



**India Meteorological Department**  
**FDP STORM Bulletin No.50 (24-04-2017)**

**1. CURRENT SYNOPTIC SITUATION at 0300UTC of the Day:**

**SYNOPTIC FEATURES:**

The western disturbance as an upper air cyclonic circulation over north Pakistan & neighbourhood now lies over north Pakistan & adjoining Jammu & Kashmir and extends upto mid tropospheric level.

The trough at mean sea level from northwest Rajasthan to north Coastal Odisha across north Madhya Pradesh, north Chhattisgarh and Jharkhand persists.

The trough at mean sea level runs from Jharkhand to South Tamilnadu and extends up to 0.9 Km above mean sea level.

A trough runs from east Bihar to northwest Bay of Bengal and extends upto 1.5 Km above mean sea level.

The upper air cyclonic circulation lies over southwest Rajasthan & neighbourhood and extends upto 1.5 Km above mean sea level.

The upper air cyclonic circulation over Nagaland, Manipur, Mizoram & Tripura & neighbourhood extending upto 1.5 km above mean sea level persists.

The upper air cyclonic circulation over southwest Uttar Pradesh & neighbourhood extending upto 0.9 Km above mean sea level has become less marked.

**SATELLITE OBSERVATIONS during past 24hrs and current observation:**

**Current Observation (based on 0300UTC imagery of INSAT 3D):**

**Convective Activity and cloud description:**

Cell No.	Date/Time	Area/Location	CTBT (minus °C)	Movement	Remarks
1	240300	W Bangladesh adjoining Gangetic West Bengal	67	---	---

Scattered multi-layered clouds seen over north J & K and Himachal Pradesh and N Uttarakhand in association with western disturbance over the area

Scattered low/medium clouds with embedded moderate to intense convection were seen over Bangladesh, adjoining West Bengal and Tripura. Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over NE Bihar, Sikkim, Sub-Himalayan West Bengal, Assam, Arunachal Pradesh and Nagaland. Scattered low/medium clouds were seen over Gangetic West Bengal, rest NE states, Kerala and W Tamilnadu. Isolated low/medium clouds were seen over N Haryana, rest Uttarakhand, and NW Uttar Pradesh.

**Arabian Sea:**

Scattered low/medium clouds with embedded moderate to intense convection were seen over SE Arabian Sea.

**Bay of Bengal & Andaman Sea:**

No Significant clouds over the region..

## **Past Weather:**

### **Convection:**

Moderate to Intense convection was observed over J&K Himachal Pradesh Punjab Uttarakhand N Rajasthan Uttar Pradesh Bihar Jharkhand N Odisha West Bengal NE States and Tamilnadu.

### **OLR:-**

Up to 280  $\text{wm}^{-2}$  was over J&K Punjab Himachal Pradesh Uttarakhand NE Bihar E Jharkhand West Bengal Kerala & west Tamilnadu.  
Up to 310  $\text{wm}^{-2}$  was over N Rajasthan Haryana rest Uttar Pradesh rest Bihar rest Jharkhand rest Odisha rest Tamil Nadu S Karnataka.

Up to 340  $\text{wm}^{-2}$  was over rest parts of India..

### **Westerly Trough & Jet Stream:**

No Trough & Jet stream observed

### **Dynamic Features:**

Negative shear tendency observed over coastal Odisha NE Uttar Pradesh and Positive shear tendency observed over rest parts of India.

Medium to high wind shear is observed over India.

A positive Vorticity field is observed over coastal Andhra Pradesh West Bengal E Assam and central Uttar Pradesh.

Negative low level convergence observed over Uttarakhand Uttar Pradesh Vidarbha Madhya Maharashtra Konkan & east Gujrat and

Positive Low Level Convergence observed over Bihar adjoining SHWB Sikkim NE States coastal Odisha & coastal Karnataka

### **Precipitation:**

#### **IMR:**

Rainfall upto 50 mm was observed over extreme E Jharkhand central Gangetic West Bengal S Bangladesh. Rainfall 10 – 20 mm was observed over J&K NE Jharkhand rest Gangetic West Bengal rest Bangladesh Mizoram Tripura NW Tamil Nadu. Rainfall upto 10 mm was observed over N Punjab Himachal Pradesh NE Uttarakhand NW Rajasthan N adjoining central Uttar Pradesh NE Bihar SHWB E Assam and E Arunachal Pradesh.

**HEM:** Rainfall upto 70 mm was observed over SW J&K N Uttarakhand E Gangetic West Bengal S Bangladesh S Manipur Mizoram. Rainfall upto 14 mm was observed over NW Rajasthan Punjab N adjoining central Uttar Pradesh NE Bihar SHWB rest Gangetic West Bengal rest Bangladesh and rest NE States

### **RADAR and RAPID observation:**

No significant convective activity was seen in DWR composite at 1151hrs IST.

RAPID RGB imagery at 1030hrs IST indicated convective clouds over Bangladesh and adjoining areas of Meghalaya, Assam, Tripura, Manipur and Mizoram.

### **Environmental condition (dust etc) and its forecast based on 00UTC of date:**

**Not received**

## 2. NWP MODEL GUIDANCE:

### NCMRWF (NCUM Forecasts based on 00 UTC of the day):

#### 1. Weather Systems:

12UTC Charts of Day-0 to Day-4 show moderate **Heat Low over Rajasthan and adjoining Pakistan** and its extension over IG plains is prominent with MSLP is at around 1002 hPa.

12UTC charts on all days from Day0-4 show two zones of wind discontinuity at 925 hPa: (i) SW-NE extending from northern Karnataka-Telangana region to Odisha region. (ii) S-N extending from southern parts of TN to northern parts of Telangana-AP region.

Trough at 850 hPa over WB and Bangladesh region from Day-0 to Day-4. CYCIR over SIK and TN region in Day-1 & 2, over Srilanka from Day-3-4. Strong anti-cyclone at 500 hPa from Day-0 to Day-2 over TN and AP..

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

Weaker core winds at 12 UTC on all days over India. Highest core winds of about 50 Kt widespread over Assam and Meghalaya from on all days. Peak core strength about 60 kt over Assam on Day-2

#### 3. Convergence at 850 hPa:

At 12UTC Day-0-3: high values over isolated locations over Odisha and at several locations along the Western Ghats. Parts of Assam and over Jharkhand. On Day-4 Enhanced activity over Western Ghats and Assam.

