



India Meteorological Department
FDP STORM Bulletin No. 06 (11-03-2017)

S. No.	STORM area of interest (All India)	
1.	CURRENT SYNOPTIC SITUATION at 03UTC of 11-03- 2017	<p>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 3.1km above mean sea level with the trough aloft in mid-tropospheric westerlies roughly along longitude 73.0° E and north of latitude 30.0° N. The induced upper air cyclonic circulation over Haryana & adjoining West Uttar Pradesh and extending upto 1.5 km above mean sea level persists. A trough in westerlies runs from northwest Rajasthan to southwest Madhya Pradesh and extends upto 0.9 KM above mean sea level. An upper air cyclonic circulation lies over eastern parts of Bihar & adjoining Sub Himalayan west Bengal and extends upto 0.9 KM above mean sea level. A trough extends from the above system to Telangana across Gangetic West Bengal, Odisha & south Chhattisgarh and extends upto 0.9 KM above mean sea level. The upper air cyclonic circulation over Telangana & adjoining North Interior Karnataka has become less marked. However, the trough from cyclonic circulation over Telangana & adjoining North Interior Karnataka to south Tamilnadu, now seen as a wind discontinuity from Telangana to south Tamilnadu across Rayalseema at 0.9 km above mean sea level. The upper air cyclonic circulation over north Chhattisgarh & neighbourhood has become less marked. The upper air cyclonic circulation over southwest Rajasthan & neighbourhood has become less marked.</p> <p>SATELLITE OBSERVATIONS during past 24hrs and current observation (Based on 0300 UTC Imagery of INSAT-3D): Clouds (based on 0300UTC imagery): <u>WESTERN DISTURBANCE (WD) :-</u> Scattered multi-layered clouds over J & K, Himachal Pradesh, Uttrakhand and Uttar Pradesh in association with western disturbance over the area. Scattered Low/Medium clouds over NE Haryana. Scattered Low/Medium clouds with embedded isolated weak to moderate convection over south NW Bihar, E Meghalaya S Assam Nagaland, Manipur, Mizoram, Tripura, Scattered Low/Medium clouds over North Central Andhra Pradesh, Tamilnadu and Kerala. Arabian Sea:- No significant clouds over the region. Bay Of Bengal & Andaman Sea:- Scattered Low/Medium clouds with embedded isolated moderate to intense convection over N Bay.</p> <p>RADAR observation during past 24 hrs and current observation based on 0600UTC Convection appears to be in progress over Western Uttar Pradesh, Gangetic West Bengal, Coastal Andhra Pradesh,</p>

		<p>Mizoram and Tripura</p> <p>Environmental condition(dust etc) and its forecast based on 00UTC of date: No significant dust concentration observed over Arabian Peninsula and west Rajasthan.</p>
2.	<p>NWP MODEL GUIDANCE</p>	<p>NCMRWF (NCUM Forecasts based on 00UTC of the day):</p> <p>1. Weather Systems: Feeble trough in forecasts Day-0 to Day-5 at MSLP over J&K. Wind discontinuity only in Day-2-4: at 925 extends WE & NS from parts of AP, Maharashtra, Odisha, Chhattisgarh and parts of Bihar. WD over J&K in Day-0 to Day-1;</p> <p>2. Location of jet and jet core at 500hPa:-500hPa Jet core (>60kt) Over Rajasthan, Gujarat and MP in Day0 to Day-1, extending to large parts of central & eastern India. Large parts of eastern and NE states in Day-1 (core winds exceed 100Kt). Weak in Day2 to Day4</p> <p>3. Convergence at 850 hPa:- Weak noisy low level convergence at several places over India</p> <p>4. Low level Vorticity:-Positive Vorticity (>15 x 10⁻⁵/s) Over isolated locations over eastern and NE in Day 0 to Day 2. Strong along 75E over peninsula during 18-00UTC on Day-3 to 5.</p> <p>5. Showalter Index: -3 to -4[Very Unstable] Day-0-1: Parts of Bangladesh, Meghalaya, Tripura, Mizoram region Day-1-2: parts of Arunachal and TN. Day-3- 4: Parts of TN extending to AP and Karnataka . NS orientation, covering Maharashtra and MP. Day-4-5: NS orientation, Central peninsula covering parts of Telengana, Karnataka, Maharashtra, MP, Chhattisgarh and Odisha (on day5)</p> <p>6. K-Index:>35[Very Unstable thunderstorm likely]:- Day-0-1: Parts of Bangladesh, Meghalaya, Tripura, Mizoram region Day-1-2: parts of Arunachal and TN. Day-3- 4: Parts of TN extending to AP and Karnataka. NS orientation, covering Maharashtra and MP. Day-4-5: NS orientation, Central peninsula covering parts of Telengana, Karnataka, Maharashtra, MP, Chhattisgarh and Odisha (on day5)</p> <p>7. Spatial distribution of TTI TTI >50 [Scattered Numerous Thunderstorms] : Large parts of North and NW India in Day-0 to Day-1. Over Assam and Arunachal in Day-1 and Day-2. Day-2-3: HP Utrakhhand TTI >44 [Scattered Numerous Thunderstorms] : Day-4-5: NS orientation, Central peninsula covering parts of Telengana, Karnataka, Maharashtra, MP, Chhattisgarh and Odisha (on day5)</p> <p>8. Rainfall and thunder storm activity: - Day-0 -1: (>2cm/day) Parts of Utrakhhand. Parts of eastern and NE India (highest >8cm/day over Mizoram) Day-1-2: (>2cm/day) Manipur, Mizoram and Arunachal. (highest >4cm/day) Day-2-3: (>2cm/day)parts of Arunachal. Day4-5: TN, Kerala due to easterly wave</p> <p>IMD GFS(T1534) based on 00 UTC of the day:-</p> <p>1. Weather systems:- The CYCIR at 850 hPa over east UP and adjoining areas moved north-eastwards. A feeble trough extends from Gangetic West Bengal to Tamilnadu on Day-1. A feeble CYCIR would develop over Odisha and adjoining areas from Day-3 to Day-5. Anticyclonic flow over Bay of Bengal persists during next 5 days. Contour at 500 hPa shows the WD over the northern parts of the India moved away north-eastwards.</p>

2. Location of jet and jet core at 500hPa:-500hPaJetcore(>60kt):- 500hPa Jet core (>60kt): A Jet at 500 hPa persists over India along around 26 deg. N latitude during next 24 hours.

3. Spatial distribution of Low level Vorticity:- 850hPa Positive Vorticity (>12 x 10⁻¹/s): Mainly over eastern parts and NE states during next 24 hours. Over Karnataka and adjoining areas during Day-3 to Day-5 and along foothill of Himalya 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):

CAPE (> 1000): Mostly along east coast during next 4 days and over Odisha coast on Day-5.

CIN (50-150): Over the Gangetic plain during next 24 hours and over Odisha, AP, Telangana and Tamilnadu from Day-2 to Day-5.

5.Rainfallactivity:- 10-40 mm rainfall over extreme south peninsula during next 5 days,
20-130 mm rainfall over NE states during next 24 hours.

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

1. Weather Systems: A trough extends from Rajasthan to Andhra Pradesh at 850 hPa in the analysis field. A feeble trough extends from Gangetic West Bengal to Andhra Pradesh on Day-1. Anticyclonic flow over Bay of Bengal and Arabian Sea persists during next 3 days. Contour at 500 hPa shows that the WD over the northern parts of the India moved eastwards and an N-S trough along long. 90 deg. E on Day-1 forecasts.

2. Location of jet and jet core at 500 hPa:- 500 hPa Jet core (>60kt): A Jet at 500 hPa persists over India along around 25 deg. N latitude from Day-1 to Day-3.

3. Spatial distribution of Low level Vorticity-850 hPa Positive Vorticity (>12x10⁻¹/s): Over the most parts of India at 850 hPa during next 2 days and along foothills of Himalaya on Day-2 and Day-3.

4. Model reflectivity (Max. dBz): 5-25-35 dBz over eastern parts of India and NE states during next 24 hours and over NE states during subsequent 12 hours.

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

Total Total Index (> 50) : Above threshold value mostly over most parts of NW India and Gangetic plain during next 3 days.

K-Index (> 35): Less than threshold value over the India during next 3 days.

CAPE (> 1000): Mostly over the east coast on Day-2 & Day-3 and over Tamilnadu coast on Day-3.

CIN (50-150): More than -200 over most parts of the India during next 3 days.

5. Rainfall activity: - 20-40 mm over Bihar, and northern parts of West Bengal during next 24 hours and over Arunachal Pradesh and adjoining areas on Day-2.

20-70 over Odisha, Gangetic West Bengal and NE states during next 24 hours.

ECMWF(based on 0000 UTC of the day):

Mean sea level: No significant systems over Indian region till 15th March 2017.

Lower Level Winds (925 hpa & 850 hpa):

An upper air cyclonic circulation is seen over west Pakistan and adjoining Rajasthan on 11th, another upper air cyclonic circulation is seen over Bihar on 11th, both circulation are becoming less marked thereafter.

A trough in westerlies from Gangetic West Bengal to south Costal Andhra Pradesh across Odisha is seen on 12th March.

Another upper air cyclonic circulation is seen over north Interior Karnataka and neighbourhood on 13th march and is persisting over the same region up to 15th March.

Western Disturbance (700 hpa & 500 hpa)

A western disturbance as an upper cyclonic circulation at 700 hpa is seen over north Pakistan and adjoining Jammu & Kashmir with trough aloft at 500 hpa roughly along 74° E and north of 30° N on 11th March; on 12th March the trough runs roughly along 80° E and north of 30°, the trough is becoming less marked thereafter.

A fresh western disturbance as trough running roughly along 57° E and north of 30° N at 700 hpa is seen on 14th March; on 15th March trough running roughly along 63° E and north of 30° N; on 16th March trough running roughly along 66° E and north of 30° N.

Jet Streams (200hpa)

On 11th March Jet maxima is seen between longitude 60.0° E to 66.0° E and between latitude 30.0 ° N to 35.0° N;

On 12th March Jet maxima is seen between longitude 60.0° E to 90.0° E and between latitude 26.0 ° N to 35.0° N;

On 13th March Jet maxima is seen between longitude 88.0° E to 105.0° E and between latitude 26.0 ° N to 33.0° N.

3. **IOP ADVISORY
FOR 24Hrs**

Summary and Conclusions:

Synopsis based on synoptic conditions, NWP models and satellite imageries is as follows:

Day1 & Day2:

The low level cyclonic circulation over Chhattisgarh has become less marked, while another circulation has developed at 0.9 km over eastern parts of Bihar & adjoining Sub Himalayan West Bengal. In association with this cyclonic circulation, winds over Gangetic West Bengal and Bangladesh at 925 hPa have become more southerly, thereby pumping moisture into Eastern India. There is also wind convergence at 850 hPa over East Assam, Meghalaya and Bangladesh. A jet core is also seen at 500 hPa over central India extending from over Gujarat to Madhya Pradesh to North Chhattisgarh to Gangetic West Bengal and upto East Assam. Hence all situations are conducive to heavy to very heavy rainfall over Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura and with less intensity over Arunachal Pradesh, Sub Himalayan West Bengal, Bihar and East Uttar Pradesh.

Thunderstorms associated with squally/hail weather is also expected over coastal Andhra Pradesh, Odisha, to the east of the trough line extending from the above circulation to Telangana across Gangetic West Bengal, Odisha & south Chhattisgarh. This trough which extends as a wind discontinuity from Telangana to south Tamilnadu across Rayalseema at 0.9 km is likely to result in rainfall activity over Interior Tamil Nadu and adjoining Kerala likely to continue on day 2.

On Day 2, the cyclonic circulation over SHWB is likely to move eastwards, thereby decreasing the intensity and spread of rainfall over the East and North East Indian region.

24 hour Advisory for IOP:

- Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura
- Arunachal Pradesh, Sub Himalayan West Bengal and Sikkim
- Interior Tamil Nadu and Kerala
- Bihar, Coastal Gangetic West Bengal, Orissa
- Himachal Pradesh, Uttrakhand, East UP
- Coastal Andhra Pradesh, Jharkhand, Haryana, Punjab

48 hour Advisory for IOP:

- Assam, Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura
- Sub Himalayan West Bengal
- Interior Tamil Nadu and Kerala

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 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

Upper level winds

http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR_2017/?C=M;O=D

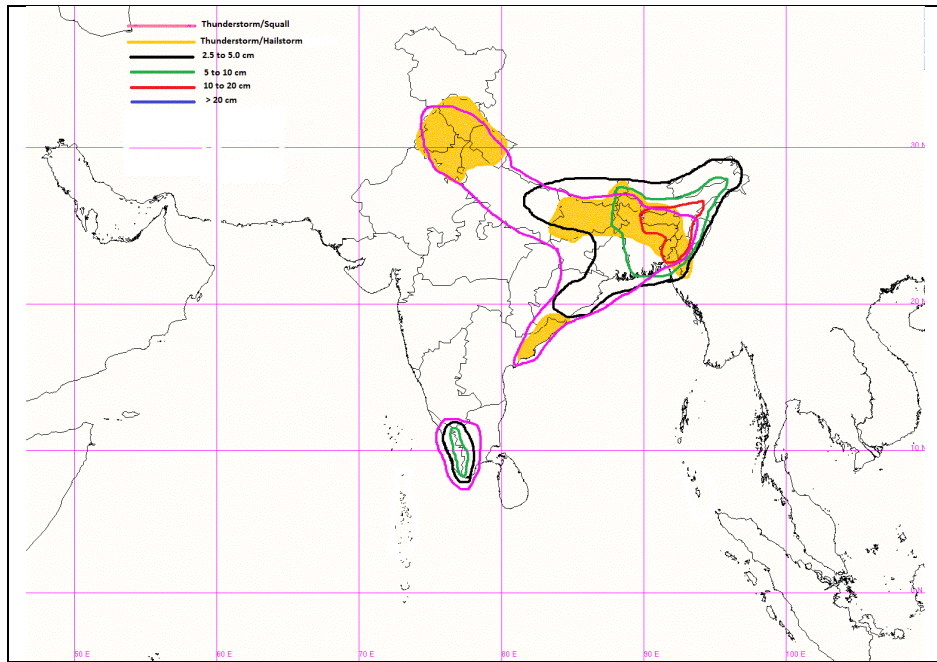
Past 24 hour HEM and IMR rainfall (upto03UTCof today)

IMR: http://satellite.imd.gov.in/img/3Ddaily_imr.jpg

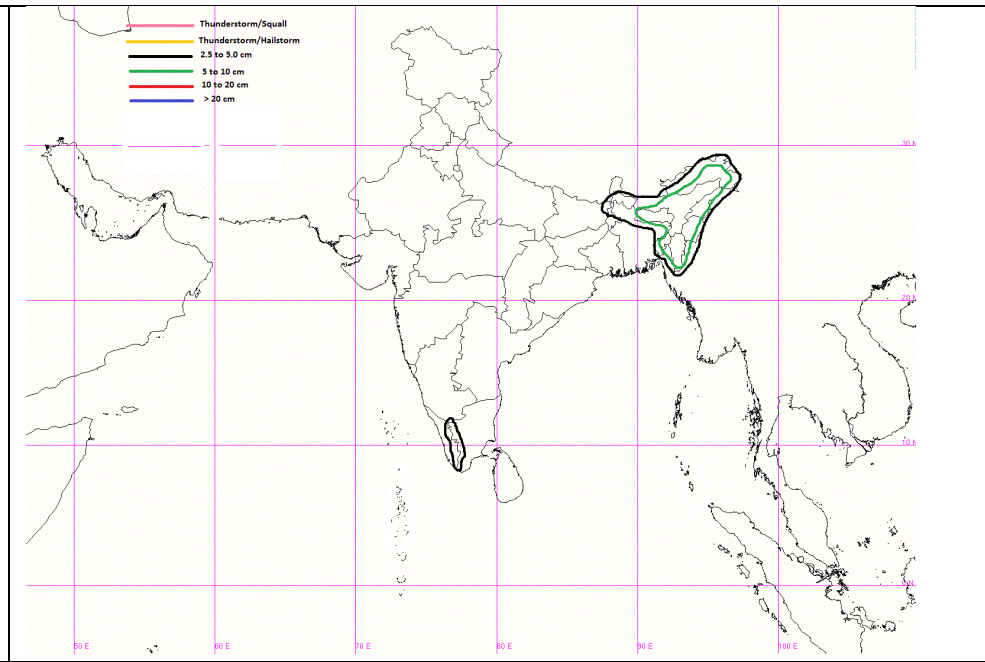
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg

For Radar images of the past 24 hours including mosaic of images:

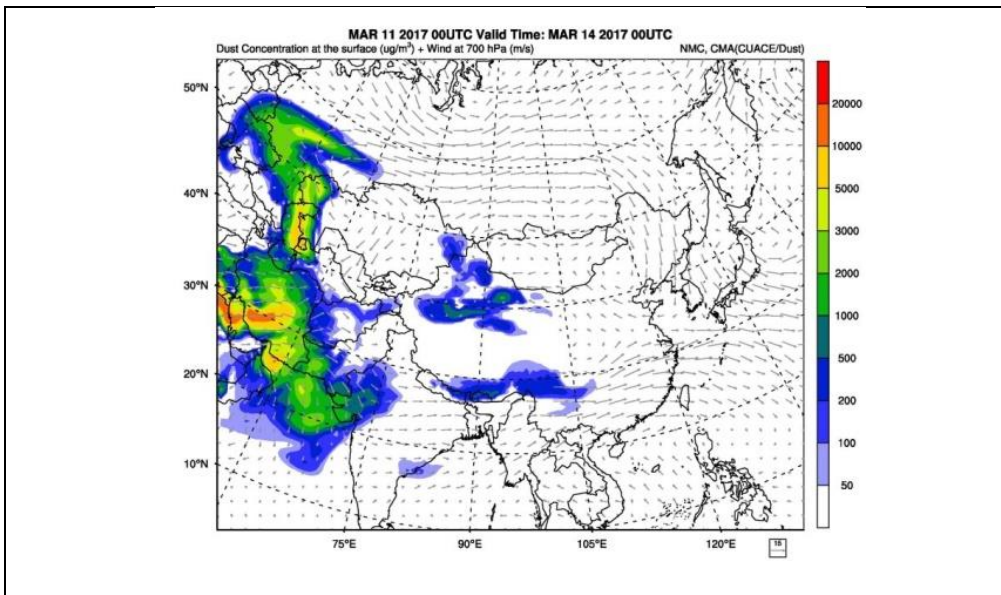
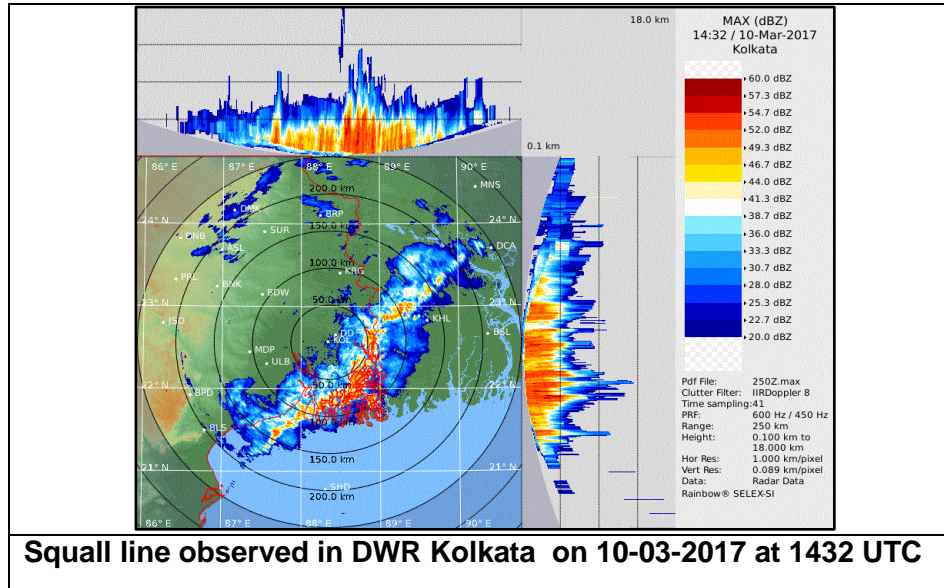
http://ddgmui.imd.gov.in/dwr_img/



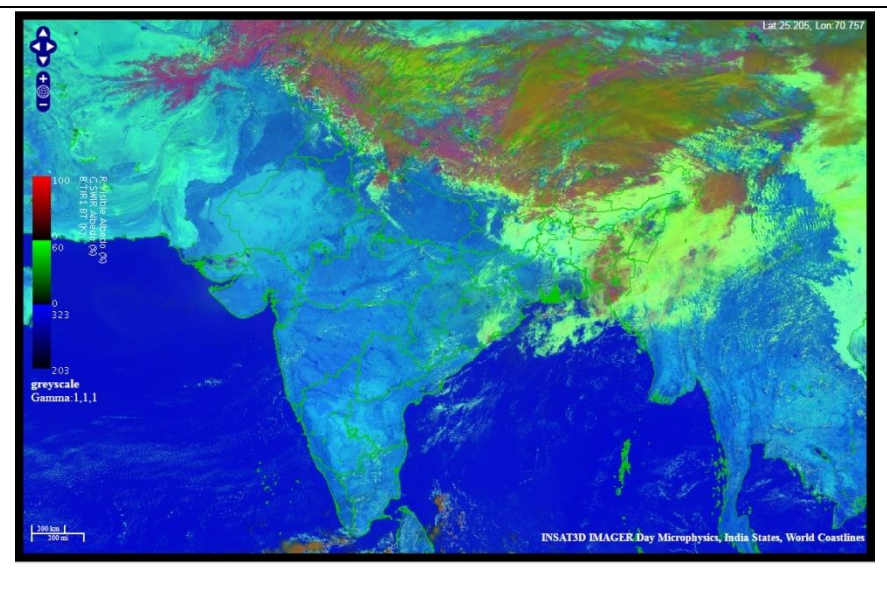
IOP Advisory for 24 hours



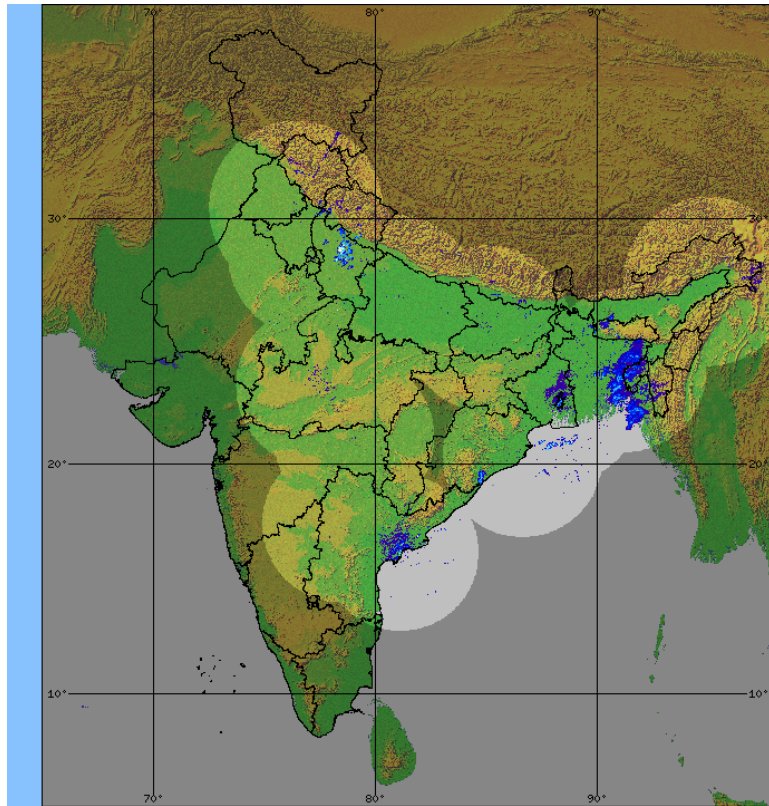
IOP Advisory for 48 hours



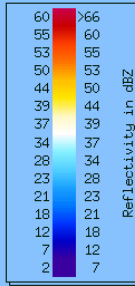
Forecast Dust Concentration for 00UTC of 14th March



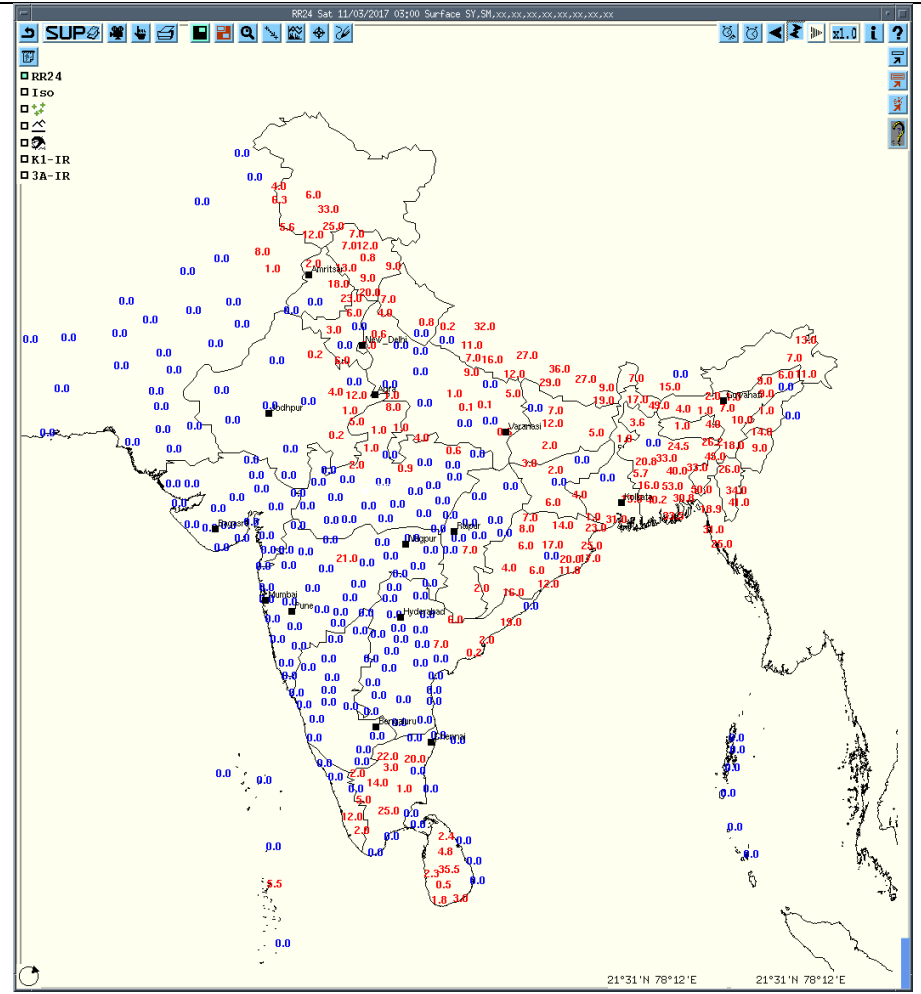
RGB Image of INSAT3D at 0530 UTC



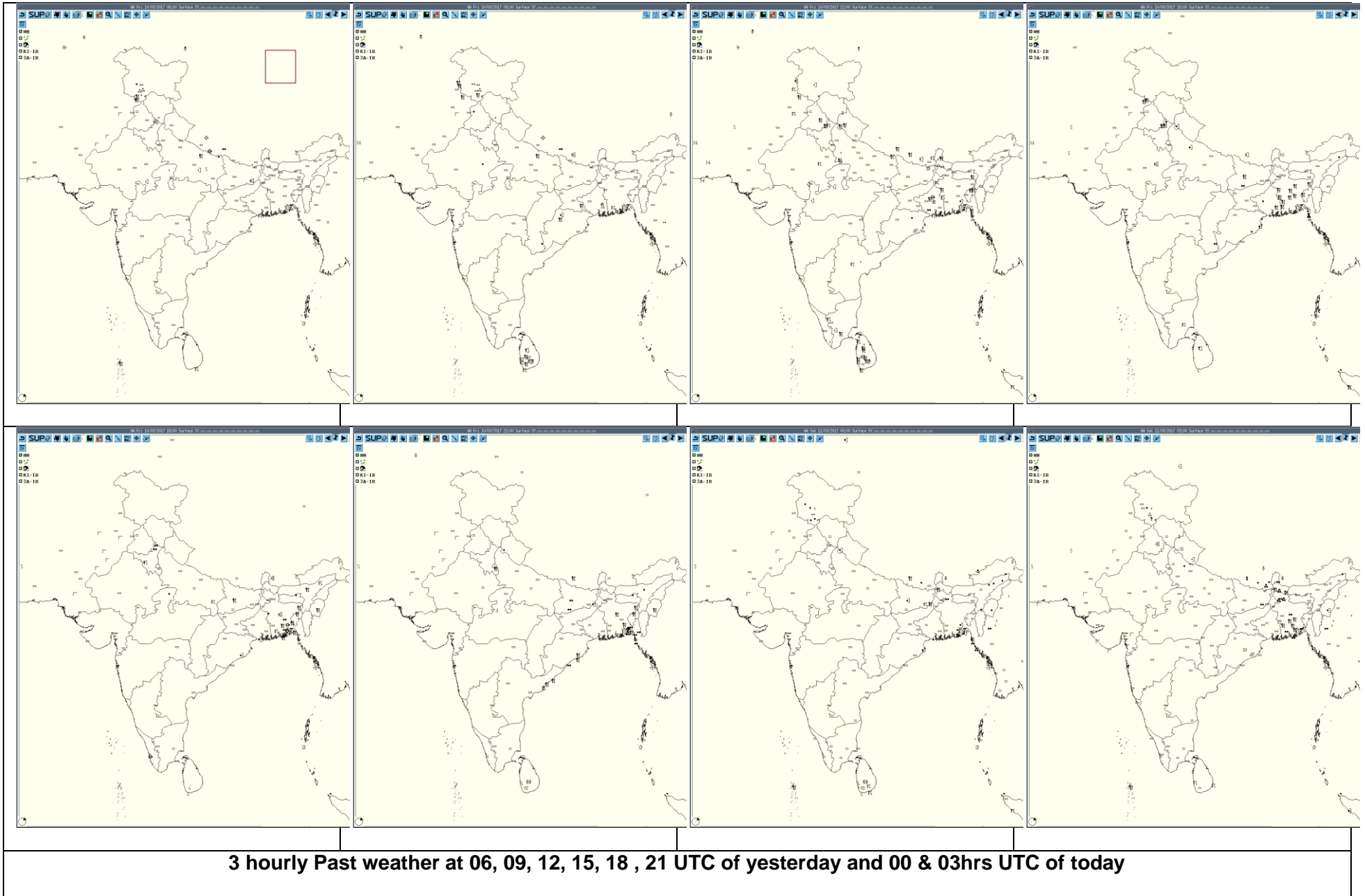
INDIA
 PPI
 COMP
 Task: IMD-C
 PRF: 300Hz
 Elevation:0.2
 Max Range:1695 km
10:30:16
11 MAR 2017 IST

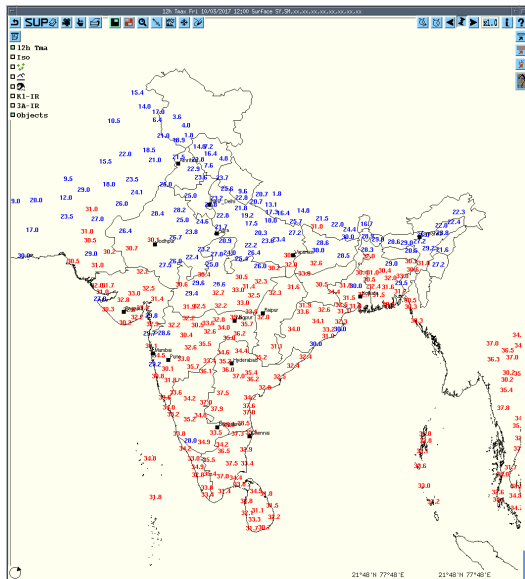


DWR Composite at 1110 hrs IST of today high lighting regions of convection

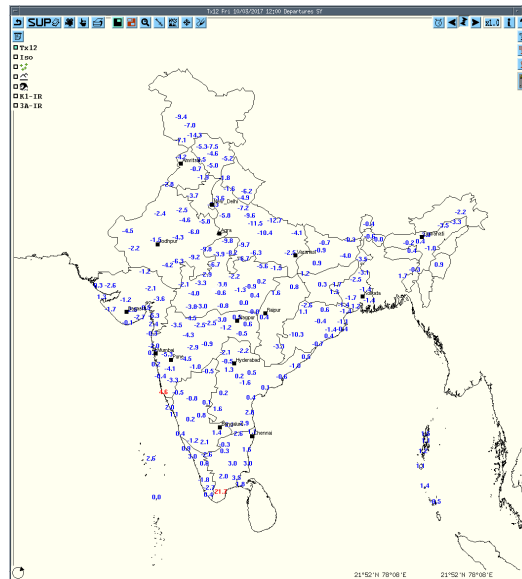


Accumulated 24 Hour rainfall (in red) recorded at 0300 UTC of today

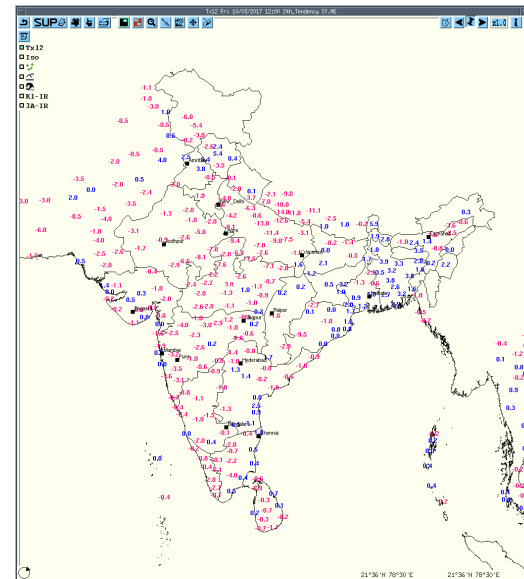




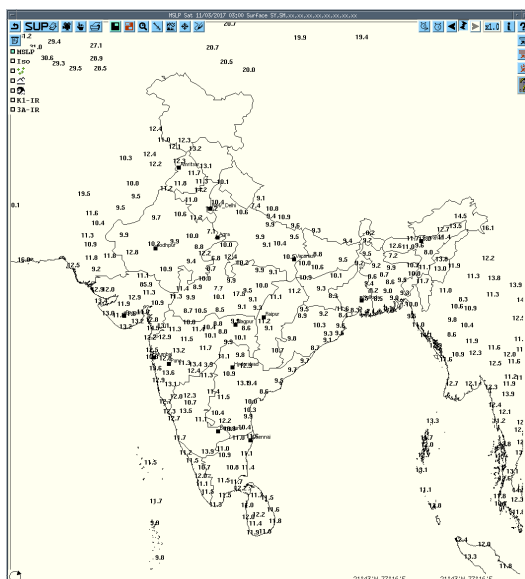
Tmax



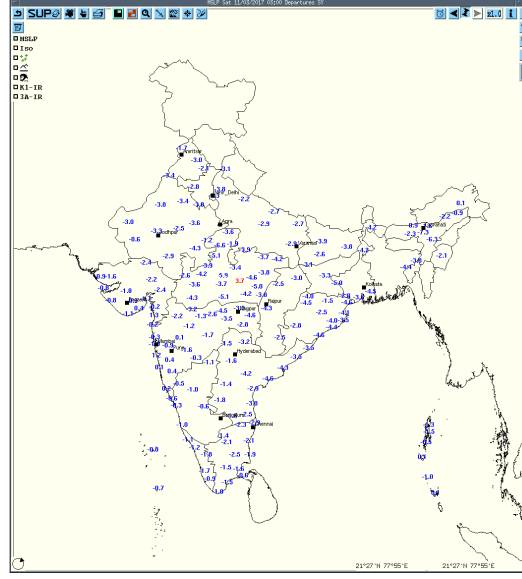
Departure Tmax



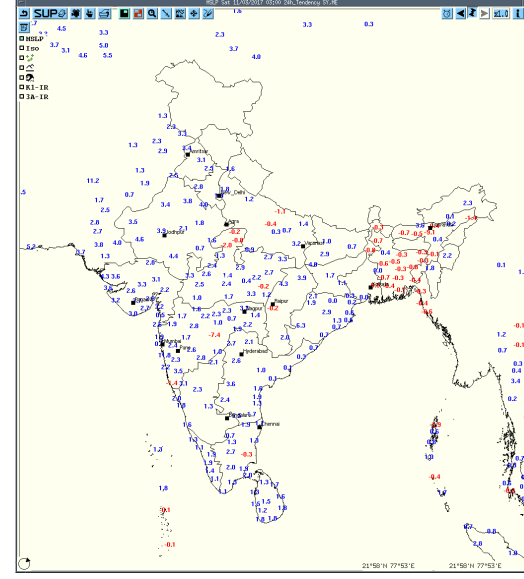
Tendency Tmax



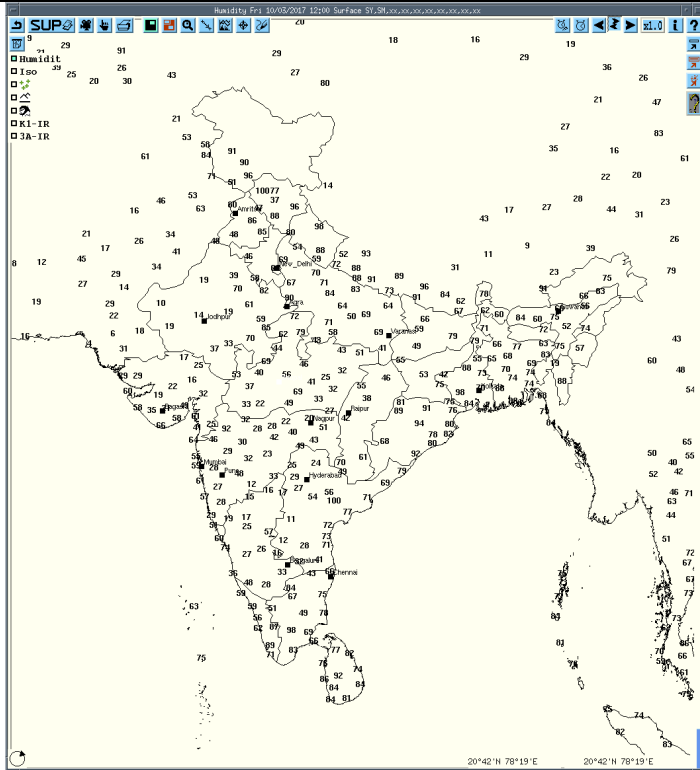
MSLP



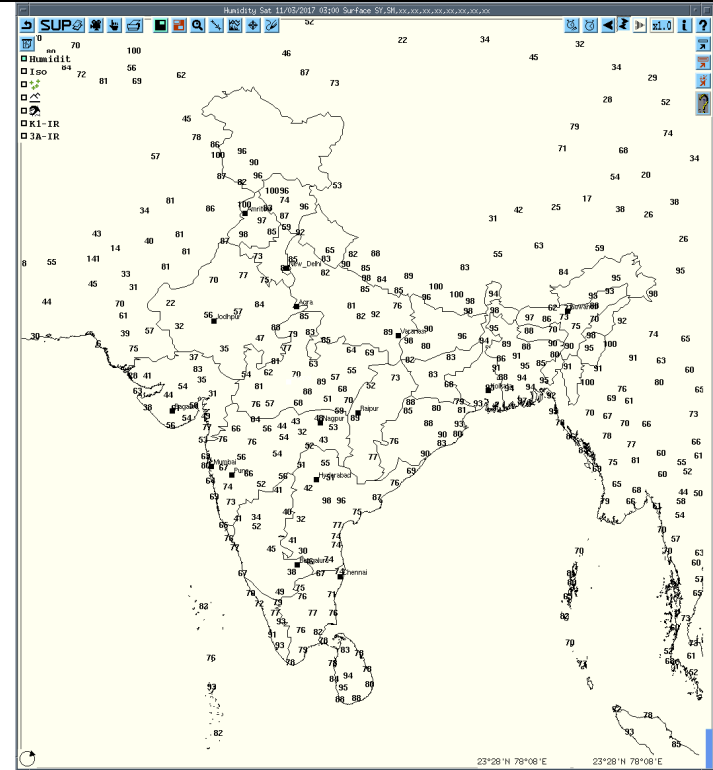
Departure MSLP



Tendency MSLP



RH 12UTC yesterday



RH 03UTC today

Realized weather past 24 hours

Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
10-03-17	0600 UTC	Katra	NW India	Jammu & Kashmir	Thunderstorm
		Jammu	NW India	Jammu & Kashmir	Thunderstorm
		Chandigarh	NW India	Haryana	Thunderstorm
		Bahraich	NW India	Uttar Pradesh	Thunderstorm
		Bhagalpur	East India	Bihar	Thunderstorm
10-03-17	0900 UTC	Batote	NW India	Jammu & Kashmir	Thunderstorm
		Bahraich	NW India	Uttar Pradesh	Thunderstorm
		Jamshedpur	East India	Jharkhand	Thunderstorm
		Sambhalpur	East India	Odisha	Thunderstorm
10-03-17	1200 UTC	Ludhiana	NW India	Punjab	Thunderstorm
		Patiala	NW India	Punjab	Thunderstorm
		Ambala	NW India	Haryana	Thunderstorm
		Dehradun	NW India	Uttarakhand	Thunderstorm
		Tehri	NW India	Uttarakhand	Thunderstorm
		Agra	NW India	Uttar Pradesh	Thunderstorm
		Jaipur	NW India	Rajasthan	Thunderstorm
		Malda	East India	West Bengal	Thunderstorm
		Panagarh	East India	West Bengal	Thunderstorm
		Burdhaman	East India	West Bengal	Thunderstorm
		Gangtok	East India	Sikkim	Thunderstorm
		Shillong	NE India	Meghalaya	Thunderstorm
		Kailashsahar	NE India	Tripura	Thunderstorm
		Nalgonda	South India	Andhra Pradesh	Thunderstorm
		Coonoor	South India	Tamil Nadu	Thunderstorm
		Madurai	South India	Tamil Nadu	Thunderstorm
10-03-17	1500UTC	Jammu	NW India	Jammu & Kashmir	Thunderstorm
		Patiala	NW India	Punjab	Thunderstorm

		Ambala	NW India	Haryana	Thunderstorm
		Jaipur	NW India	Rajasthan	Thunderstorm
		Patna	East India	Bihar	Thunderstorm
		Agartala	NE India	Tripura	Thunderstorm
		Tiruchchirappalli	South India	Tamil Nadu	Thunderstorm
10-03-17	1800 UTC	Hissar	NW India	Haryana	Thunderstorm
		Varanasi	NW India	Uttar Pradesh	Thunderstorm
		Patna	East India	Bihar	Thunderstorm
		Tejpur	NE India	Assam	Thunderstorm
		North Lakhimpur	NE India	Assam	Thunderstorm
		Imphal	NE India	Manipur	Thunderstorm
10-03-17	2100 UTC	New Delhi (SFD)	NW India	Delhi	Thunderstorm
		Imphal	NE India	Manipur	Thunderstorm
		Bhubaneswar	East India	Odisha	Thunderstorm
		Vishakhapatnam	South India	Andhra Pradesh	Thunderstorm
		Tuni	South India	Andhra Pradesh	Thunderstorm
		Kakinada	South India	Andhra Pradesh	Thunderstorm
11-03-17	0000 UTC	Bagdogra	East India	West Bengal	Thunderstorm
		Bhagalpur	East India	Bihar	Thunderstorm
		Purnea	East India	Bihar	Thunderstorm
11-03-17	0300 UTC	Nil	Nil	Nil	Nil




Name of Station Reporting	Region	STATE	Weather Event	Date	Time of Commencement (IST)	Time of end (IST)
Jammu	Northwest India	Jammu & Kashmir	TSRA		0930 1745	1250 2050
Batote	Northwest India	Jammu & Kashmir	TSRA		1240	1500
Katra	Northwest India	Jammu & Kashmir	TSRA		0830	1310
Bhaderwah	Northwest India	Jammu & Kashmir	TSRA		1300	1600
Hissar	Northwest India	Haryana	TS	10-03-17	2055	0015
Ambala	Northwest India	Haryana	TS	10-03-17	1940	2100
Amritsar	Northwest India	Punjab	TS	10-03-17	1430 1815	1615, 2110
Patiala	Northwest India	Punjab	TS	10-03-17	1040 1640 1845	1115 1800 2200
Patiala	Northwest India	Punjab	Hail(Diameter-0.2 cm)	10-03-17	1655	1700
Ludhiana	Northwest India	Punjab	TS	10-03-17	1145	1600
New Delhi (Safdarjung)	Northwest India	Delhi	TSRA	10-03-17	1535	1610
New Delhi (Safdarjung)	Northwest India	Delhi	TSRA	11-03-17	0110	0650
New Delhi (Palam)	Northwest India	Delhi	TSRA	11-03-17	0128	0430
Gorakhpur	Northwest India	Uttar Pradesh	TS	10-03-17	1140	1230
Varanasi AP	Northwest India	Uttar Pradesh	TS	10-03-17	1100	0130
BHU	Northwest India	Uttar Pradesh	TS	10-03-17	1030	1100
Churk	Northwest India	Uttar Pradesh	TS	10-03-17	1115	1125
Bahraich	Northwest India	Uttar Pradesh	TS	10-03-17	0830	1440
Kanpur City	Northwest India	Uttar Pradesh	TS	11-03-17	0600	0700
Muzaffarnagar	Northwest India	Uttar Pradesh	TS	11-03-17	0700	0708
Jaipur	Northwest India	Rajasthan	TSRA	10-03-17	1415 1755 1915	1530 1850 1945
Pilani	Northwest India	Rajasthan	TS	10-03-17	1315	1430
MC Dehradun	Northwest India	Uttrakhand	TSRA	10-03-17	1515 2045	1730 2300
MO Tehri	Northwest India	Uttrakhand	TSRA	10-03-17	1315 1430 1510 1730	1430 1500 1730 1830
MO Tehri	Northwest India	Uttrakhand	Hail (Diameter-0.2 cm)	10-03-17	1500	1510
Gwalior	Central India	Madhya Pradesh	TSRA	10-03-17	1800	1845

TS: Thunderstorm,
TSRA: Thunderstorm with Rain

Name of Station Reporting	Region	STATE	Weather Event	Date	Time of Commencement (IST)	Time of end (IST)
Gangtok	East India	West Bengal	TSRA	10-03-17	1445 1720	1505 1740
Tadong	East India	West Bengal	TSRA	10-03-17	1435	1510
Alipore	East India	West Bengal	TSRA	10-03-17	1740	2000
Alipore	East India	West Bengal	Squall (NE/56 Kmph)	10-03-17	1845	1846
Haldia	East India	West Bengal	TSRA	10-03-17	1810	2050
Haldia	East India	West Bengal	TSRA	11-03-17	0525	0625
Daltonganj	East India	Jharkhand	Squall (W/45 Kmph)	10-03-17	1840	1842
Jorhat	Northeast India	Assam	TSRA		10/1930	10/2310
Silchar	Northeast India	Assam	TSRA	10-03-17	10/1810 10/2020	10/1920 10/2130
N/Lakhimpur	Northeast India	Assam	TSRA	10-03-17	10/2300 10/2330	10/2330 10/2355
Tezpur	Northeast India	Assam	TSRA	10-03-17	10/2230	10/2400
Barapani	Northeast India	Meghalaya	TSRA	10-03-17	10/1550	10/1700
Cherrapunjee	Northeast India	Meghalaya	TSRA	10-03-17	10/1750	10/2030
Shillong	Northeast India	Meghalaya	TSRA	10-03-17	10/1710	10/1845
Imphal	Northeast India	Manipur	TSRA	10-03-17	10/2120	11/0300
Kailasahar	Northeast India	Tripura	TSRA	10-03-17	10/1650	10/1800
Agartala	Northeast India	Tripura	TSRA	10-03-17	10/2010	10/2340
Dharmapuri	South India	Tamil Nadu	TSRA	10-03-17	1530	1600
Tuni	South India	Andhra Pradesh	TSRA	10-03-17	0225	0250
Visakhapatnam	South India	Andhra Pradesh	TSRA	10-03-17	0100 0300	0215 0515
Kakinada	South India	Andhra Pradesh	TSRA	10-03-17	0120	0255

TS: Thunderstorm,
TSRA: Thunderstorm with Rain

Severe Weather warning based on DWR observation	
Name of issuing radar station	DWR HYDERABAD
Geo-coordinates of issuing Station (Lat,Long,Alt)	17.2562oN/78.7656oE
Date and time of issue in UTC(yyyyMMddhhmm)	0700 UTC of 11/03/2017
Nature of severe weather expected	Nil
Name of issuing Radar station	DWR Kolkata
Geo-coordinates of issuing Station (Lat,Long,Alt)	22.5705°N/88.353°E,7m
Date and time of issue in UTC(yyyyMMddhhmm)	201703110612 UTC
Nature of severe weather expected	Nil
Name of issuing Radar station	DWR KARAIKAL
Geo-coordinates of issuing Station (Lat,Long,Alt)	Lat:10.91381N,Long:79.84141E/Alt:25mamsl
Date and time of issue in UTC(yyyyMMddhhmm)	DWR U/S
Nature of severe weather expected	--
Name of issuing Radar station	DWR MUMBAI
Geo-coordinates of issuing Station (Lat,Long,Alt)	Lat-18°54'04",Long-72°48'32"HeightAMSL-3.22meters
Date and time of issue in UTC(yyyyMMddhhmm)	201703110700 UTC
Nature of severe weather expected	Nil
Name of issuing radar station	DWR LUCKNOW
Geo-coordinates of issuing Station (Lat,Long,Alt)	26 ⁰ 46'07" N / 80 ⁰ 53'07" E/ 127.71 M
Date and time of issue in UTC(yyyyMMddhhmm)	201703110650
Nature of severe weather expected	Nil
Name of issuing radar station	DWR Machilipatnam
Geo-coordinates of issuing Station (Lat,Long,Alt)	LAT: 16.12' LONG: 81.09' ALT: 3.05m
Date and time of issue in UTC(yyyyMMddhhmm)	201703110601
Nature of severe weather expected	Nil
Districts/Taluks/Mandals/Blocks likely to be impacted	Pitapuram
Vertical Extent (20dbZ echo top)	289 SQ.KM
Direction of motion (bearing w.r.t radar towards which storm is moving/SPEED/Max .ref Factor dBZ	NE/15 m/s/ 50.50

∞	haze
	smoke
	dust or sand storm
≡	fog
•	drizzle
•	rain
*	snow
▽	showers
△	hail
	thunderstorm

Weather Symbols



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