



**India Meteorological Department**  
**FDP STORM Bulletin No.81 (25-05-2017)**

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

A low pressure area formed over southeast Bay of Bengal & adjoining area of Central Bay of Bengal. The associated upper air cyclonic circulation extends upto 5.8 Km above mean sea level. It is likely to become more marked over eastcentral Bay of Bengal during next 3-4 days. The Western Disturbance as an upper air cyclonic circulation over eastern parts of Jammu & Kashmir persists at 5.8 Km above mean sea level. The trough aloft roughly along Long. 77.0° E and north of Lat. 35.0° N has moved away.

The upper air cyclonic circulation over western parts of westcentral Arabian Sea & neighbourhood extending upto 1.5 Km above mean sea level persists.

An upper air cyclonic circulation lies over southeast Uttar Pradesh & neighbourhood and extends upto 0.9 Km above mean sea level. A trough runs from this system to North Interior Karnataka across Chhattisgarh, Vidarbha & Marathawada and extends upto 0.9 km above mean sea level.

An upper air cyclonic circulation lies over eastern parts of Assam & neighbourhood and extends upto 0.9 km above mean sea level.

The shear zone roughly along latitude 08.0°N between 1.5 & 3.1 km above mean sea level has become less marked.

The induced upper air cyclonic circulation over Haryana & neighbourhood between 1.5 and 2.1 Km above mean sea level has become less marked.

The trough from eastern parts of Bihar to north coastal Andhra Pradesh across interior Odisha extending upto 0.9 Km above mean sea level has become less marked.

The upper air cyclonic circulation over south Chhattisgarh & 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 0900UTC imagery of INSAT 3D):**

**Convective Activity:**

Cell No	Date/time (UTC)	Location/Area	MIN CTT (- DEG C)	Movement	Remarks
1	25/0900	E Bihar adjoining Jharkhand South Sub Himalayan West Bengal	83	-	-
2	25/0900	South Odisha	74	-	-

**Cloud Description:**

Scattered low/medium clouds were seen over Haryana, Delhi, Uttar Pradesh, Madhya Pradesh, Maharashtra,

Scattered low/medium clouds with embedded intense to very intense convection were seen Bihar, Jharkhand, South Sub Himalayan West Bengal and South Odisha.

Scattered low/medium clouds with embedded moderate to intense convection were seen Central Assam and Bay islands.

Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over East Rajasthan and South Andhra Pradesh.

**Western Disturbance:**

Scattered multi-layered clouds seen over East J & K, Himachal Pradesh & Uttarakhand and area between 37.0N TO 50.0 LONG 64.0E TO 96.0E N in association with WD over the Area.

**Arabian Sea:**

Scattered low/medium clouds with embedded intense to very intense convection were seen over exterior west Central Arabian Sea. Scattered low/medium clouds with embedded moderate to intense convection were seen over South Arabian Sea.

**Bay of Bengal & Andaman Sea:**

Scattered low/medium clouds with embedded intense to very intense convection were seen over South adjoining Central Bay and Andaman Sea.

**Past Weather:****Convection:-**

Moderate to Intense convection was observed over J&K Uttarakhand Rajasthan Jharkhand West Bengal Meghalaya North East States Karnataka Kerala Tamilnadu.

**OLR:-**

Upto **200**  $\text{wm}^{-2}$  was observed over South Tamilnadu. Upto **230**  $\text{wm}^{-2}$  was observed over J&K Himachal Pradesh Uttarakhand East Meghalaya Assam East Arunachal Pradesh, Karnataka Kerala Rest Tamilnadu.

Upto **250**  $\text{wm}^{-2}$  was observed over East Rajasthan Odisha Coastal Andhra Pradesh Rest Arunachal Pradesh Sikkim Nagaland

**Westerly Trough & Jet-Stream:**

Trough in Westerlies runs roughly along Longitude 77.0E north of Latitude 35.0N.

No Jet Stream observed over India.

**Dynamic Features:**

Low to Medium wind shear is observed over India.

Negative shear tendency is observed over Rajasthan and Positive shear tendency is observed over rest parts of India

A positive Vorticity field is observed over Coastal Gujarat Vidarbha South Chhattisgarh Telangana North Interior Karnataka.

Positive low level convergence is observed over South India and Vidarbha Bihar Odisha West Bengal and Negative low level convergence observed over rest parts of India.

**Precipitation:****IMR:**

Rainfall Up to **50** mm was observed over Coastal Odisha adjoining Jharkhand South Kerala adjoining Tamilnadu, Northeast Jharkhand and East Meghalaya. Rainfall Up to **20** mm was observed over West Assam South Interior Karnataka. Rainfall Up to **10** mm was observed over J& K Himachal Pradesh East Rajasthan Rest Assam Meghalaya Nagaland North Kerala South Tamilnadu.

**HEM:**

Rainfall Up to **70** mm was observed over South West J&K North Himachal Pradesh Coastal Odisha Meghalaya South Interior Karnataka South Kerala adjoining Tamilnadu.

Rainfall Up to **14** mm was observed over West Assam. Rainfall Up to **07** mm was observed over East Rajasthan South West of West Bengal Sub Himalayan West Bengal Rest Assam East Arunachal Pradesh Nagaland Manipur North Interior Karnataka North Kerala.

**RADAR and RAPID Observation:**

DWR Composite at 1650hrs IST indicated significant convection over Northern parts of Gangetic West Bengal, Southwest Odisha adjoining Andhra Pradesh and isolated convection over Central & West parts of Uttar Pradesh, Uttarakhand East Rajasthan, Maharashtra, Rayalaseema, North Tamilnadu and in RAPID RGB Satellite imagery at 1600hrs IST also including Kerala, Lakshadweep, Minicoy, Andaman & Nicobar Islands.

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

Higher Dust concentration was observed over north-west Africa and Arab countries. Dust concentration is expected to increase over north-west India for next five days. High PM10 concentration was observed over Rajasthan and is expected to increase over north India in next five days.

## **2. NWP MODEL GUIDANCE:**

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

**1. Weather Systems: 12UTC Charts of Day 0-4** show evolution of heat low over NW India and adjoining Pakistan with MSLP values lower than 992hPa on Day-2 to Day-4.

**12UTC charts on days from Day0-4:** show a zones of wind discontinuity at 925 hPa :(i) SW-NE extending from NIK-Maharashtra region to Jharkhand and WB region.

**A CYCIR is seen over Bay fo Bengal:** from Day-2 onwards and is seen to intensify on Day-3 and track towards Myanmar and **is likely to cross the coast at around 06UTC on 29<sup>th</sup> May 2017 near 20N/94E at 00UTC.**

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

Weaker core winds at 12 UTC on all days over India

### **3. Convergence at 850 hPa:**

**(Day/Index: Subdivisions with Lower Level Convergence > 15 x 10<sup>-5</sup> /s):**

Day0: NE NMMT, East RJ, Madhya Maharashtra, Vidarbha,

Day1: Jharkhand, Bihar, Punjab, Chhattisgarh,

Day2: Jharkhand, West UP, Odisha,

Day3: Jharkhand, Odisha, East MP, Chhattisgarh, TN Puducherry,

Day4: NE NMMT, Gangetic WB, West UP, Haryana Chandigarh Delhi, Punjab,

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

**(Day/Index: Subdivisions with Lower Level Vortex > 15 x 10<sup>-5</sup> /s):**

Day0: Himachal Pradesh, West RJ, TN Puducherry,

Day1: Bihar, Uttarakhand, Punjab, Himachal Pradesh, TN Puducherry,

Day2: Bihar, East UP, West UP, Haryana Chandigarh Delhi, Himachal Pradesh, TN Puducherry,

Day3: Assam Meghalaya, Jharkhand, Bihar, TN Puducherry,

Day4: Assam Meghalaya, NE NMMT, Gangetic WB, Jharkhand, Bihar, West UP, Haryana Chandigarh Delhi, Punjab,

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

**(Day/Index: Subdivisions with Showalter Index < -4):**

Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, West MP, East MP, Madhya Maharashtra, Chhattisgarh, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, East MP, Gujrat Region, Chhattisgarh, TN Puducherry,

#### **6. K-Index :-> 35[Very Unstable thunderstorm likely]:**

##### **(Day/Index: Subdivisions with K Index > 40):**

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, East RJ, Odisha, West MP, Gujarat Region, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Marathwada, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

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, Odisha, West MP, East MP, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, West MP, East MP, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, Uttarakhand, Haryana Chandigarh Delhi, Himachal

#### **7. 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, Rayalaseema, TN Puducherry,

Day1: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Chhattisgarh, Coastal AP, Telangana,

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, Odisha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, SI Karnataka,

Day3: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, West MP, East MP, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, SI Karnataka,

Day4: 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, Chhattisgarh, Coastal AP,

#### **8. Rainfall and thunder storm activity:**

##### **(Day/Index: Subdivisions with Precipitation > 2 cm):**

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Andaman Nicobar, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, Uttarakhand, Jammu Kashmir, Andaman Nicobar, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Bihar, East UP, Uttarakhand, Andaman Nicobar, SI Karnataka, Kerala,

Day4: NE NMMT, Gangetic WB, Bihar, East UP, West UP, Uttarakhand, Jammu Kashmir, Odisha, Andaman Nicobar, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Gangetic WB, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, TN Puducherry, Kerala,

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

#### **1. Weather Systems:**

00 UTC analysis shows an east west trough over Haryana, UP, Bihar, Jharkhand and adjoining areas. A low is present in the analysis over the BOB region and is persisting for the next 5 days. The trough now has a N-S component extending along Bihar, MP and up to interior AP and TN and is seen persisting during next 4 to 5 days.

**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):** Analysis shows low level positive vorticity (>12 x 10<sup>-5</sup>/s) mainly over few pockets in the north eastern states, Interior MP, AP and Karnataka. The high vorticity belts are mainly confined over regions of Bihar, MP, AP and south peninsular region during next 3 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):** Significant threshold values are noticed over GWB, Odisha, Coastal AP and also over few regions in Gujarat in the analysis. Forecast shows high threshold values over east coast of India mainly over the AP and Odisha region along with regions over Gujarat, Rajasthan and GWB region for the next 3 days.

**Lifted Index (< -2):** The areas with index less than -2 lies along east UP, Bihar, Chhattisgarh, GWB and major regions of AP and TN along with major regions along the west coast for the next 3 days.

**Sweat Index (> 400):** 00UTC shows significant values over major parts over Bihar, GWB, Odisha, AP, TN and over major regions bordering the west coast of the country and is expected to persist for the next 3 days.

**CAPE (> 1000):** Mostly over Bihar, GWB, Odisha, and AP and other regions over the east coast along with major regions bordering the west coast during the next 3 days.

**CINE (50-150):** Maximum CIN values are found in areas over Bihar, GWB, Odisha, AP and TN and along with major pockets in the Gujarat and Rajasthan region for the next 2-3 days.

#### **5. Rainfall and thunderstorm activity:**

10-40 mm rainfall is forecasted tomorrow over major pockets over Kerala, north eastern states and over isolated pockets in WB and the south peninsular region is expected to persist for the next 5 days.

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

#### **1. Model Reflectivity (Max. dBz):**

15-40 dBZ: over isolated pockets of the south peninsular and in the north eastern region today.

15-40 dBZ: over major parts of the north eastern states and few pockets over Kerala, UP, Bihar during tomorrow.

#### **2. Spatial distribution of Total Total Index, K-Index, CAPE and CIN [High potential for thunderstorm]**

**CAPE (> 1000):** Mostly along Bihar, Jharkhand, WB, Odisha, AP and TN and along major regions bordering the west coast during next 3 days.

**CINE (50-150):** Higher values over most regions of India except over central India, J & K region and NE states during next three days.

### **3. Rainfall and thunderstorm activity:**

10-40 mm over isolated pockets in the north eastern region and Kerala Coast and it is expected to persist for the next 3 days and 10-40 mm over the Himalayan foothills during day2 and day3.

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

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

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

In association with the low pressure area over southeast Bay of Bengal, isolated heavy rainfall is likely to occur over Andaman and Nicobar Islands on day 1, which is likely to increase on day 2. The upper air cyclonic circulation over eastern parts of Assam & neighbourhood has increased the southerly wind flow in the lower levels over the North-eastern States compared to yesterday, and associated rainfall is likely to persist over the North Eastern states during the next 48 hours. The upper air cyclonic circulation over western parts of west central Arabian Sea & neighbourhood which persists since yesterday has increased the westerly flow inland, into the south-western peninsula since yesterday. Hence rainfall is likely to occur over this region during the next 24 hours. This rainfall is likely to increase over the same region on day 2, especially over the Nilgiri Hills of Interior Tamil Nadu and adjoining Kerala.

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

Assam and Meghalaya, Arunachal Pradesh, Sikkim and Sub Himalayan West Bengal  
Andaman and Nicobar Islands  
Nagaland, Manipur, Mizoram, Tripura  
Interior Tamil Nadu, Kerala, Coastal Karnataka, South Interior Karnataka,  
North Coastal Andhra Pradesh, Telangana  
Orissa, Jharkhand, Bihar, Gangetic West Bengal,  
East Rajasthan, West Madhya Pradesh, Madhya Maharashtra

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

Assam and Meghalaya, Arunachal Pradesh, Sikkim and Sub Himalayan West Bengal  
Nagaland, Manipur, Mizoram, Tripura  
Andaman and Nicobar Islands  
South Interior Karnataka,  
Kerala, Coastal Karnataka, Interior Tamil Nadu, Coastal Andhra Pradesh  
Bihar, Orissa  
Uttarakhand

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](http://nwp.imd.gov.in/diagpro_new.php))

For Synoptic plotted data and charts

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

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

For RAPID tool:

<http://rapid.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](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](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)

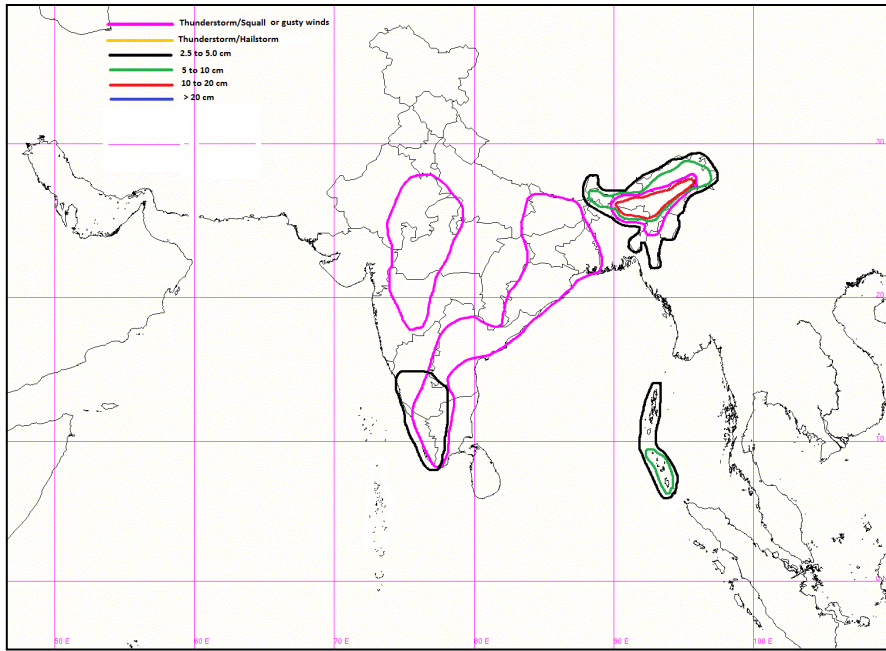
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ForRadarimagesofthepast24hoursincludingmosaicofimages:

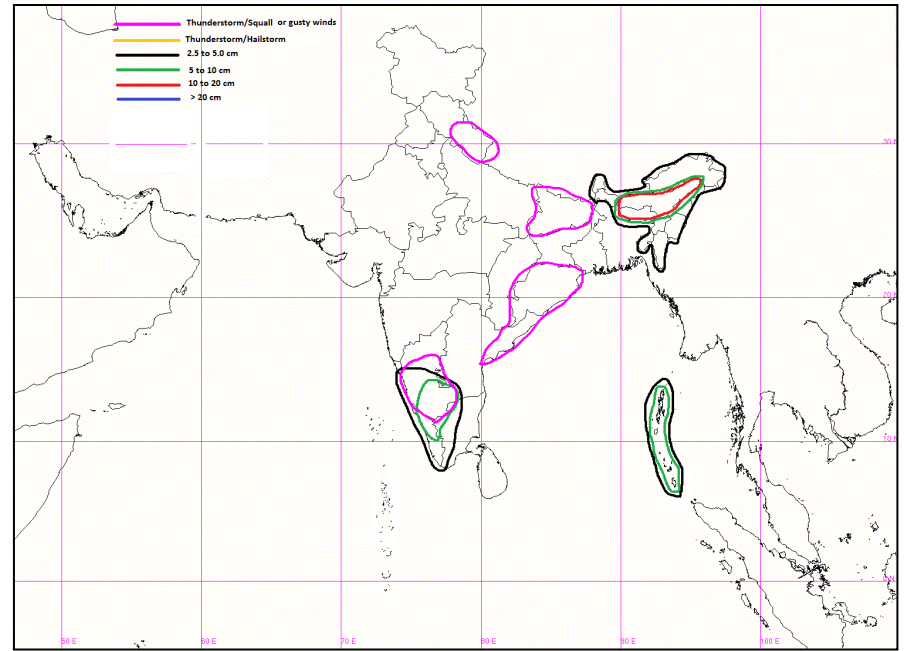
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Satellite sounder based T- Phigram

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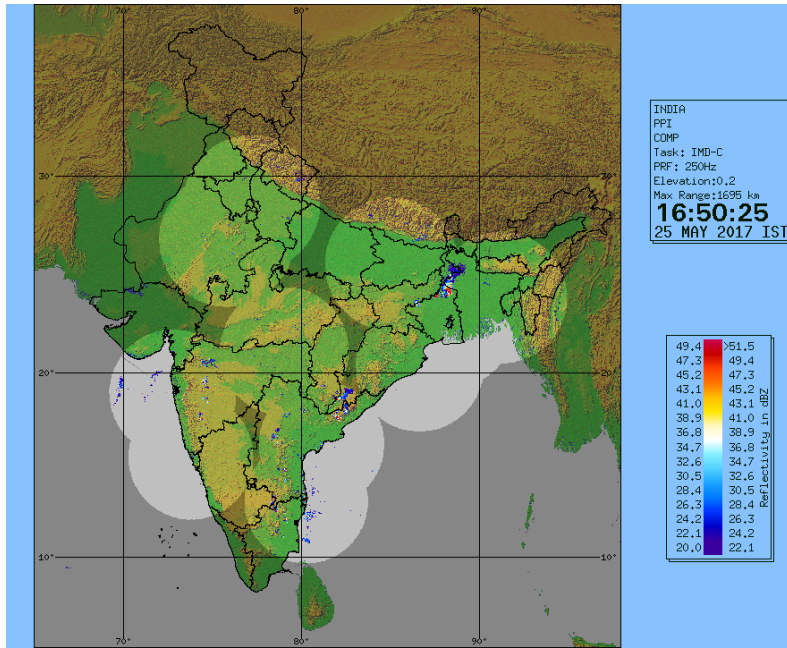