**At 00UTC very high values : over several places in Assam and over Assam-Arunachal region in Day-2 & 4..**

#### 4. Low level Vorticity:-Positive Vorticity (>15 x 10<sup>-5</sup>/s):

At 12UTC on Day-0-4 :mainly over Assam, Bangladesh. On Day-1 and 2 over isolated locations of AP and Odisha.

At 00UTC : very high values along the line of low level confluence and strong convergence

#### 5. Showalter Index: Day-wise Sub-divisions with Showalter index <-4:

**Day0:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Bihar, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir, Odisha, Guj\_Reg, Saurashtra\_Kutch, Coastal\_AP, Rayalseema, TN\_Puducherry, Coastal\_Karnataka, NI\_Karnataka, SI\_Karnataka, Kerala,

**Day1:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Uttarakhand, Himachal\_Pradesh, Coastal\_AP, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day2:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir, Coastal\_AP, TN\_Puducherry, Kerala,

**Day3:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Bihar, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir, Odisha, Saurashtra\_Kutch, Coastal\_AP, Telangana, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day4:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Gangetic\_WB, Bihar, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, Odisha, Saurashtra\_Kutch, Coastal\_AP, Telangana, TN\_Puducherry, SI\_Karnataka, Kerala

#### 6. K-Index : Daywise Sub-divisions with K-index >40:

**Day0:** Arunachal\_Pradesh, NE\_NMMT, Sub\_Himalayan\_WB, Bihar, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, Guj\_Reg, Coastal\_AP, Rayalseema, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day1:** Arunachal\_Pradesh, Sub\_Himalayan\_WB, Uttarakhand, Coastal\_AP, Telangana, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day2:** Arunachal\_Pradesh, Assam\_Meghalaya, Sub\_Himalayan\_WB, Coastal\_AP, Telangana, Rayalseema, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day3:** Arunachal\_Pradesh, Assam\_Meghalaya, Sub\_Himalayan\_WB, Odisha, Coastal\_AP, Telangana, Rayalseema, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day4:** Arunachal\_Pradesh, Assam\_Meghalaya, Sub\_Himalayan\_WB, Uttarakhand, Jammu\_Kashmir, Odisha, Vidarbha, Chhattisgarh, Coastal\_AP, Telangana, Rayalseema, TN\_Puducherry, NI\_Karnataka, SI\_Karnataka, Kerala

**7. Spatial distribution of TTI: Daywise Sub-divisions with TTI >52:**

**Day0:** Arunachal\_Pradesh, Sub\_Himalayan\_WB, Bihar, East\_UP, West\_UP, Uttarakhand, Punjab, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, East\_RJ, Odisha, Guj\_Reg, Saurashtra\_Kutch, Coastal\_AP,

**Day1:** Arunachal\_Pradesh, Sub\_Himalayan\_WB, Uttarakhand, Hry\_Chhd\_Delhi, Punjab, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, East\_RJ, West\_MP, Saurashtra\_Kutch, Coastal\_AP, TN\_Puducherry,

**Day2:** Arunachal\_Pradesh, Sub\_Himalayan\_WB, Uttarakhand, Hry\_Chhd\_Delhi, Punjab, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, Odisha, East\_MP, Guj\_Reg, Madhya\_Maharashtra, Chhattisgarh, Coastal\_AP, TN\_Puducherry, Kerala,

**Day3:** Arunachal\_Pradesh, Assam\_Meghalaya, Sub\_Himalayan\_WB, Gangetic\_WB, Jharkhand, Bihar, Uttarakhand, Hry\_Chhd\_Delhi, Punjab, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, East\_RJ, Odisha, West\_MP, East\_MP, Saurashtra\_Kutch, Vidarbha, Chhattisgarh, Coastal\_AP, Telangana, TN\_Puducherry, SI\_Karnataka, Kerala,

**Day4:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Gangetic\_WB, Jharkhand, Bihar, Uttarakhand, Hry\_Chhd\_Delhi, Punjab, Himachal\_Pradesh, Jammu\_Kashmir, West\_RJ, Odisha, Guj\_Reg, Saurashtra\_Kutch, Vidarbha, Chhattisgarh, Coastal\_AP, Telangana, Rayalseema, NI\_Karnataka, SI\_Karnataka,

**8. Rainfall : Daywise Sub-divisions with Precipitation >2cm:**

**Day1:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB, Uttarakhand, Himachal\_Pradesh, Jammu\_Kashmir,

**Day2:** Arunachal\_Pradesh, Assam\_Meghalaya, NE\_NMMT, Sub\_Himalayan\_WB,

**Day3:** Arunachal\_Pradesh, Assam\_Meghalaya, Jammu\_Kashmir,

**Day4:** Arunachal\_Pradesh, Assam\_Meghalaya,

**Day5:** Arunachal\_Pradesh, Assam\_Meghalaya, Sub\_Himalayan\_WB, Jammu\_Kashmir,,

**IMD GFS (T1534) based on 00 UTC of the day:-**

**1. Weather Systems:**

00 UTC analyses shows a north-south oriented low level trough over West Bengal extended to coastal AP and adjoining regions and this trough will persist for the next 5 days. Forecasts show a feeble CYCIR would develop over Punjab and adjoining areas during day-3 to day-7. Analysis also shows a low level CYCIR over NE India and this CYCIR will persist for the next 5 days. Contour at 500 hPa shows approaching of a WD over the northern parts of the India during Day-1 to Day-4 forecast

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

No presence of jet core over the Indian region for the next 5 days.

**3. Low level Vorticity:-Positive Vorticity 850hPa (>12 x 10<sup>-1</sup>/s):**

Mostly along the trough at 850 hPa, Gangetic plain and along the foot hill of Himalaya during next 5 days.

**4. Spatial distribution of T-Storm Initiation Index, Lifted Index, Total Total Index, CAPE, CINE and Sweat Index (High potential for thunderstorm):**

**T-Storm Initiation Index( > 4):** Mostly over east coast, eastern part of the country and over Gujarat and adjoining areas during next 5 days.

**Lifted Index (< -2):** Less than threshold value mostly along east coast from Gangetic West Bengal to south peninsula and eastern part of the country during next 5 days.

**Total Total Index ( > 50 )** : Above threshold value over the most parts of central and eastern parts of India at 12 UTC during next 5 days.

**Sweat Index ( > 300)**: Mostly along east coast, eastern part of India and Gujarat and adjoining areas during next 5 days.

**CAPE (> 1000)**: Mostly along east coast, extreme south peninsula and Gujarat and adjoining areas during next 5 days.

**CINE (50-150)**: Mostly along east coast, west coast and Gujarat and adjoining areas at 12 UTC during next 5 days.

**5. Rainfall and thunderstorm activity:**

10-70 mm rainfall over NE states during next two days.

10-40 mm rainfall over NE states during day 3 to day5.

10-40 mm rainfall over extreme south peninsula during next 2 days

**IMD WRF (based on 00UTC of the day):**

**Not Received**

### **3. IOP ADVISORY FOR 24 and 48 Hrs:**

#### **Summary and Conclusions:**

##### **Day 1 & Day 2:**

Presently, the upper air cyclonic circulation over Nagaland, Manipur, Mizoram & Tripura & neighbourhood extending upto 1.5 km above mean sea level persists and the upper air cyclonic circulation over Nagaland, Manipur, Mizoram & Tripura & neighbourhood extending upto 1.5 km above mean sea level persists. which may give rise to heavy rainfall over the isolated places of Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura on Day-1. However intensity of the rainfall may decreases on Day-2.

The trough at mean sea level from northwest Rajasthan to north Coastal Odisha across north Madhya Pradesh, north Chhattisgarh and Jharkhand persists. This will give rise to thunder squall with gust wind activity over South Chhattisgarh, Jharkhand, Eastern parts of Vidarbha and South Coastal Orissa on Day-1

##### **24 hour Advisory for IOP:**

Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura, Arunachal Pradesh  
Jammu and Kashmir, Himachal Pradesh  
Sub Himalayan West Bengal, Sikkim, GWB  
Kerala, Telangana, Coastal Andhra Pradesh, Interior Tamilnadu, South Interior Karnataka  
South Coastal Orissa, Jharkhand, Eastern parts of Vidarbha and South Chhattisgarh

##### **48 hour Advisory for IOP:**

Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura  
Sub Himalayan West Bengal, Sikkim and GWB  
South Coastal Orissa, Kerala

ForNCMRWFNWPproducts:(<http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php>)

ForIMDNWPproducts:([http://nwp.imd.gov.in/diagpro\\_new.php](http://nwp.imd.gov.in/diagpro_new.php))

ForSynopticplotteddataandcharts

<http://amssdelhi.gov.in/>

<http://www.amsskolkata.gov.in/>

ForRAPIDtool:

<http://rapid.imd.gov.in/>

LowLevelWinds

[http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR\\_2017/?C=M;O=D](http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR_2017/?C=M;O=D)

Upperlevelwinds

[http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR\\_2017/?C=M;O=D](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](http://satellite.imd.gov.in/img/3Ddaily_imr.jpg)

HEM:[http://satellite.imd.gov.in/img/3Ddaily\\_he.jpg](http://satellite.imd.gov.in/img/3Ddaily_he.jpg)

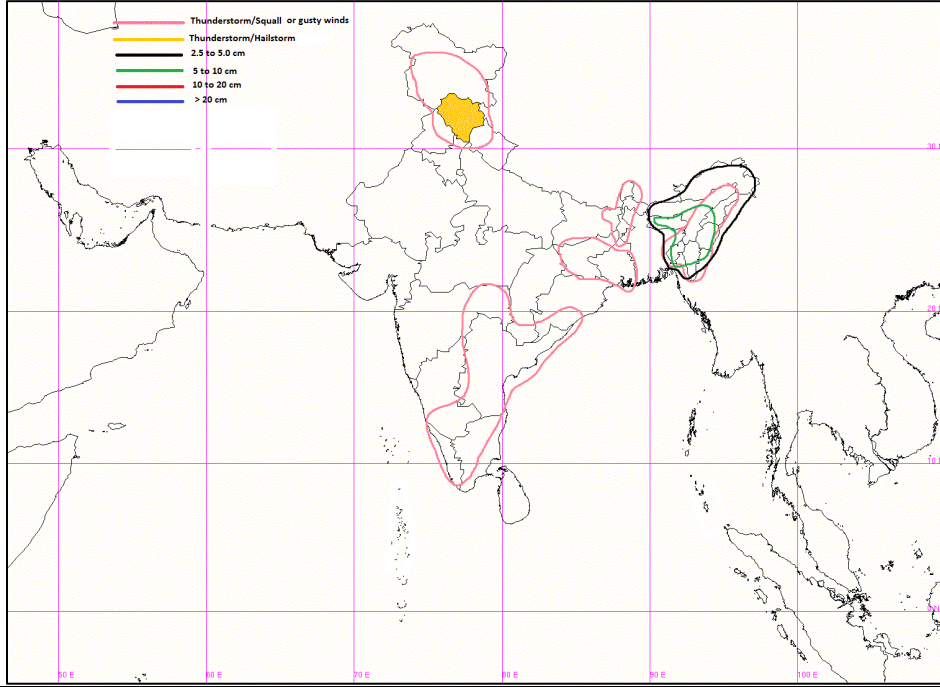
ForRadarimagesofthepast24hoursincludingmosaicofimages:

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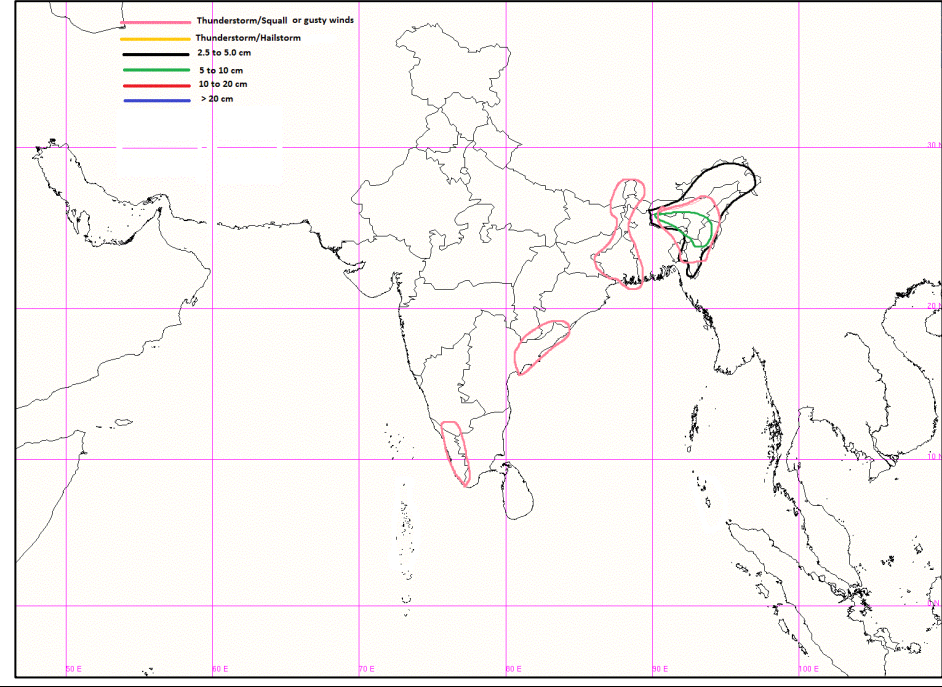
SatellitesounderbasedT-Phigram

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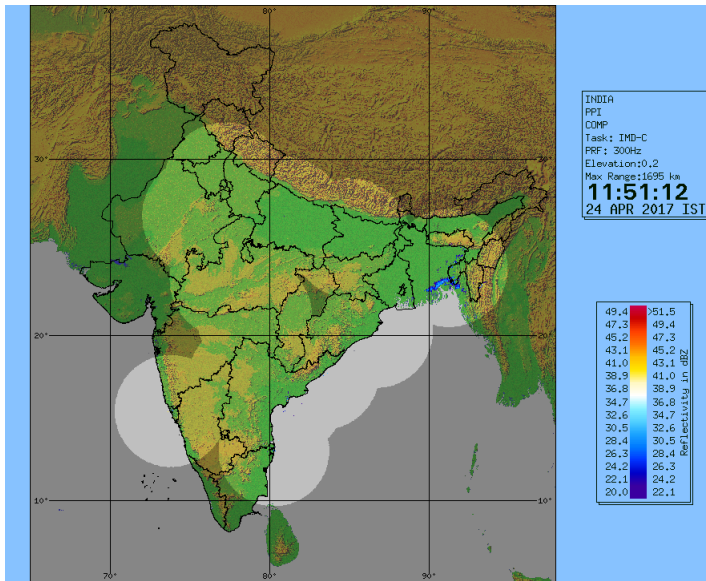


**IOP Advisory for 24hours**

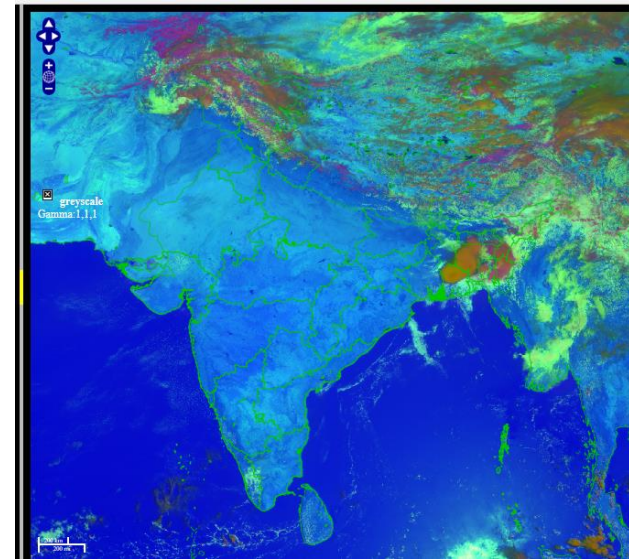


**IOP Advisory for 48hours**





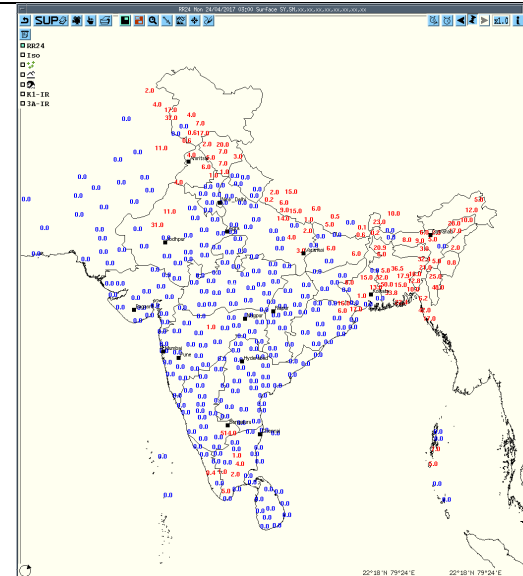
**DWR Composite at 1151hrs IST of today**



**RAPID RGB Image of INSAT 3D at 1030hrs IST of today**

Not received

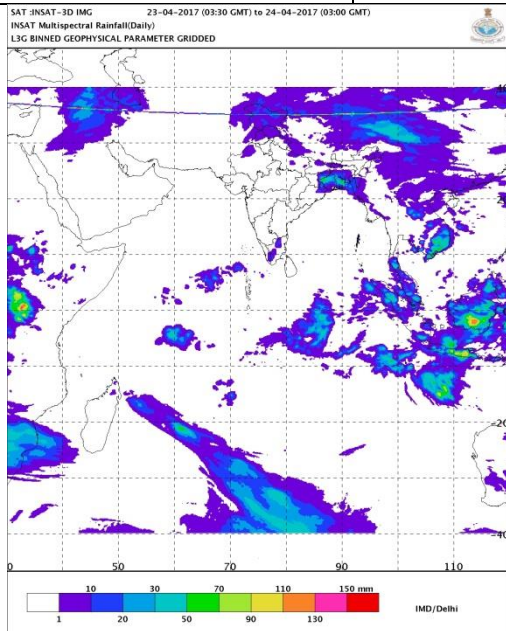
Not received



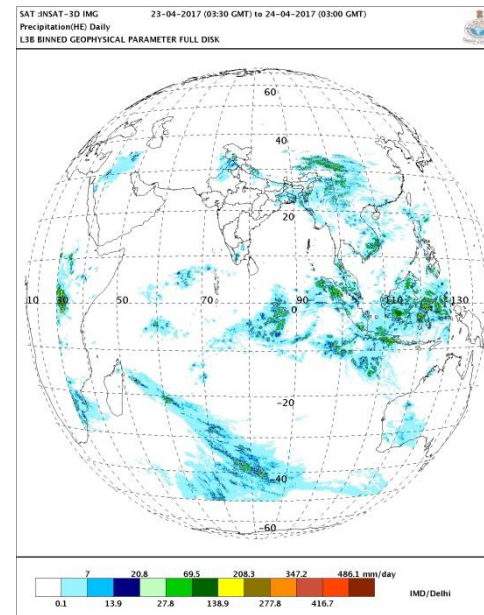
Forecast Dust Concentration

PM10 Forecast

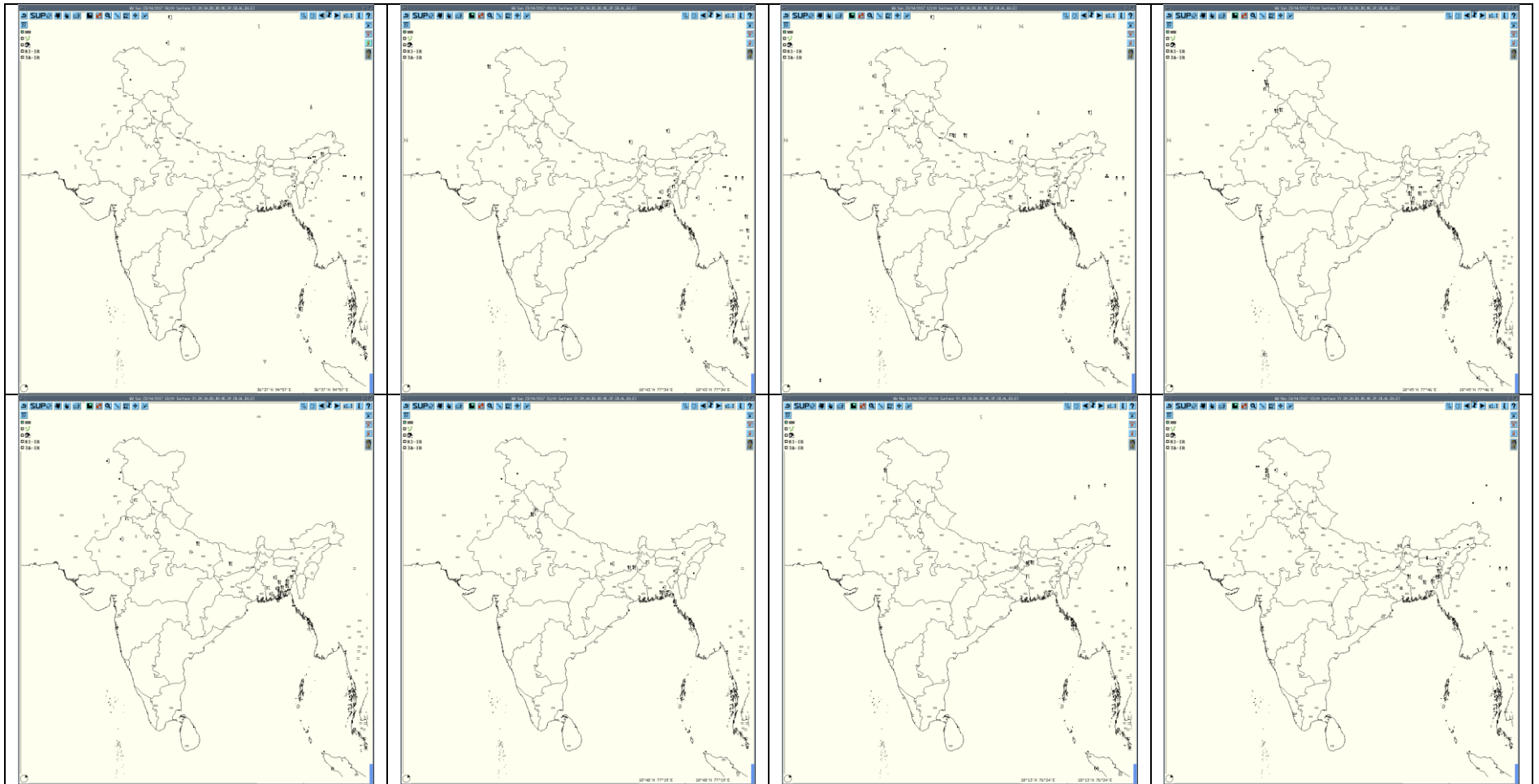
Accumulated 24 Hour rainfall (in mm) recorded at 0300 UTC of today



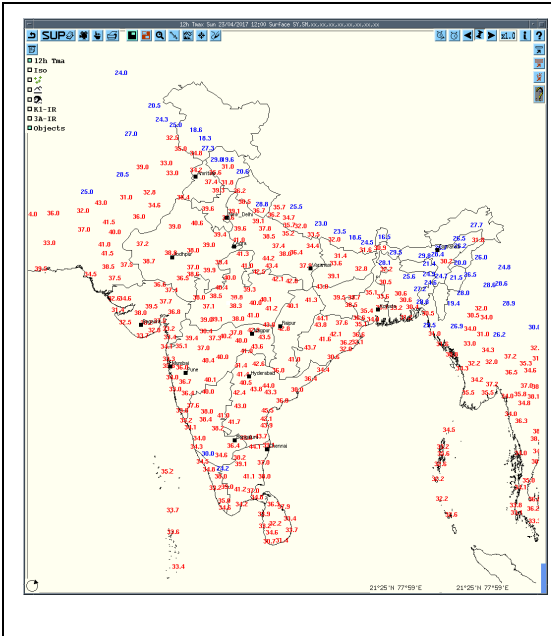
IMR Rainfall



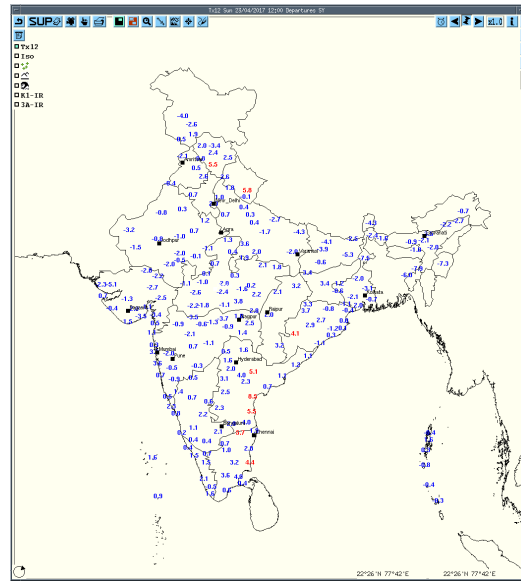
HEM Rainfall



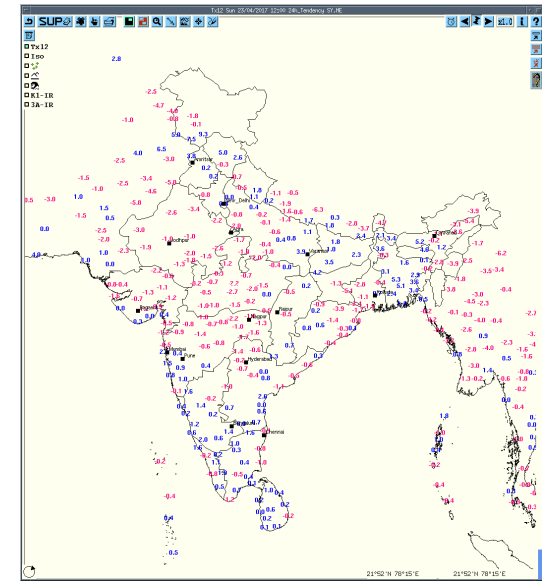
3 hourly Past weather at 06, 09, 12, 15, 18, 21 UTC of yesterday and 00 & 03 hrs UTC of today



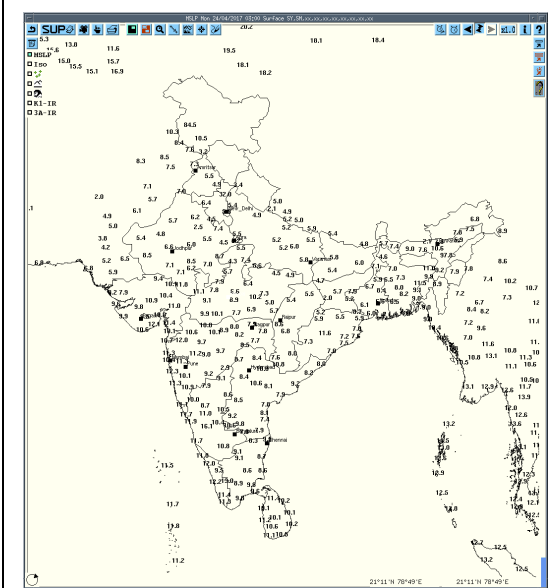
**Tmax**



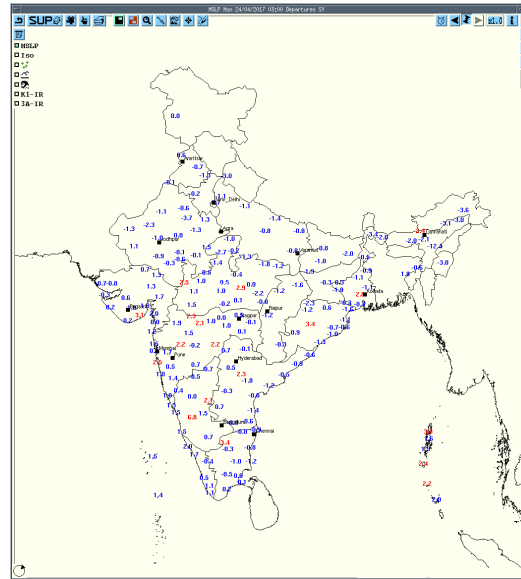
**Departure Tmax**



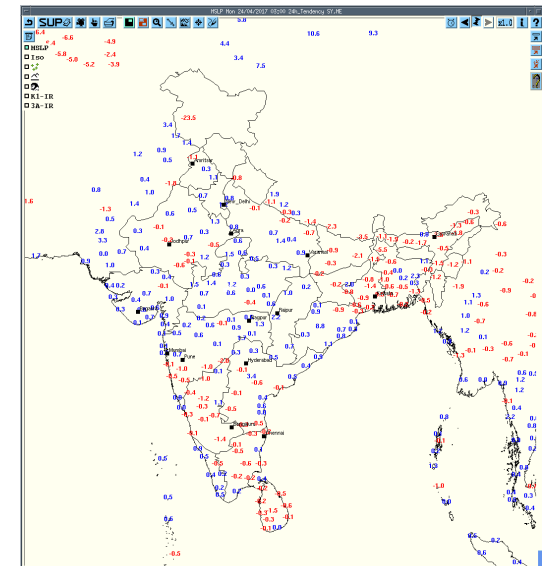
**Tendency Tmax**



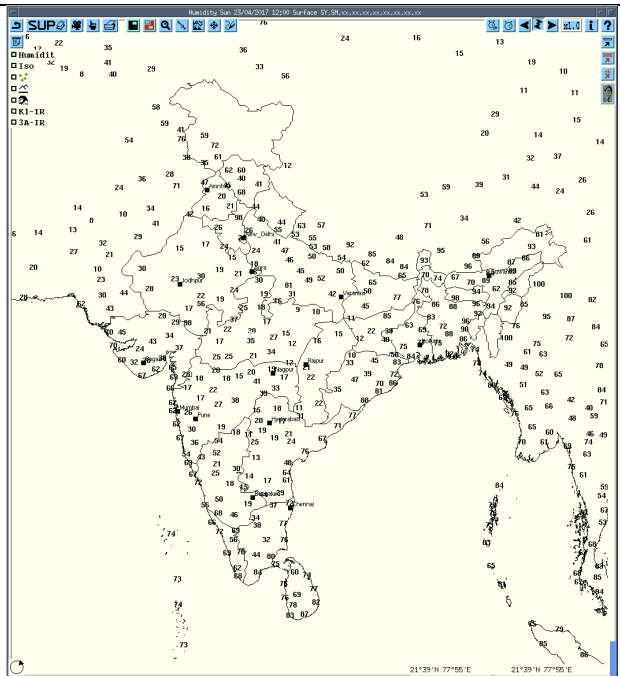
**MSLP**



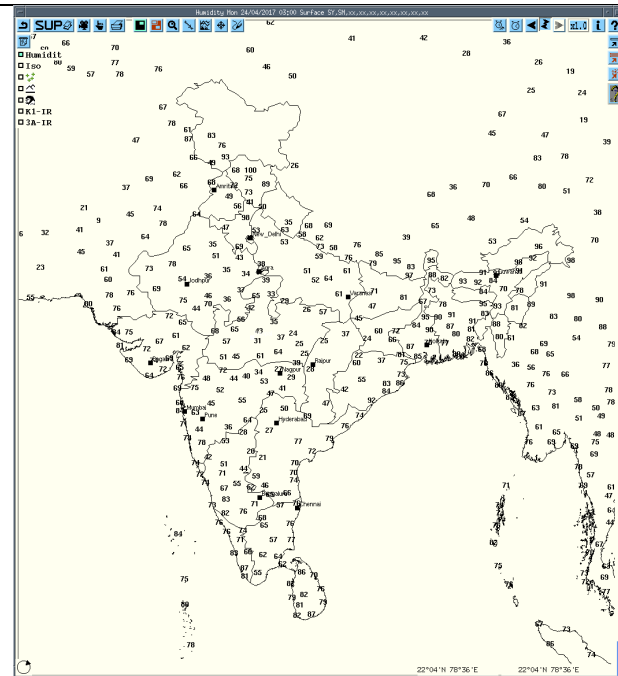
**Departure MSLP**



**Tendency MSLP**



**RH at 12UTC yesterday**



**RH at 03UTC today**

Realized weather past 24 hours (Based on SYNERGIE Products)					
Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
23-04-17	0600 UTC	Dibrugarh	Northeast India	Assam	Thunderstorm
23-04-17	0900 UTC	Keonjhar	East India	Odisha	Thunderstorm
		Agartala	Northeast India	Tripura	Thunderstorm
		Silchar	Northeast India	Assam	Thunderstorm
23-04-17	1200 UTC	Kodaikanal	South India	Tamilnadu	Thunderstorm
		Thiruvananthapuram AP & City	South India	Kerala	Thunderstorm
		Bankura	East India	West Bengal	Thunderstorm
23-04-17	1500 UTC	Amritsar	Northwest India	Punjab	Thunderstorm
		Tiruchirappalli	South India	Tamilnadu	Thunderstorm
		Kolkata	East India	West Bengal	Thunderstorm
23-04-17	1800 UTC	Amritsar	Northwest India	Punjab	Thunderstorm
		Ganganagar	Northwest India	Rajasthan	Thunderstorm
		Lucknow	Northwest India	Uttar Pradesh	Duststorm
		Baharaich	Northwest India	Uttar Pradesh	Thunderstorm
		Patna	East India	Bihar	Thunderstorm
		Agartala	Northeast India	Tripura	Thunderstorm
23-04-17	2100 UTC	Chandigarh	Northwest India	Chandigarh	Thunderstorm
		Patiala	Northwest India	Punjab	Thunderstorm
		Ambala	Northwest India	Haryana	Lightening
		Jodhpur	Northwest India	Rajasthan	Lightening
		Patna, Bhagalpur, Purnea	East India	Bihar	Thunderstorm
24-04-17	0000 UTC	Purnea	East India	Bihar	Thunderstorm
24-04-17	0300 UTC	Burdwan	East India	West Bengal	<b>Thunderstorm with Hail</b>



**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
Patna	24-04-17	230300-231630	NIL	NIL	N/A	N/A	N/A
		231630-231930	Multiple Cell. Maximum Reflectivity : 40 dBZ Echo Top : 10.5 KM	Range: 56 KM from DWR Patna in West direction. Movement- Easterly	Warning E-mail sent to State Disaster management Authority and Concern DMs	THUNDER-STORM WITH RAIN	BUXAR,BHOJPUR,PATNA,SARAN,CHAPRA SIWAN,VAISHALI
		231930-240000	Multiple Cell. Maximum Reflectivity : 52.5dBZ Echo Top : 12.8 KM	Range: 182.0 KM from DWR Patna in North-West direction. Movement- South-Easterly	Warning E-mail sent to State Disaster management Authority and Concern DMs	THUNDER-STORM WITH RAIN	West champaran,east champaran,Siwan,Saran,Samastipur,Sitamarhi,Sheohar,Madhubani,Vaishali,Muzaffarpur,Supaul,Motihari,Madhepura,Khagadia,Begusarai,Munger,Lakhisarai,Darbhanga
		240000-240300	NIL	NIL	NIL	NIL	NIL
Agartala	24-04-17	230630-231510	Multiple cells with Maximum Height <b>14km</b> and maximum reflectivity <b>40 dBZ</b> (at 1000 UTC of 22.04.17 over Central	Formed 150 km WNW of DWR AGT at 0630 UTC of 23.04.17 and moved ESE-wards at around 70kmph	Cells Dissipated at 1510 UTC of 23.04.17 over Mizoram	TS with rain	West, Sipahijala, South, Gomati, Dhalai district of Tripura










			Parts of Tripura)				
		230800-231720	Multiple Cells with Maximum Height <b>15 km</b> and maximum reflectivity <b>39 dBZ</b> (at 1330 UTC over South Bangladesh)	Formed 200 km SW of DWR AGT at 0800 UTC of 23.04.17 and moved ESE-wards at around 30 kmph	Cells Dissipated at 1720 UTC of 23.04.17 over South Bangladesh and adjoining BoB	N/A	N/A
		231100-232130	Squall Line with Maximum Height <b>14 km</b> and maximum reflectivity <b>45dBZ</b> (at 1500 UTC over Bangladesh)	Formed 450 km WSW of DWR AGT at 1100 UTC of 23.04.17 and moved ESE-wards at around 65kmph	Cells Dissipated at 2130 UTC of 23.04.17 over Mizoram	TS with rain	All Districts of Tripura, Mamit District of Mizoram
		232120-240300	Multiple Cells with Maximum Height <b>12 km</b> and maximum reflectivity <b>42 dBZ</b> (at 0100 UTC over Meghalaya)	Formed 400 km NW of DWR AGT at 2120 UTC of 23.04.17 and moved Eastwards at around 75 kmph	Cells Dissipated at 0300 UTC of 24.04.17 over Meghalaya	N/A	N/A
		232250-240300	Squall Line with Maximum Height <b>14 km</b> and maximum reflectivity <b>45 dBZ</b> (at 0200 UTC over Bangladesh-70km NW of DWR AGT)	Formed 290 km WNW of DWR AGT at 2250 UTC of 23.04.17 and moving ESE-wards at around 55kmph	At 0300 UTC of 24.04.17, cells still persists over Western parts of Tripura	1.TS with squall at Agartala Airport. 2.TS with Rain at other places	West, Sipahijala, Khowai, Dhalai, North, Unakoti district of Tripura
		240130-240300	Squall Line with Maximum Height <b>10 km</b> and maximum reflectivity <b>34 dBZ</b> (at 0300 UTC over Bangladesh-230km West of DWR AGT)	Formed 340 km WNW of DWR AGT at 0130 UTC of 24.04.17 and moving ESE-wards at around 60kmph	At 0300 UTC of 24.04.17, cells still persists over over Bangladesh and approaching towards Tripura	N/A	N/A

Paradeep	24-04-17	230600-231300	Isolated single cells seen to develop having maximum reflectivity of 57 dBZ and heights exceeding 14 kms. single cells transforming into multiple cells during later stages of observation.	Position: 310-45 degrees(clockwise) Range:230-80 kms from the RADAR	NIL	TS with Rain	Sundergarh, Debagarh, Angul, Sudergarh, Keonjhar, Mayurbhanj, Bhadrak, Baleshwar, Jajpur and Dhenkanal.
Vishakhapatnam	24-04-17	230600-230900	Isolated single cells with Maximum reflectivity of 49dBZ and Max.height of 10 kms.	NE(200 kms) moving SEly	Cells are start forming from 0841UTC and developing.	-	■
		230900-231200	Isolated single cells with Maximum reflectivity of 53dBZ and Max. height of 10 kms.	NE(180 kms ) & W(120 kms) moving SEly	Cells are forming, well developed up to 53dBZ and dissipated.	-	■
		231200-231500	Isolated single cell with Maximum reflectivity of 34dBZ and Max. Height of 8 kms.	NE(197 kms ) and moving Ely	Cell is gradually dissipated.	-	■
		240000-240300	0600 UTC-0900 UTC	Isolated single cells with Maximum reflectivity of 49dBZ and Max.height of 10 kms.	NE(200 kms) moving SEly	-	-
Lucknow	24-04-17	230802-231342	Squall line convective system with average height of 13 km with Maximum reflectivity of 52 dBZ	SSW(100KM) moving in NE'ly Direction at speed of 65km/hr	Cells started forming at 0752 UTC at SSW(100KM) from Radar organized into squall line MCS during 0842 UTC to 1212 UTC and disorganized at 1232 UTC and so formed multiple cells	....	Fatehpur,Hamirpur,Kanpur(urban), Kanpur(rural),Unnao, Raibarely,Pratapgarh

					dissipated at 1352 UTC		
		231002-231042	Isolated cell with average height of 12 km with Maximum reflectivity of 38 dBZ	NW(170KM) moving in SE'ly direction at speed of 43km/hr	Single isolated cell started forming at 0952 UTC at NW(175KM) did not intensified and dissipated at 1042 UTC at NW(150KM) from radar	....	Badaun,Bareilly
		231112-231502	Multiple cells with average height of 15 km with Maximum reflectivity of 46 dBZ	SSE(200KM) moving in NE'ly direction at speed of 83 km/hr	Cells started forming at 1042 UTC at SSE(185KM) from Radar ,matured at 1212 UTC and disappeared from LKN radar at 1512 UTC at ESE(250KM)	....	Allahabad,Jaunpur, Sant Ravidas Nagar,Varanasi,Mirzapur
		231342-232012	Squall line convective system with average height of 15 km with Maximum reflectivity of 56 dBZ	NNW (120KM) moving in E'ly direction at speed of 65km/hr and N(250KM) moving in SE'ly direction at speed of 128 km/hr	Cells started forming at 1342 UTC at NNW(140KM) from radar and organized into squall line MCS at 1412 UTC and merged with already formed(at N(250KM) at 1242 UTC) squall line convective system at 1602 UTC and dissipated at 2012 UTC at ESE(225KM) from radar Note: radar was on standby mode during 1805 UTC to 1830 UTC due to power failure	.....	Hardoi,Sitapur,Lakhimpur Kheri,Baharaich,Gonda, Balrampur,SiddharthNagar, Barabanki,Basti,Sant kabir Nagar,Gorakhpur,Deoria, Faizabad,Jaunpur,Balia, Sultanpur,Kushinagar, Azamgarh,Gazipur,Sravasti
Nagpur	24-04-17	231002-231042	<b>Single</b>	115 km NE,moving NE'ly	< 10 dBZ	1002-1042	<b>Single</b>
		240002-240302	Nil	Nil	Nil	Nil	Nil
Hyderabad	24-04-17	230300-240300	Nil	Nil	Nil	Nil	Nil
Jaipur	24-04-17	230300-240300	Nil	Nil	Nil	Nil	Nil

∞	haze
☁	smoke
☄	dust or sand storm
☁	fog
☂	drizzle
•	rain
✪	snow
▽	showers
△	hail
⚡	thunderstorm

**Weather Symbols**

		
+ thunderstorm	+ heavy thunderstorm	sandstorm or dust storm
		
squall	hail shower	tropical storm
		
+ tornado	+ lightning	+ hurricane