

India Meteorological Department

FDP STORM Bulletin No. 111 (25-06-2018)

1. CURRENT SYNOPTIC SITUATION:

NWFC Inference (0300UTC of the day):

◆ Southwest monsoon has further advanced into some more parts of Odisha, most parts of West Bengal and some parts of Bihar and Jharkhand. 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, Angul, Jamshedpur, Supaul and Lat 27°N/ Long 86°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, some more parts of Jharkhand and Bihar and some parts of East Uttar Pradesh and south east Rajasthan during next 48 hours.

• Conditions are likely to become favourable for further advance of Southwest Monsoon into remaining parts of Madhya Pradesh, Chhattisgarh, Bihar & Jharkhand and some more 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.

• Subsequently, advance of southwest monsoon is also likely over parts of northwest India including Delhi during 28th June-1st July.

• The Western Disturbance is now seen as an upper air cyclonic circulation at 3.1km above mean sea over north Pakistan and adjoining Jammu & Kashmir with the trough with its axis at 5.8 km above mean sea level roughly along Long 74°E to the north of lat 32°N persisting aloft.

• The cyclonic circulation over north west Uttar Pradesh and neighbourhood now lies over northern parts of central Uttar Pradesh & neighbourhood and extends upto 0.9 km above mean sea level.

• The cyclonic circulation over north Konkan & adjoining south Gujarat now lies over south Gujarat & neighbourhood between 2.1km and 4.5 km 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 5.8 km and 7.6 km above mean sea level.

• A cyclonic circulation lies over Bihar & adjoining Sub Himalayan West Bengal between 3.1 km and 4.5 km above mean sea level.

• The cyclonic circulation over west Assam and adjoining Sub Himalayan West Bengal now lies over West Assam & neighbourhood and extends upto 0.9 km above mean sea level.

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, North Himachal Pradesh, North Punjab, West Haryana and Uttar Pradesh. Scattered low/medium clouds over Uttarakhand.

East: Broken low/medium clouds with embedded intense to very intense convection seen over Northeast Jharkhand, East & Coastal Odisha, West Bengal, West Assam and South Arunachal Pradesh. Scattered low/medium clouds with embedded moderate to intense convection seen over North Sub-Himalayan West Bengal, Meghalaya, Mizoram, Southwest SW Bihar and rest parts of the region.

West: Scattered low/medium clouds with embedded intense to very intense convection seen over extreme South Gujarat and North Konkan. Scattered low/medium clouds with embedded weak to moderate convection seen over Rajasthan, Madhya Pradesh, rest Gujarat, Vidarbha, Madhya Maharashtra and Marathwada. Scattered low/medium clouds over Konkan & Goa.

South: Scattered low/medium clouds with embedded moderate to intense convection seen over Coastal & South Andhra Pradesh, North Tamilnadu & Bay Islands. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over Telangana, Rayalaseema, South Interior Karnataka and Lakshadweep. 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 adjoining North & Coastal Maharashtra and moderate to intense convection seen over Arabian Sea between lat 8.0N to 14.0N and east of long 67.0E.

Bay of Bengal & Andaman Sea: Scattered low/medium clouds with embedded moderate to intense convection seen over North and East Central Bay Andaman Sea and weak to moderate convection seen over South Bay. 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 Bhopal, Chennai, Delhi, Jaipur, Kochi, Patiala, Patna, Srinagar, and Light echoes over Kolkata, Lucknow, Mohanbari, Mumbai, Visakhapatnam and Thiruvananthapuram around 1630 IST.

RAPID RGB Satellite imagery at 1600 IST indicates significant convection over adjoining South Delhi, Southeast Rajasthan, West Assam, Meghalaya, Gangetic West Bengal, South Bihar Jharkhand, North Odisha, North Chhattisgarh, Madhya Pradesh, South Gujarat, Saurashtra and North Konkan.

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 for next few days 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	25.06.2018	26.06.2018
PM10 (micro-g/m ³)	208	187
PM2.5 (micro-g/m ³)	69	62

2. NWP MODEL GUIDANCE:

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

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

2. Convergence at 850 hPa:

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

Day0: Tamilnadu, Puducherry,

Day1: Tamilnadu, Puducherry,

Day2:

Day3:

Day4:

3. Low level Vorticity:-Positive Vorticity:

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

Day0: Arunachal Pradesh, Assam Meghalaya, Uttarakhand, Himachal Pradesh, Madhya Maharashtra, Tamilnadu, Puducherry, Kerala,

Day1: Assam Meghalaya, NE NMMT, Tamilnadu, Puducherry, Kerala,

- Day2: Bihar, Tamilnadu, Puducherry, Kerala,
- Day3: Arunachal Pradesh, Assam Meghalaya, Jharkhand, West UP, West Rajasthan, East Rajasthan, Tamilnadu, Puducherry, Kerala,

Day4: Arunachal Pradesh, Assam Meghalaya, East Rajasthan, Tamilnadu, Puducherry,

4. 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, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West MP, East MP, Gujarat Region, Saurashtra Kutch, Chhattisgarh, Coastal AP, Day1: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West Rajasthan, Coastal AP, Telangana, Tamilnadu, Puducherry,

Day2: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West MP, East MP, Chhattisgarh,

Day3: Arunachal Pradesh, Sub Himalayan WB, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan,

Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West Rajasthan, Chhattisgarh,

5. 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, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan,

Day1: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan,

Day2: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day3: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

6. 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 Rajasthan, East Rajasthan, Odisha, West MP, East MP, Gujarat Region, Saurashtra Kutch, Vidarbha, Chhattisgarh, Telangana, Rayalaseema, Tamilnadu, Puducherry,

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 Rajasthan, East Rajasthan, Odisha, West MP, East MP, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Tamilnadu, 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 Rajasthan, East Rajasthan, Odisha, West MP, East MP, Chhattisgarh, Coastal AP, Rayalaseema, Tamilnadu, Puducherry,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, West MP, East MP, Marathwada, Chhattisgarh,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West MP, East MP, Chhattisgarh, Tamilnadu, Puducherry,

7. Rainfall and thunder storm activity:

Day/Index: Subdivisions with Precipitation > 2 cm

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East Rajasthan, 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, Jharkhand, Bihar, East UP, Uttarakhand, East Rajasthan, Odisha, West MP, East MP, Gujarat Region, Konkan Goa, Madhya Maharashtra, 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, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West MP, East MP, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan, Odisha, West MP, East MP, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

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

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

- The synoptic analysis indicate a Western Disturbance as an upper air cyclonic circulation at 3.1 km above mean sea over north Pakistan and adjoining Jammu & Kashmir with a trough aloft with its axis at 5.8 km above mean sea level roughly along Long. 74°E to the north of lat. 32°N. A cyclonic circulation lies over northern parts of central Uttar Pradesh & neighbourhood extending upto 0.9 km above mean sea level. This system is likely to trigger thunderstorms/ dust storms over Uttar Pradesh on day 1 and day 2.
- A cyclonic circulation lies over south Gujarat & neighbourhood between 2.1km and 4.5 km above mean sea level. The off-shore trough at
 mean sea level is seen from south Gujarat coast to Kerala coast. These two systems together with the orographic effect is expected to
 give heavy to very heavy rainfall at a few places with extremely heavy falls at isolated places over Gujarat region and over north
 Maharashtra coast on day 1 and day 2. Heavy rain is also expected over the remaining west coast and adjoining interior parts of the
 peninsular regions on both days.
- A cyclonic circulation is seen over northwest Bay of Bengal & neighbourhood between 5.8 km and 7.6 km above mean sea level. Another cyclonic circulation lies over Bihar & adjoining Sub Himalayan West Bengal between 3.1 km and 4.5 km above mean sea level. A third cyclonic circulation lies over West Assam & neighbourhood extending upto 0.9 km above mean sea level. These systems are likely to cause widespread rainfall over northeast region on day 1 and day 2 accompanied with isolated heavy falls. West Bengal and Sikkim, Bihar, Jharkhand and Odisha also likely to get fairly widespread to wide spread rainfall on these two days with isolated heavy to very heavy falls on both days.

IOP Area for Day-1 & Day-2:

24 hour Advisory for IOP:	48 hour Advisory for IOP:
Significant Rainfall:	Significant Rainfall:
Konkan & Goa, Gujarat Region, Saurashtra & Kutch, Madhya	Konkan & Goa, Gujarat Region, Saurashtra & Kutch,
Maharashtra	Coastal Karnataka, South Interior Karnataka, North Coastal Andhra
Coastal Karnataka	Pradesh
Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Bihar, Jharkhand, Odisha	Sub-Himalayan West Bengal & Sikkim, Gangetic West Bengal, Bihar, Jharkhand, Odisha
Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura	Assam & Meghalaya, Nagaland, Manipur, Mizoram, Tripura
East Rajasthan	East Rajasthan
Thunderstorm with squall or gusty winds: Nil	Thunderstorm with squall or gusty winds: East Uttar Pradesh
Thunderstorm with squall and hail Nil	Thunderstorm with squall and hail Nil
Duststorm/Thunderstorm: Uttar Pradesh	Duststorm/Thunderstorm: West Uttar Pradesh

Graphical Presentation of Potential Areas for Severe Weather:















Past 24 hours DWR Report:

Radar Station	Date	Time	Organization of the cells	Formation w.r.t	Remarks	Associat	Districts affected
name		interval	(Isolated single cells	radar station and		ed	
		of	/multiple cells/ convective	Direction of		severe	
		observat	regions/ squall lines) with	movement		weather	
		ion	height of 20 dBZ echo top			if any	
		(UTC)	and maximum reflectivity			-	
Visakhapatnam	25-06-18	0600UTC	Squally line of cb cells over	40kms (south)	dissipated	-	Bay of Bengal
-			the sea with max reflectivity				
			52dbz and height 9kms.	and moving E ly.			
		0900UTC	Isolated single cells with max	W(57) NE(212)	During the period CB cells are	-	Vizianagaram,
			reflectivity 53dBz and height	E(133) and moving	formed and developed to		Visakhapatnam
			17kms.	E ly.	reflectivity of 53dBz at 0851		Dist.(AP)
					UTC		Ganjam Dist.(Orissa)
		1200UTC	Multiple cells with max	W(60) NW(52)	Since the last observation CB	Thunderst	Srikakulam,
			reflectivity 58dBz and height	N(174) and moving	cells are developing and	orm with	Vizianagaram,
			16kms.	E ly.	mature well to reflectivity of	rain	Visakhapatnam
					58dBz at 1101 UTC and start		Dist.(AP)
					dissipating from 1141UTC		Rayagada, Ganjam
							Dist.(Orissa)
		1500UTC	Isolated cells with max	NNW (96 kms)	Since the last observation	NIL	NIL
			reflectivity 53 0dBz and	moving Ely.	max. reflectivity of 53 dBz at		
			height 10 kms.		1231 UTC and start dissipating		
		40001170			from 1441UIC		NUI
		1800010	Isolated cells with max	N (74 Kms) moving	Isolated cells are forming with	NIL	NIL
				E ly.	1621 LITC dissipated at 1701		
			12 KIIIS.				
			Isolated cells with max	SW/ (172 kms)	Since last observation isolated	NII	Bay of bendal
		0000010	reflectivity 61 dBz and height	moving E ly	cells are continuing to form		Day of Songal
			9 kms	moving E ly.	with max reflectivity of 61 dbz		
					at 2151 UTC		
		0300UTC	Multiple cb cells over the sea	168kms(SE)	-	-	Over the sea.
			with max reflectivity 52 dbz	02:21UTC and			
			and height 10kms.	moving NE ly.			
Jaipur	25-06-18	240300-	Multiple cell with average	Multiple cell	Multiple cell develop from	Dust	Jaipur, Ajmer,
		242352	height of 7.5 km & maximum	develop from 0300	0300 UTC of 24/06/18 towards	storm/Thu	Nagaur, Pali, Tonk,
			reflectivity53.0 dBZ	UTC of 24/06/18	W,NE,SW,S,SE,E,NE,N of	nderstorm	Dausa, Kota,
				towards	Jaipur and reaches maximum	/ Light	Bundi, Bhilwara,
				W,NE,SW,S,SE,E,	reflectivity at 1312 UTC to	rain at	Jhalawar, Baran,
				NE,N	2102 UTC of 24/06/2018 and	Isolated	Sawai Madhopur,
				of Jaipur and	cells died down at 2352 UTC	places	Karauli, Sikar,
				moved to SE, E	of 24.06-2018.		Jhunjhunu,
				Wards at			Churu, Bikaner,
				speed20-25 km/hr			Bharatpur,
							Dholpur, Chittorgarh,
							Alwar Districts.

Radar Station name	Date	Time interval of observati on (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	Associa ted severe weather if any	Districts affected
Patna	25-06-18	240830- 240940	NIL	NIL	NIL	NIL	NIL
		240940- 2422:10	Multiple cell Maximum Reflectivity: 41.5 dBZ Echo Top: 13 KM	Range: 48.5 KM from DWR Patna in NW direction Movement: NORTH EASTERLY OR EASTERLY	Warning Issued	THUND ERSTO RM WITH RAIN	BHOJPUR, SARAN, MZF, Vaishali ,Sitamarhi, Sheohar, Patna, Samastipur, Darbhanga, Nalanda, Begusarai, Samastipur, Sheikhpura, Lakhisarai, Khagaria, Jamui, Gaya, Nawada, Banka, Aurangabad, Bhabhua
		242210-	NIL	NIL	NIL	NIL	NIL
Patiala	25-06-18	24/06/18 0300 - 0900	No Significant Echo				
		24/06/18 0900- 1200	ISOLATED Echo Z: 52.0 dbz Ht. 9 KM.	SW Sector Dir. E-ly		TS/RA	Hanumangarh, Sirsa and their adjoining areas.
		24/06/18 1200 - 1500	Multiple Echoes Z: 50.0 dbz Ht. 9 KM.	SW/NE Sectors Dir. E-ly		TS/RA	Bhumsana, Rajgarh, Uttarkashi and their adjoining areas.
		24/06/18 1500 - 1800	Multiple Echoes Z: 45.0 dbz Ht. 8 KM.	SW/NE Sectors Dir. E-ly		TS/RA	Uttarkashi, Rewari, Pilani, Bhiwani, Rajgarh, Mohindergarh and their adjoining areas.
		24/06/18 1800 - 2100	Multiple Echoes Z: 40 dbz Ht. 8 KM.	SW/NW Sectors Dir. E-ly		TS/RA	Tarantarn, Maham, Bhiwani, Rewari and their adjoining areas.
		24/06/18 2100- 0000	No Significant Echo				
		25/06/18 0000- 0252	Multiple Echoes Z: 52.5 dbz Ht. 10 KM.	W Sector Dir. E-ly		TS/RA	Fazilka, Muktsar, Moga, Zira and their adjoining areas.

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	Associat ed severe weather, if any	Districts affected
Lucknow	24/06/2018	240300 UTC TO 240742 UTC	NIL	NIL	NIL	NIL	NIL
	24/06/2018	240742 UTC TO 241422 UTC	A Single cell developed at 0742 UTC over 180 km in West of Southwest with height 6km (echo top 32.0dbz) and at 0842UTC Multiple cells developed over 150km in WSW with Max. reflectivity 58.0 dbz.	The system moved with avg. speed 45 Km/h East of SE, w.r.t radar station.	Multiple cell start weakend at 1352UTC and dissipated at 1422UTC over 100km from station in SE.	TS/RA/ DS	Jalaun, Etawah, Kanpur, Kannauj, Hardoi, Lucknow, Unnao, Raebareily, Fatehpur, Barabanki, Allahabad, Mirzapur
	24/06/2018	241422 UTC TO 241942 UTC	NIL	NIL	NIL	NIL	NIL
	24/06/2018	241942 UTC TO 242202 UTC	Multiple cell developed at 1942 UTC over 200 Km in SE with avg. height 4.5km of 38dbz echo top and Max. Relectivity48.5dbZ.	The System moved in East ward with speed of 40 Km/h w.r.t radar station.	Cells weakend and dissipated at 2202 UTC over 280km in East from station.	TS/RA/ DS	Allahabad, Sant Ravidas Nagar, Mirzapur, Jaunpur, Sultanpur, Azamgarh, Ghazipur, Mau,
	24/06/2018	242202 UTC TO 250300 UTC	NIL	NIL	NIL	NIL	NIL

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)
Mukteshwar	Northwest India	East Uttar Pradesh	Thunderstorm	24-06-18	1255	1605
Kanpur IAF	Northwest India	East Uttar Pradesh	Thunderstorm	24-06-18	1600	1830
Ballia	Northwest India	East Uttar Pradesh	Thunderstorm	25-06-18	0300	0330
Churk	Northwest India	East Uttar Pradesh	Thunderstorm	24-06-18	2110	2145
Jhansi	Northwest India	West Uttar Pradesh	Thunderstorm	24-06-18	1600	1700
Hamirpur	Northwest India	West Uttar Pradesh	Thunderstorm	24-06-18	1530	1630
Orai	Northwest India	West Uttar Pradesh	Thunderstorm	24-06-18	1400	1430

Sikar	Northwest India	East Rajasthan	Thunderstorm	24-06-18	1530	1630
Pali	Northwest India	East Rajasthan	Thunderstorm	24-06-18	1830	1930
Jodhpur	Northwest India	West Rajasthan	Thunderstorm	24/25-06-18	241830	250330
Ganganagar	Northwest India	West Rajasthan	Thunderstorm	24-06-18	1640	1730
Guna	Central India	Madhya Pradesh	Thunderstorm	24-06-18	1820	2330
Indore	Central India	Madhya Pradesh	Thunderstorm	24-06-18	2010	2225
Chhindwada	Central India	Madhya Pradesh	Thunderstorm	24-06-18	1350	1530
Silchar	Northeast India	Assam	Thunderstorm	24-06-18	1930	2300
Machilipatnam	South India	Coastal Andhra Pradesh	Thunderstorm	25-06-18	0015	0115
Visakhapatnam	South India	Coastal Andhra Pradesh	Thunderstorm	24-06-18	1615	1700
Shirali	South India	Coastal Karnataka	Thunderstorm	24-06-18	1615	1645
Coochbehar	East India	SHWB	Thunderstorm	25-06-18	XXXX	0640
Malda	East India	SHWB	Thunderstorm	24-06-18	1640	1840
Alipore	East India	GWB	Thunderstorm	24-06-18	1005	1240
DumDum	East India	GWB	Thunderstorm	24/25-06-18	1045	1335
Haldia	East India	GWB	Thunderstorm	24-06-18	0830	0945
Digha	East India	GWB	Thunderstorm	24-06-18	0935	1125
Bankura	East India	GWB	Thunderstorm	24-06-18	1120	1430
Sriniketan	East India	GWB	Thunderstorm	24-06-18	1350	1415
Gaya	East India	Bihar	Thunderstorm	24-06-18	1210	1330
Bhagalpur	East India	Bihar	Thunderstorm	24-06-18	1700	1740
Purnia	East India	Bihar	Thunderstorm	25-06-18	0740	0750
Ranchi	East India	Jharkhand	Thunderstorm	24-06-18	1440	1540
Jamshedpur	East India	Jharkhand	Thunderstorm	24-06-18	1200	1620
Daltonganj	East India	Jharkhand	Thunderstorm	24-06-18	1745	1930
Bhubaneswar	East India	Odisha	Thunderstorm	25-06-18	0525	0655
Chandbali	East India	Odisha	Thunderstorm	25-06-18	0700	0830
Paradeep	East India	Odisha	Thunderstorm	25-06-18	0530	0830
Puri	East India	Odisha	Thunderstorm	25-06-18	0320	0630
Keonjhargarh	East India	Odisha	Thunderstorm	24-06-18	1615	1800

IMPORTANT LINKS:

For NCMRWF NWP products:(<u>http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php</u>)
For IMD NWP products:(<u>http://nwp.imd.gov.in/diagpro_new.php</u>)
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:



