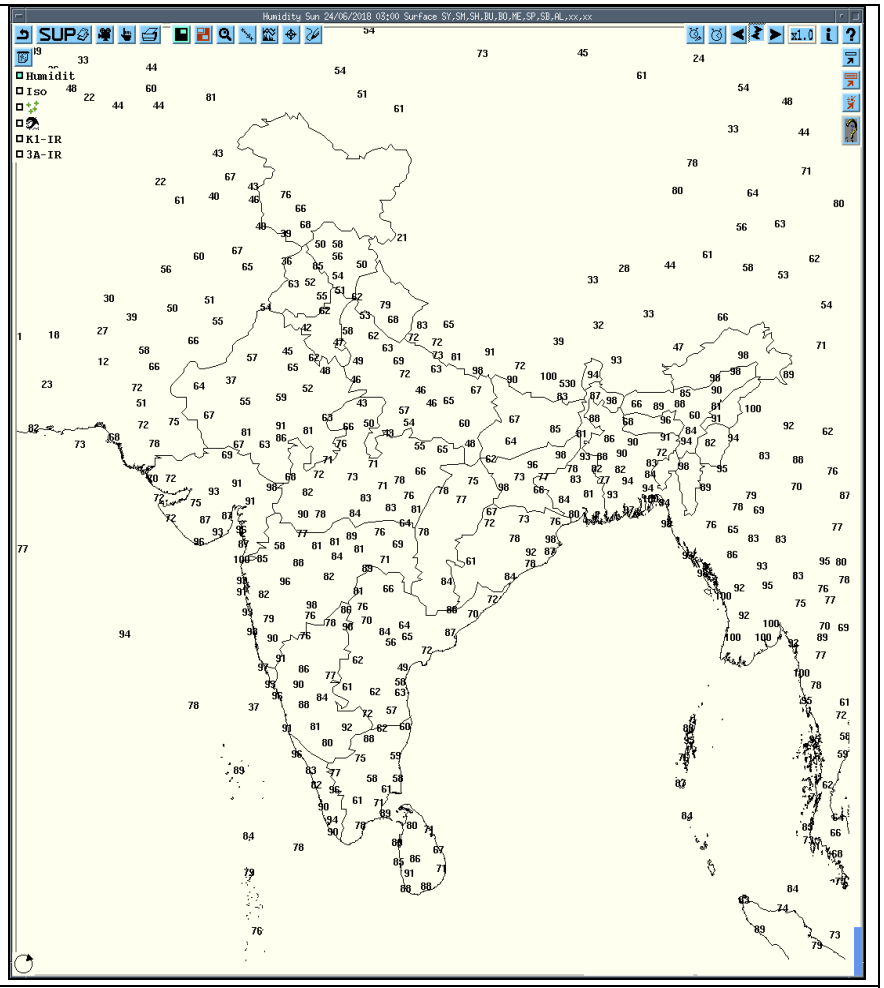
Departure MSLP



Tendency MSLP



RH at 1200UTC yesterday



RH at 0300UTC today

Past 24 hours DWR Report:

Radar Station name	Date	Time interval of observation (UTC)	Organization of the cells (Isolated single cells/multiple cells/ convective regions/ squall lines) with height of 20 dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
Visakhapatnam	23/06/18	0600UTC	isolated and merged cb cells formed in the bay region with max reflectivity 54 dbz and height 8 KMS.	110 kms(WSW) 05:21UTC and moving SE ly over the sea.	Since last observation with max. of 54 dbz at 0521 UTC	NIL	Bay of bengal
	23/06/18	0900UTC	Multiple cells with max reflectivity of 57 dbz and height of 14 KMS.	N(100 to 170 kms) NE(134 to 200 kms) SE(100 to 200 kms) moving Ely	CB cells are developing and matured well at 0841 UTC and start dissipating.		Vizianagaram, Srikakulam , East Godavari and Khammam Dist(AP) Rayagada, Gajapati Dist. (Orissa)
	23/06/18	1200UTC	Multiple cells with max reflectivity of 56 dBz and height of 12 KMS.	N(128 kms) NW(64kms) SE(178 kms) moving Ely	Since last observation CB cells are forming, developing well and dissipating.		Vizianagaram, Srikakulam , Visakhapatnam East Godavari and Khammam Dist(AP) Rayagada, Gajapati Dist. (Orissa)
	23/06/18	1500UTC	Multiple cb cells NW with max reflectivity 52dbz and height 6kms.	55kms(NW) 12:41UTC and moving NE ly.	Forming since last observation .	-	Malkajgiri, vizianagaram (Ap)
	23/06/18	1800UTC	CB CELL Westerly with reflectivity 48dbz and height 6kms.	130kms(WEST) 15:21UTC and moving Easterly.	Cb region NWly.	-	Koraput (odissa)
	24/06/18	0000UTC	Squally line of cb cells over the sea with max reflectivity 53dbz and height 10kms.	82kms(south) 23:51UTC and moving NE ly.	Another cb cell SW with reflectivity 46dbz 192kms from radar.	-	East Godaveri(AP).
	24/06/18	0300UTC	Squally line of cb cells over the sea with max reflectivity 53dbz and height 10kms.	33kms(south) and moving NE ly.	Another cb cell SW with reflectivity 46dbz 183kms from radar and dissipating	-	East Godaveri(AP).

DWR Station	Date	Time interval of observation	Organization of the cells (isolated single cell/multiple cells convective regions/squall lines) with height of 20 dBZ echo top and maximum reflectivity	Formation w.r.t. radar station & direction of movement	Remarks	Associated severe weather, if any	Districts affected
Lucknow	23/06/18	230300 UTC TO 231202 UTC	Multiple cell system developed at 0300 UTC over 200 km in North and NE.with avg. height 6km Max. reflectivity 49.5 dbz of 20 dBZ echo top. Another cells developed at 0902 UTC over 250km in North of NW with height 8km and maximum reflectivity 54.5dbz	The system moved with avg. speed 25 Km/h SE, towards the radar station. The cells moved with avg. speed 40 Km/h in south direction, towards the radar station.	Multiple cell dissipated at 0842UTC over 100km around the station Cells dissipated at 1202 over 150km in North of NW.	TS/RA/ DS TS/RA/ SQ/HS	Lakhimpur,Bahraich, Gonda,Siddharthnagar, Balrampur Bareilly,Pilibhit,Lakhimpur Shahjahanpur, Sitapur
	23/06/2018	231212 UTC TO 231642 UTC	A cell developed at 1212 UTC over 50 km in W. Max. reflectivity observed to be 47.0 dBZ with height of 5 Km of 40 dBZ echo top. Another cells developed at 1312 UTC over 175km in SE with height 5km and maximum reflectivity 48.5dbz	Cells moved with avg. 20 Km/h SSE, towards the radar station. Cells moved with avg. 20 Km/h SE, towards the radar station.	Cell Dissipated at 1312 UTC over 50 Km in SW. Cell Dissipated at 1642 UTC over 275 Km in SSE.	TS/RA /DS TS/RA /DS	Kanpur,Unnao, Lucknow Sultanpur,Jaunpur, Sant Ravidas Nagar, Varanasi,Chandauli
	23/06/2018	231652 UTC TO 231732 UTC	Multiple cell developed at 1652 UTC over 250 Km in SW with avg.height 4.5km of 36dbz echotop and Max. Relectivity 45.0dBZ .	The System moved in SE ward with speed of 20 Km/h w.r.t radar station.	Cells weakend and disspated at 1732 UTC over 200km in SW.	TS/RA/ DS	Jalaun,Hamirpur, Jhansi
	23/06/2018	231732 UTC TO 232112 UTC	NIL	NIL	NIL	NIL	NIL
	23/06/2018	232112 UTC TO 240112 UTC	A Multiple cells developed at 2112 UTC over 120 Km to 275km in NE with avg.height 5km of 39.5dbz echotop and Max. Relectivity 48.0dBZ	The System moved in SE ward with speed of 20 Km/h w.r.t radar station.	Cells disspated at 0112 UTC over 275km in East.	TS/RA/ DS	Gonda,Basti,Sant Kabirnagar, Balrampur,Siddharthnagar, Maharajganj,Kushinagar, Deoria
	24/06/2018	240112 UTC TO 240300 UTC	NIL	NIL	NIL	NIL	NIL

Radar Station Name	Date	Time Interval Of Observation (UTC)	Organisation Of The Cells(Isolated Single Cells/ Multiple Cells/ Convective Regions/ Squall Lines) With Height Of 20 dbZ echo top and maximum reflectivity	Formation w.r.t. radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
Patna	24/06/18	230300-230600	Isolated Multiple cell Maximum Reflectivity: 37 dBZ Echo Top: 8 KM	Range: 171.5 KM from DWR Patna in North-East direction Movement: Westerly	Warning Issued	THUNDERSTORM	Saharsha, Madhepura
		230600-231222	NIL	NIL	NIL	NIL	NIL
		231222-231542	Single cell Maximum Reflectivity: 48 dBZ Echo Top: 10 KM	Range: 81.5 KM from DWR Patna in SW direction Movement: Westerly	Warning Issued	THUNDERSTORM WITH RAIN	GAYA
		231542-232012	NIL	NIL	NIL	NIL	NIL
		232012-240300	Isolated Multiple cell Maximum Reflectivity: 45.5 dBZ Echo Top: 8 KM	Range: 115.3 KM from DWR Patna in North-West direction Movement: Westerly	Warning Issued	THUNDERSTORM	GOPALGANJ,SIWAN,WEST CHAMPARAN,EAST CHAMPARAN
Patiala	24-06-18	23/06/2018 0300 - 0600	MULTIPLE CELLS DBZ 49.5 HT. 08 KM	NW SECTOR MOVEMENT Ely - WARDS		RA/TS	Moga, Zira, Halwara, Faridkot, Ludhiana, Samrala, Nawasher, Kapurthela And Their Adjoining Areas
		23/06/2018 0600 -0900	MULTIPLE CELLS DBZ 49.0 HT. 08 KM	N ,NW SECTOR MOVEMENT NE - WARDS		RA/TS	Moga, Zirz, Hoshiarpur, Nekoder, Jallandher, Phagwara, Adampur, Hoshiarpur, Una And Their Adjoining Areas
		23/06/2018 0900- 1200 24/06/2018 0000-0252	No Significant Echo	----------		----------	----------
Agartala	24/06/18	230300 -240300	NO SIGNIFICANT ECHO				