**IOP Advisory for 24 hours**

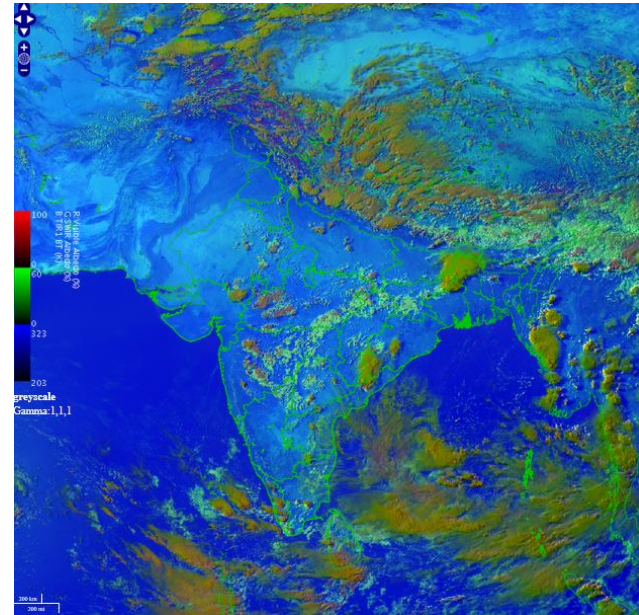


**IOP Advisory for 48 hours**

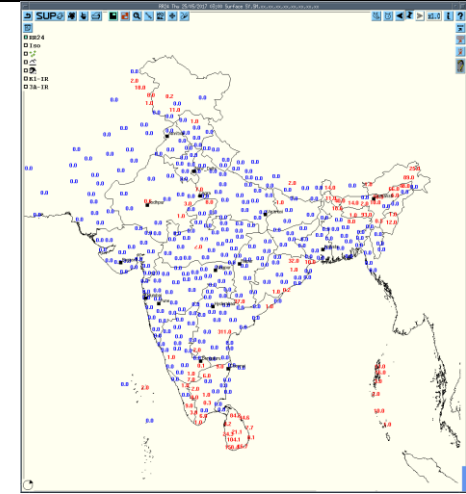
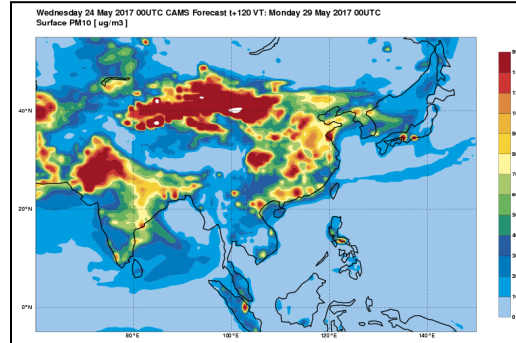
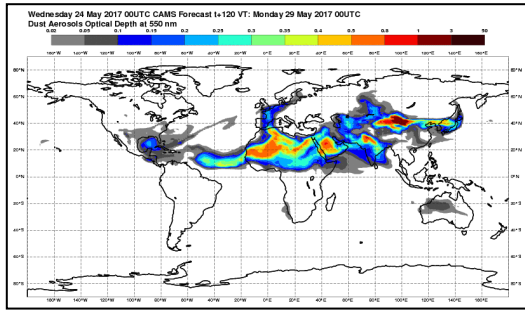




**DWR Composite at 1650 hrs IST**



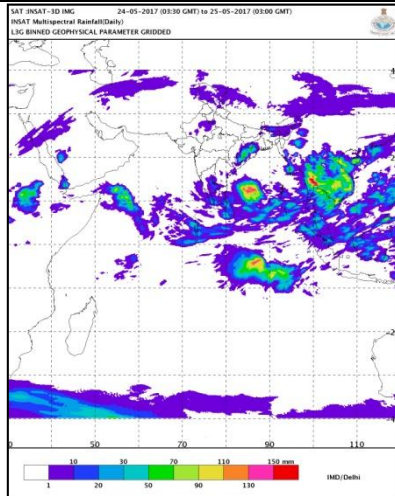
**RAPID RGB Satellite Imagery at 1600 hrs IST of today**



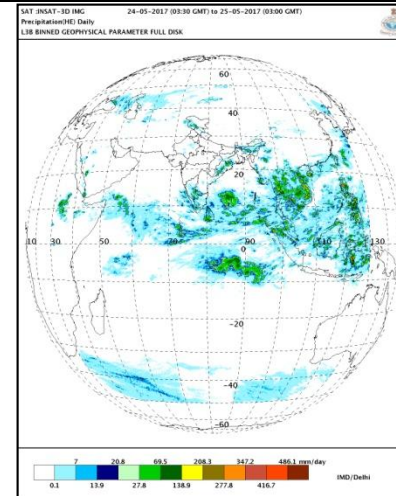
**Forecast Dust Concentration for 00UTC of 29<sup>th</sup> May**

**PM10 Forecast for 00UTC of 29<sup>th</sup> May**

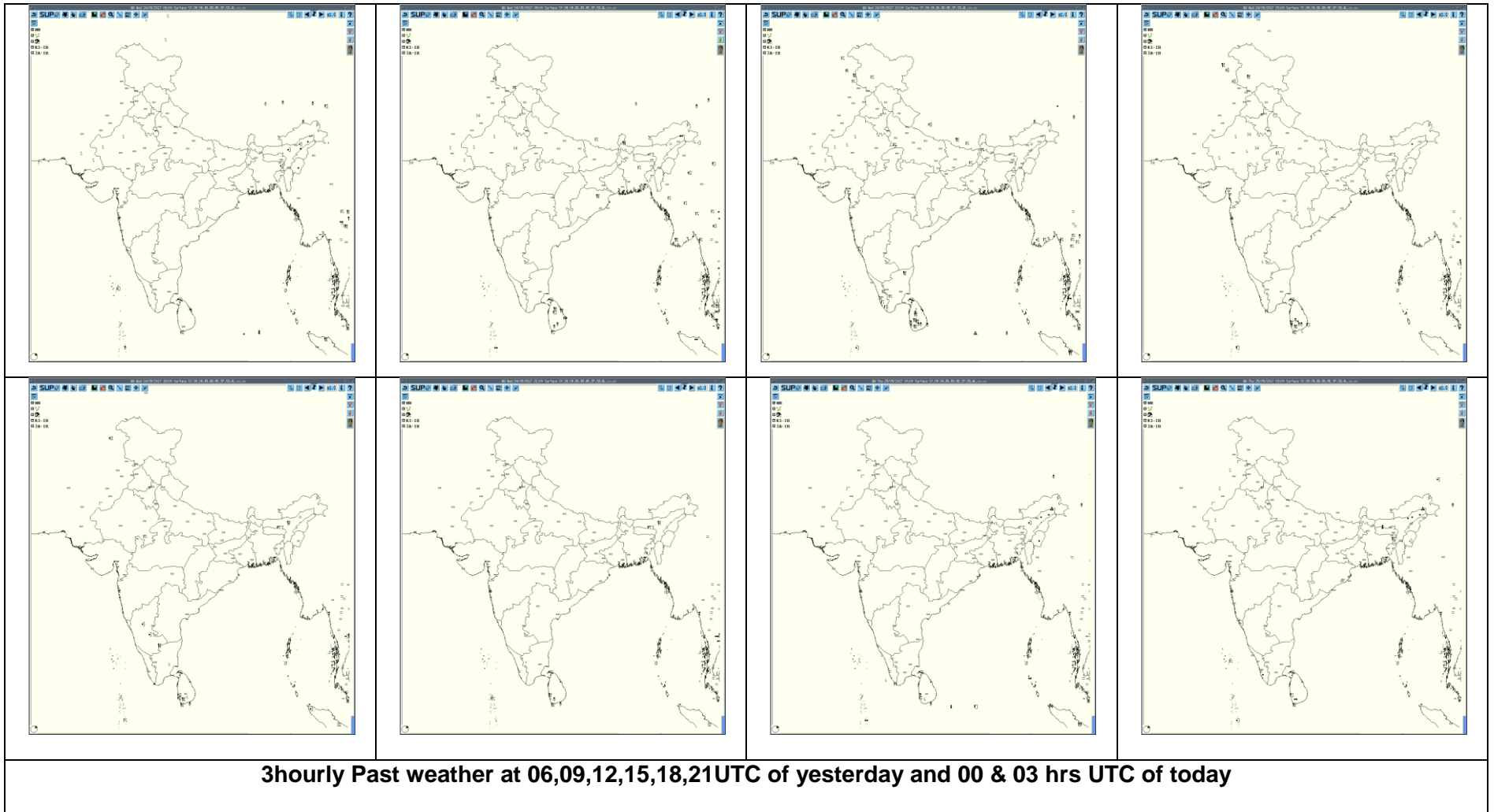
**Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today**



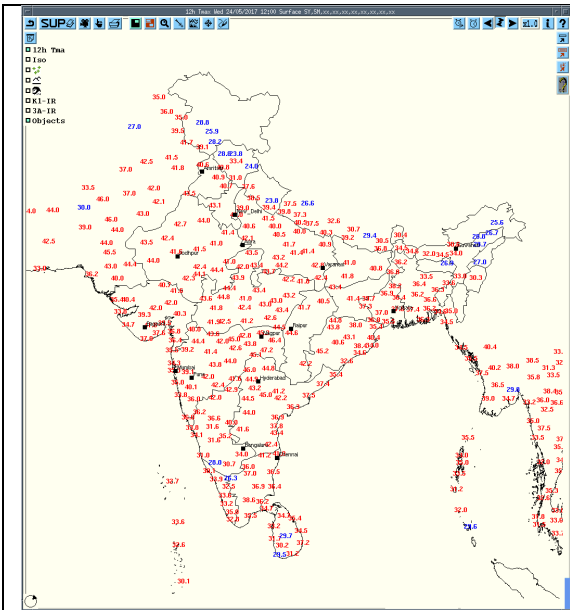
**IMR Rainfall**



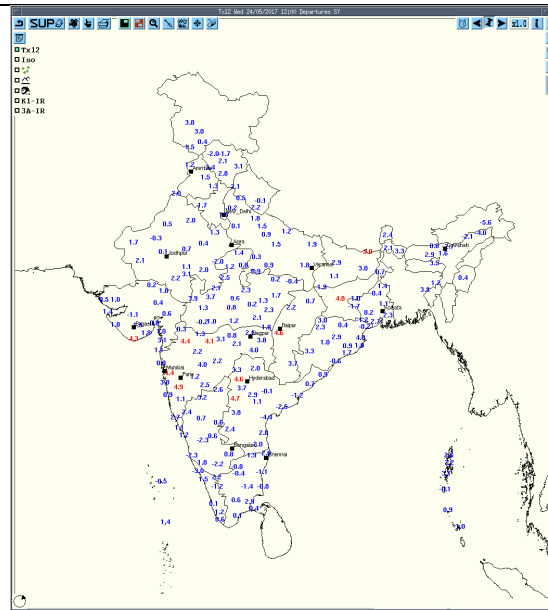
**HEM Rainfall**



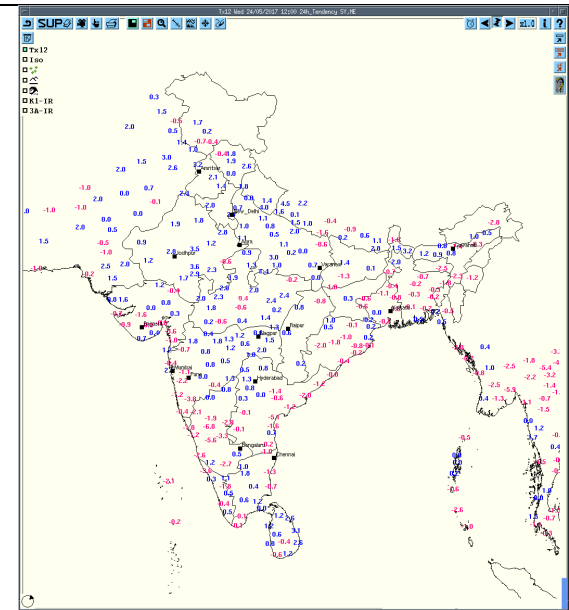
**3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today**



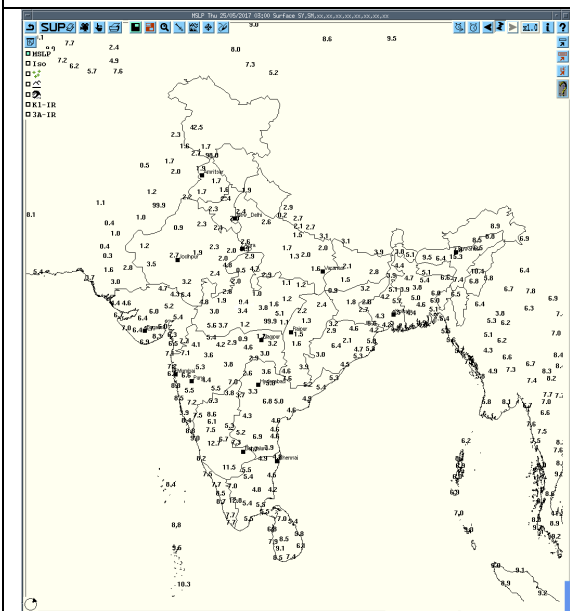
**Tmax**



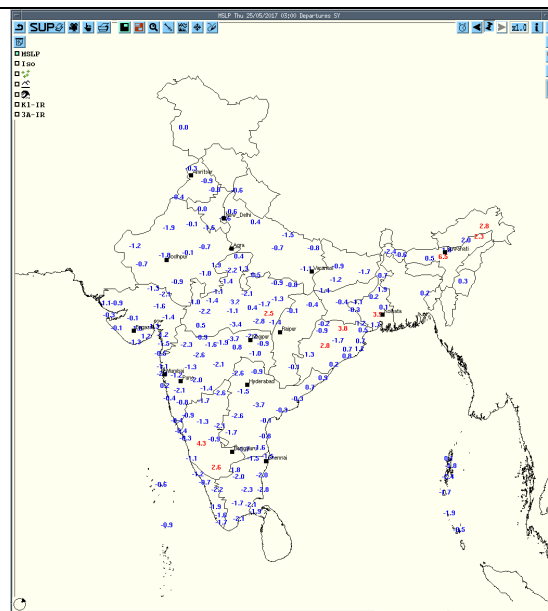
**Departure Tmax**



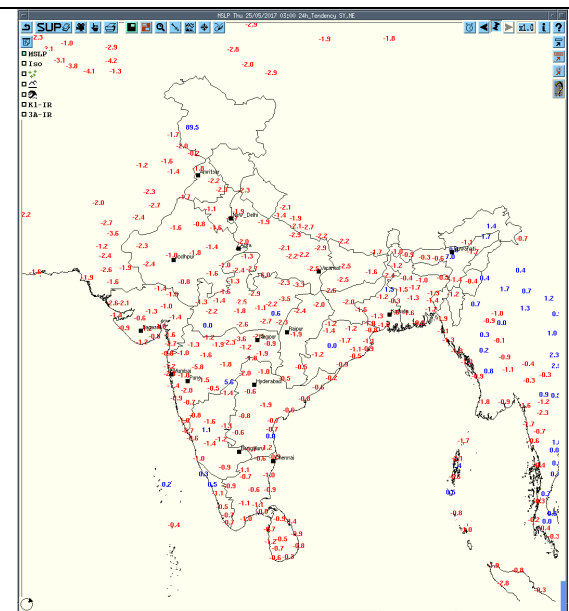
**Tendency Tmax**



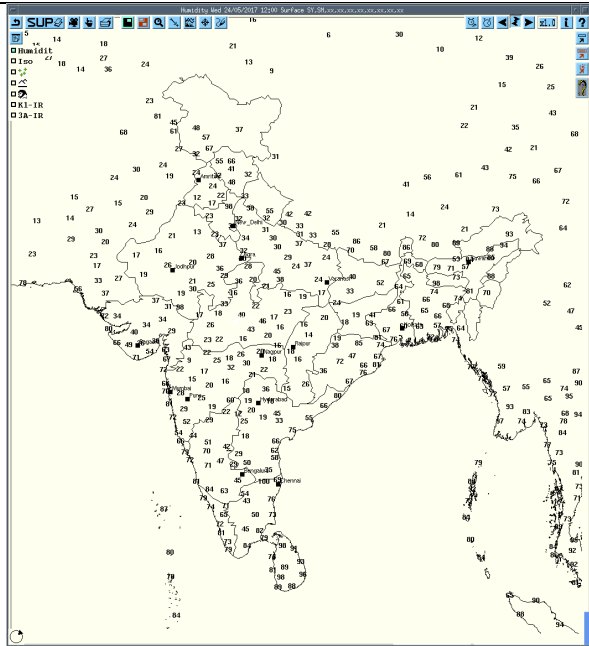
**MSLP**



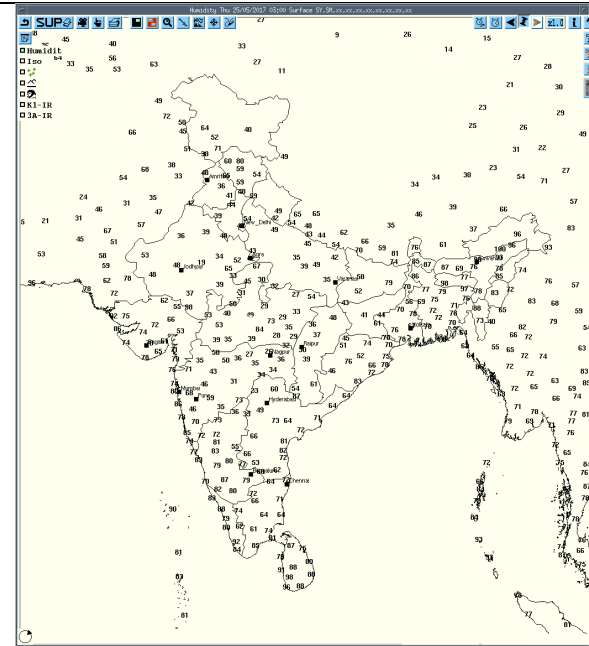
**Departure MSLP**



**Tendency MSLP**



**RH at 12UTC yesterday**



**RH at 03UTC today**

**Realised past 24hrs TS/SQ/HS Data (reported at 0300UTC of the day):**

<b>Realized weather past 24hours (Based on SYNERGIE Products)</b>					
<b>Date</b>	<b>Time of Reporting</b>	<b>Name of Station Reporting</b>	<b>Region</b>	<b>STATE</b>	<b>Weather Event</b>
24-05-17	0600UTC	Aminidivi	South India	Lakshadweep	Thunderstorm
24-05-17	0900UTC	Bhaderwah,	NW India	J & K	Thunderstorm
		Gangtok	East India	Sikkim	Thunderstorm
		Keonjhar	East India	Odisha	Thunderstorm
24-05-17	1200UTC	Pahalgam	NW India	J & K	Thunderstorm
		Agra	NW India	Uttar Pradesh	Thunderstorm
		Bhagalpur	East India	Bihar	Thunderstorm
		Bagdogra	East India	West Bengal	Thunderstorm
		Vellore, Kodaikanal	South India	Tamilnadu	Thunderstorm
		Palakkad, Punalur, Kottayam	South India	Kerala	Thunderstorm
24-05-17	1500UTC	Srinagar	NW India	J & K	Thunderstorm
		Ajmer, Kota	NW India	Rajasthan	Lightning
		Gwalior	Central India	Madhya Pradesh	Thunderstorm
		Chitradurga, Bangalore	South India	Karnataka	Thunderstorm
		Trivandrum	South India	Kerala	Thunderstorm
24-05-17	1800UTC	Kota	NW India	Rajasthan	Thunderstorm
		Guwahati, Tezpur	NE India	Assam	Thunderstorm
		Bangalore	South India	Karnataka	Thunderstorm
		Thiruchirapalli	South India	Tamilnadu	Lightning
24-05-17	2100UTC	Guwahati, Tezpur	NE India	Assam	Thunderstorm
25-05-17	0000UTC	Bajpe	South India	Karnataka	Lightning
		Kannur	South India	Karnataka	Lightning
		Trivandrum	South India	Kerala	Thunderstorm
25-05-17	0300 UTC	Aminidivi	South India	Lakshadweep	Thunderstorm

Realised TS/HS/SQ during past 24 hours ending at 0300UTC of today(received from RMCs/MCs)						
Name of Station Reporting	Region	STATE	Weather Event (TS/Hail/Squall)	Date	Time of Commencement (IST)	Time of end (IST)
Srinagar	Northwest India	Jammu & Kashmir	Thunderstorm	24-05-17	2010	2110
Pahalgam	Northwest India	Jammu & Kashmir	Thunderstorm	24-05-17	1620	1730
Kupwara	Northwest India	Jammu & Kashmir	Thunderstorm	24-05-17	1815	1845
Batote	Northwest India	Jammu & Kashmir	Thunderstorm	24-05-17	1445	1530
Bhaderwah	Northwest India	Jammu & Kashmir	Thunderstorm	24-05-17	1250	1440
Kota	Northwest India	Rajasthan	Thunderstorm	24-05-17	2000 2040 2300	2030 2100 2320
Pilani	Northwest India	Rajasthan	Thunderstorm	25-05-17	0545	0615
Sawai Madhopur	Northwest India	Rajasthan	Thunderstorm	24-05-17	1730	1830
Sikar	Northwest India	Rajasthan	Thunderstorm	24-05-17	1730	1900
Vanasthali	Northwest India	Rajasthan	Thunderstorm	24-05-17	1430	1600
Gwalior	Central India	Madhya Pradesh	Thunderstorm	24-05-17	1915	2035
Gangtok	East India	Sikkim	Thunderstorm	24-05-17	1340	1530
Tadong	East India	Sikkim	Thunderstorm	24-05-17	1325	1420
Digha	East India	West Bengal	Lightning	24-05-17	1855	1950
Bhagalpur	East India	Bihar	TS/ Lightning	24-05-17	1630 1720	1640 1730
Balasore	East India	Odisha	Thunderstorm	24-05-17	1714	1930
Keonjhar	East India	Odisha	Thunderstorm	24-05-17	1335	1620
Port Blair	East India	Odisha	Lightning	24-05-17	1845 2245	1915 2400
Port Blair	East India	Odisha	Lightning	25-05-17	0000	0145
Jorhat	Northeast India	Assam	Thunderstorm	25-05-17	0100	0630
Guwahati	Northeast India	Assam	Thunderstorm	24-05-17	1925	0225
Dhubri	Northeast India	Assam	Thunderstorm	25-05-17	0500	0615
Tezpur	Northeast India	Assam	Thunderstorm	24-05-17	2245 2115	2340 2200
Tezpur	Northeast India	Assam	Thunderstorm	25-05-17	0115	0330
N/Lakhimpur	Northeast India	Assam	Thunderstorm	25-05-17	0300	0530
Silchar	Northeast India	Assam	Thunderstorm	24-05-17	0830	0950
Imphal	Northeast India	Manipur	Thunderstorm	24-05-17	0900	0920
Dharmapuri	South India	Tamilnadu	Thunderstorm	24-05-17	2000	2200
Bengaluru City	South India	Karnataka	Thunderstorm	24-05-17	2310	2340
AMS HAL Bengaluru	South India	Karnataka	Thunderstorm	24-05-17	2210	2400
Yelahanka IAF	South India	Karnataka	Thunderstorm	24-05-17	1910 2100	2000 2300
KIAL Bengaluru	South India	Karnataka	Thunderstorm	24-05-17	2245	2320
Thiruvananthapuram AP	South India	Kerala	Thunderstorm	24-05-17	1955	2145

## Past 24 hours DWR Report:

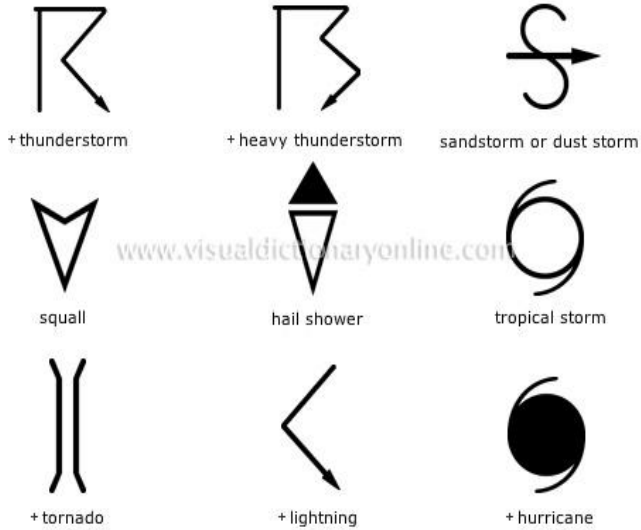
Radars Station name	Date	Time interval of observation (UTC)	Organization of the cells (Isolated single cells/multiple cells/ convective regions/ squall lines) with height of 20 dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
Agartala	25/05/17	240230 - 240730	Multiple cells formed one after another with Maximum Height <b>15 km</b> and maximum reflectivity <b>41.5 dBZ at 0440 UTC</b>	Formed 250 km N of DWR and moved NE-wards at around 26 Kmph	Cells dissipated at 0730 UTC over E- Meghalaya	N/A	N/A
		240650 - 240920	Multiple cells with Maximum Height <b>14 km</b> and maximum reflectivity <b>47.5 dBZ at 0822 UTC</b>	Formed 140 km NW of DWR and moved SE-wards at around 21 Kmph	Cells dissipated at 0920 UTC over North Tripura	N/A	N/A
		241700 - 250350	Multiple cells with Maximum Height <b>14 km</b> and maximum reflectivity <b>47.0 dBZ at 2100 UTC</b>	Formed 250 Kmph NNW of DWR and moved E-wards at around 23 Kmph	Cells dissipated at 0350 UTC over East Meghalaya	N/A	N/A
Jaipur	25/05/17	0710-1732 UTC	multiple cells with average height of 8.0 km maximum reflectivity 56.5 dBZ	Cell develop 0710 to 1732 UTC of 24/05/17 towards SW,NNW of Jaipur and movement SE at speed 30-36 km/hr	Cells continuous forming from 0710UTC NNW of Jaipur and maximum reflectivity during 0952-1502 UTC and died down at 1732UTC	Moderate Thunderstorm at a few places and isolated places	Nagaur, Sikar, Jaipur, dausa, alwar, bharatpur, karauli tonk, Kota, sawaimadhopur, Jhalawar, Ajmer districts
Lucknow	25/05/17	Nil	Nil	Nil	Nil	Nil	Nil



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 20dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
DWR Machilipatnam	03Z of 24/05/17 to 03Z of 25/05/17	0841 to 1301 UTC	Multiple cells average height of 9.5 km with maximum reflectivity of 60 dBZ	W (188km) and moving SW ly direction with average speed of 15 kmph	Cell started forming at 0841UTC, at W (188km) from Radar the maximum reflectivity during 0841 to 1251 UTC and died down at 1301UTC	Possibility of Thunder storm with Hail and rain with light wind.	Prakasam District
	03Z of 24/05/17 to 03Z of 25/05/17	1201 to 1311 UTC	Multiple cells average height of 10 km with maximum reflectivity of 58 dBZ	NW (195km) and moving SE ly direction with average speed of 20 kmph	Cell started forming at 1201UTC, at NW (195km) from Radar the maximum reflectivity during 1201 to 1301 UTC and died down at 1311UTC	Possibility of Thunder storm and rain with winds	Mahabubabad District
	03Z of 24/05/17 to 03Z of 25/05/17	0921 to 1041 UTC	Multiple cells average height of 10.5 km with maximum reflectivity of 60 dBZ	NE(200km) and moving SEly direction with average speed of 18 kmph	Cell started forming at 0921UTC, at NE (200km) from Radar the maximum reflectivity during 0921 to 1031 UTC and died down at 1041UTC	Possibility of Thunder storm, Hail and rain with light winds	Visakhapatnam District
	03Z of 24/05/17 to 03Z of 25/05/17	1031 to 1221 UTC	Multiple cells average height of 10.5 km with maximum reflectivity of 62 dBZ	NE(250km) and moving SWly direction with average speed of 13 kmph	Cell started forming at 1031UTC, at NE (250km) from Radar the maximum reflectivity during 1031 to 1211 UTC and died down at 1221UTC	Possibility of Thunder storm and Hail with rain and moderate winds	Visakhapatnam District

Radar Station name	Date	Time interval of observation (UTC)	Organization of the cells	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
NAGPUR	24/05/17	0902-0942	Single	248 km NE	Max Z=31 ht of cloud=6.0-9.3km Max Z=40 ht of cloud=2.2-7.2km Max Z=26.5 ht of cloud=4.0-5.8km	Nil.	Isolated places in Betul distt.
		0952—1140	Single	109 km NE			
1940-2152	Single	187km NE					
	25/05/17	0002-0252	Nil				

Radar Station Name	Date	Time Interval of Observation (UTC)	Formation w.r.t. radar station and Direction of movement	Remarks	Associated Severe Weather if any	Districts affected
Kolkata	24-05-2017	0301 – 0921 UTC	NIL	NO SIGNIFICANT ECHO	NIL	NIL
		0921 - 1531 UTC	WSW (233 km) moving in E-ly / ESE-ly direction with speed of 51.1 kmph	Formation started in WSW on 0931 UTC at a distance of 233 km from Radar. Initially single cell which developed in extended multi celled system. Matured and dissipated at 1531 UTC in SW at a distance of 146 km from Radar.	Hailstorm / Squall/ Thunderstorm / Rain	N/A
		1531 - 2351 UTC	NIL	NO SIGNIFICANT ECHO	NIL	NIL
	25-05-2017	0001 - 0301 UTC	NIL	NO SIGNIFICANT ECHO	NIL	NIL
	Date (Of Issuing the Bulletin)	Time interval of observation (UTC)	Formation w.r.t. Radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
Srinagar	25/05/2017	24 MAY 03Z to 25May 03Z(24hrs)	1. Isolated cells developed at NW and SW direction and moved E and direction 2. Multiple cells developed in SW and S and moved further SSE wards	Thunder storm observed at many places with rain at isolated places	10.9 mm rain at Batote	All hilly districts of J and k



∞	haze
☁	smoke
☁	dust or sand storm
☁	fog
☁	drizzle
☁	rain
☁	snow
☁	showers
☁	hail
☁	thunderstorm

**Weather Symbols**