Realised past 24hrs TS/SQ/HS Data:

Realised TS/HS/SQ during past 24hours ending at 0300UTC of today (received from RMCs/MCs)						
Station	**Region**	**State/Sub Division**	**Weather Event (TS/Hail/Squall)**	**Date**	**Time of Commencement (IST)**	**Time of end (IST)**
Qazigund	Northwest India	Jammu & Kashmir	Thunderstorm	23-06-18	1716	1740
Pahalgam	Northwest India	Jammu & Kashmir	Thunderstorm	23-06-18	1550	1620
Kukernag	Northwest India	Jammu & Kashmir	Thunderstorm	23-06-18	1435	1445
Batote	Northwest India	Jammu & Kashmir	Thunderstorm	23-06-18	1640	1810
Bhaderwah	Northwest India	Jammu & Kashmir	Thunderstorm	23-06-18	1700	1830
Kota	Northwest India	East Rajasthan	Thunderstorm	23/24-06-18	2000 0000	2020 0430
Bhilwara	Northwest India	East Rajasthan	Thunderstorm	24-06-18	0730	0815
Ajmer	Northwest India	East Rajasthan	Thunderstorm	23-06-18	19200	2000
Orai	Northwest India	West Uttar Pradesh	Thunderstorm	23-06-18	2100	2130
Agra(IAF)	Northwest India	West Uttar Pradesh	Thunderstorm	23-06-18	1645 0600	1800 0800
Indore	Central India	West Madhya Pradesh	Thunderstorm	23/24-06-18	1720 0750	2340 0840
Itanagar	Northeast India	Arunachal Pradesh	Thunderstorm	23/24-06-18	23/1145	24/0100
Diamond Harbour	East India	SHWB	Thunderstorm	23/24-06-18	0950 0745…	1130 0830…
Haldia	East India	GWB	Thunderstorm	23/24-06-18	0847 0808-	1045 0830…
Asansol	East India	GWB	Thunderstorm	23-06-18	1410	1440
Bankura	East India	GWB	Thunderstorm	23-06-18	1615	1900
Sriniketan	East India	GWB	Thunderstorm	23-06-18	1415	1750
Gaya	East India	Bihar	Thunderstorm	23-06-18	1820	2100
Jamshedpur	East India	Jharkhand	Thunderstorm	23-06-18	1625	1705
Daltonganj	East India	Jharkhand	Thunderstorm	23-06-18	1655	1810
Chandbali	East India	Odisha	Thunderstorm	23/24-06-18	1030 0400	1045 0700
Nizamabad	South India	Telangana	Thunderstorm	23-06-18	1220	1600
Vijayawada AP	South India	Coastal Andhra Pradesh	Thunderstorm	23-06-18	1450	1830
Masulipatnam	South India	Coastal Andhra Pradesh	Thunderstorm	23-06-18	1700	1830
Narsapur	South India	Coastal Andhra Pradesh	Thunderstorm	23-06-18	0830	0900
Kakinada	South India	Coastal Andhra Pradesh	Thunderstorm	23-06-18	0915	1000
Kalaburgi	South India	North Interior Karnataka	Thunderstorm	23-06-18	1630 1830	1830 2100

IMPORTANT LINKS:

For NCMRWF NWP products:(http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php)
For IMD NWP products:(http://nwp.imd.gov.in/diagpro_new.php)
For Synoptic plotted data and charts
http://amssdelhi.gov.in/
http://www.amsskolkata.gov.in/
For RANDHRA PRADESHID tool:
http://rAndhra_Pradeshid.imd.gov.in/
Low Level Winds
http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR_2017/?C=M;O=D
Upper level winds
http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR_2017/?C=M;O=D
Past24hourHEMandIMRrainfall(upto03UTCoftoday)
IMR: http://satellite.imd.gov.in/img/3Ddaily_imr.jpg
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg
ForRadarimagesofthepast24hoursincludingmosaicofimages:
http://ddgmui.imd.gov.in/dwr_img/
Satellite sounder based T- Phigram
http://satellite.imd.gov.in/mAndhra_Pradesh_skm2.html

WEATHER SYMBOLS: