



India Meteorological Department
FDP STORM Bulletin No.61(05-05-2017)

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

SYNOPTIC FEATURES:

The feeble Western Disturbance as an upper air cyclonic circulation over north Pakistan & neighbourhood at 3.1 km has become less marked and the trough aloft in mid tropospheric westerlies, now seen roughly along longitude 74.0°E and north of latitude 35.0°N. An upper air cyclonic circulation lies over southeast Rajasthan & neighbourhood and extends upto 0.9 km above mean sea level. An upper air cyclonic circulation lies over central parts of Madhya Pradesh and extends upto 1.5 km above mean sea level. A trough runs from this system to comorin area across Vidarbha, Marathwada, interior Karnataka and interior Tamilnadu and extends upto 0.9 km above mean sea level. The trough in mid-tropospheric westerlies now runs roughly along longitude 90.0°E and north of latitude 25.0°N. The upper air cyclonic circulation over Haryana & adjoining West Uttar Pradesh has become less marked and trough from this system to comorin area has also become less marked. The upper air cyclonic circulation over Bihar & neighbourhood has become less marked. A feeble Western Disturbance likely to affect Western Himalayan region from 7th onwards.

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 (UTC)	Area/Location	CTBT (-°C)	Movement	Remarks If any
1	05/0300	Central Assam adjoining Meghalaya	56		Developing
2	05/0300	E Arunachal Pradesh	56		Developing
3	05/0300	North Manipur adjoining Nagaland	42		Developing

Broken low/medium clouds with embedded moderate to intense convection over East Arunachal Pradesh, Central Assam adjoining Meghalaya, North Manipur adjoining Nagaland, Scattered low/medium clouds seen over Himachal Pradesh, North Uttarakhand, South Haryana adjoining Uttar Pradesh, North Odisha, South Gangetic West Bengal and rest Northeast states, west region, North Interior Karnataka, South Tamilnadu and North Nicobar Islands.

Arabian Sea:

No significant clouds seen over this region.

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded isolated moderate to intense convection seen over South Andaman Sea.

Past Weather:

Convection: Moderate to Intense convection was observed over Madhya Maharashtra West Bengal North East States Karnataka Uttarakhand. Weak to Moderate convection associated with Western Disturbance was observed over J&K Himachal Pradesh.

OLR: - Upto 200 wm^{-2} was observed over north J&K and east Arunachal Pradesh.

upto 230 wm^{-2} was observed over Rest J&K Himachal Pradesh, north Uttarakhand rest Arunachal Pradesh Assam west Meghalaya Nagaland South Madhya Maharashtra adjoining Karnataka..

Westerly Trough & Jet-Stream: Trough in Westerlies runs roughly along Longitude 90.0E North of Latitude 25.0N

Dynamic Features: Positive shear tendency is observed over India.

Low wind shear is observed over South India Low to Medium shear is observed over rest India.

A positive Vorticity field is observed over Uttarakhand Uttar Pradesh north West Bengal Karnataka Vidarbha and Odisha.

Positive Low Level Convergence is observed over south & central India Odisha and Negative low level convergence observed over rest parts of India.

Precipitation:**IMR:**

Rainfall upto 30 mm was observed over North Uttarakhand South Madhya Maharashtra adjoining Karnataka south Bihar east Assam.

Rainfall upto 10 mm was observed over J&K, Himachal Pradesh, rest Uttarakhand, north Andhra Pradesh south Odisha.

HEM:

Rainfall upto 14 mm was observed over South Madhya Maharashtra adjoining Karnataka east Arunachal Pradesh.

Rainfall upto 07 mm was observed over Himachal Pradesh Uttarakhand north Gangetic West Bengal Sikkim Meghalaya Assam rest Arunachal Pradesh Nagaland Manipur.

RADAR and RAPID observation:

No significant convection was observed in Radar Composite of 1250IST and in RAPID RGB Satellite imagery of 1200hrs IST.

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

Dust concentration was observed over northern Africa and some parts of eastern Asia. Dust concentration is expected to increase over western and northern India for next five days.

High PM10 concentration was observed over north-western and northern India. PM10 concentration is expected decrease over northern India for next five days.

2. NWP MODEL GUIDANCE:

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

1. Weather Systems: 12UTC Charts of Day-0, 3 and 4 feeble trough in MSLP is seen over J & K.

12UTC charts on all days from Day0-4 show two zones of wind discontinuity at 925 hPa due to persistent anticyclonic flow over Arabian Sea :(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 GWB and SHWB in Day0-3.

At 500 hPa: trough over west of J & K in Day-0. Strong east-west ridge over peninsula is prominent in Day-1 to Day-4

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: Day0: Arunachal Pradesh, Assam Meghalaya, Gangetic WB, Jharkhand, Uttarakhand, Odisha, West MP, Madhya Maharashtra, Vidarbha, SI Karnataka,

Day1: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, East MP, Marathwada, Vidarbha, Chhattisgarh, TN Puducherry, SI Karnataka,

Day2: Gangetic WB, Jharkhand, East RJ, Madhya Maharashtra, NI Karnataka,

Day3: Jharkhand, Uttarakhand, Odisha, Madhya Maharashtra, Chhattisgarh,

Day4: Jharkhand, West UP, Punjab, West RJ, Odisha, Madhya Maharashtra, NI Karnataka,

4. Low level Vorticity:-Positive Vorticity (>15 x 10⁻⁵/s): Day0: Arunachal Pradesh, Assam Meghalaya, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, TN Puducherry,

Day1: Arunachal Pradesh, Assam Meghalaya, Gangetic WB, Bihar, East UP, Uttarakhand, Himachal Pradesh, East RJ, Chhattisgarh, Coastal AP, TN Puducherry,

Day2: Assam Meghalaya, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, TN Puducherry,

Day3: Assam Meghalaya, Gangetic WB, Jharkhand, West UP, Himachal Pradesh, Odisha,

Day4: Gangetic WB, Jharkhand, Bihar, East UP, West UP, Punjab, TN Puducherry,

5. Showalter Index: Day-wise Sub-divisions with Showalter index <-4: Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Telangana, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

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

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

6. K-Index: Daywise Sub-divisions with K-index >40: Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, West RJ, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Bihar, Uttarakhand, Odisha, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

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

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

7. Spatial distribution of TTI: Daywise Sub-divisions with TTI >52: Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, Guj Reg, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, East RJ, Odisha, West MP, East MP, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Telangana, Rayalaseema, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, East MP, Konkan Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, NI Karnataka, SI Karnataka,

Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, NI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, NI Karnataka, SI Karnataka,

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

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Rayalaseema, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Odisha, Chhattisgarh,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Rayalaseema, NI Karnataka, SI Karnataka, Kerala,

Day4: Assam Meghalaya, Sub Himalayan WB, Bihar, Odisha,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Bihar, Uttarakhand, Odisha,

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

1. Weather Systems: The model analysis shows north-south trough from SHWB to Jharkhand and adjoining Orissa is seen in the analysis. Another east-west trough over Madhya Pradesh and Chhattisgarh. In the forecasts, a northeast-southwest trough forms extending from SHWB up to Vidarbha and adjoining areas on day 1 which orients north-south from east UP and adjoining Bihar to interior Karnataka and persists till day 5. The east-west trough over Northern Gangetic plains extending up to NE states is seen on day 3 which persists over the region till day 5. The trough along foothills over UP and Bihar persists from day 2 day 5. The wind analysis at 500 hPa shows a weak trough in westerlies over northern parts of NE states on day 1.

2. Location of jet and jet core at 500 hPa:-500 hPa Jet core (>60kt): No presence of jet core over the Indian region.

3. Low level Vorticity:-Positive Vorticity 850hPa (>12 x 10⁻¹/s): Mostly along the foot hill of Himalaya. Prominent vorticity zones are found in the morning hours along troughs over east, central and south peninsular India 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): Less than threshold value all over the country. The values between 3-3.5 mostly along east coast, eastern part of the country covering Bihar, SHWB,GWB, parts of Andhra Pradesh also along west coast and over Gujarat during next 5 days prominently during morning hours.

Lifted Index (< -2): Less than threshold value mostly reiterates the coverage like T-storm index during next 5 days.

Total Total Index (> 50): Above threshold value over the most parts of central India and spreading over NW India and west parts of east India and during afternoon hours.

Sweat Index (> 300): Along east coast, along west coast, GWB, Bihar and adjoining areas in east India and parts of NE states; along west coast and coastal Gujarat prominently during morning hours.

CAPE (> 1000): Similar spatial coverage like sweat index during next 5 days.

CINE (>150): Along east coast, west coast, Gujarat and adjoining areas, parts of north eastern states, over eastern India during morning hours for next 5 days.

5. Rainfall and Rainfall activity:

10-70 mm: rainfall along NE states during next 3 days with decreasing trend.

10-40 mm: rainfall over Kerala and adjoining interior Karnataka during next 5 days with an increasing trend after day 2.

10-40 mm: rainfall over parts of costal Andhra Pradesh and adjoining areas during day 2 and 5.

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

Model Reflectivity: 15-35 dBZ over parts NE states during next 24 hours, over parts of SHWB and NE States during next 2 days.

15-30 dBZ: over parts of coastal Orissa and adjoining Andhra Pradesh during day 3.

Spatial distribution of Total Total Index, K-Index, CAPE and CINE:

Total Total Index (> 50): Above threshold value over most parts of the country except extreme south peninsula, J&K and northern parts of NE states during next 72 hour.

CAPE (> 1000): Mostly along east coast of India, over eastern parts of India, parts of NE states, west coast and coastal Gujarat during next 3 days.

CINE (50-150): Higher values over coastal regions of India except southern parts of peninsula. Some parts of eastern India, Gujarat during morning hours of next three days.

Rainfall Activity:

10-130 mm: over North-eastern states during next 24 hours and then 10-70 mm over NE states during next 2 days with decreasing trend.

10-20 mm: rainfall over Kerala and adjoining Konkan-Goa and interior Karnataka during next 3 days.

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

In association with the upper air cyclonic circulation over central parts of Madhya Pradesh and the trough which runs from this system to Comorin area thunderstorms accompanied by squalls or gusty weather is expected over entire South Peninsular India and extending eastwards to Orissa and Gangetic West Bengal. In association with the trough in mid tropospheric westerlies along longitude 90.0°E, low level wind convergence over North East India is likely to result in isolated heavy rainfall over the region.

24 hour Advisory for IOP:

Arunachal Pradesh, Assam, Meghalaya
Nagaland, Manipur, Mizoram, Tripura
Kerala, Interior Tamilnadu,
Entire Karnataka, Telangana, Rayalaseema, Coastal Andhra Pradesh,
Gangetic West Bengal, Orissa
Vidarbha, South Chhattisgarh and South Madhya Maharashtra, Marathwada

48 hour Advisory for IOP:

Assam, Meghalaya,
Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura
Kerala, Interior Karnataka, Interior Tamilnadu
Vidarbha, Chhattisgarh and South Madhya Maharashtra,

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

Past24hourHEMandIMRrainfall(upto03UTCoftoday)

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

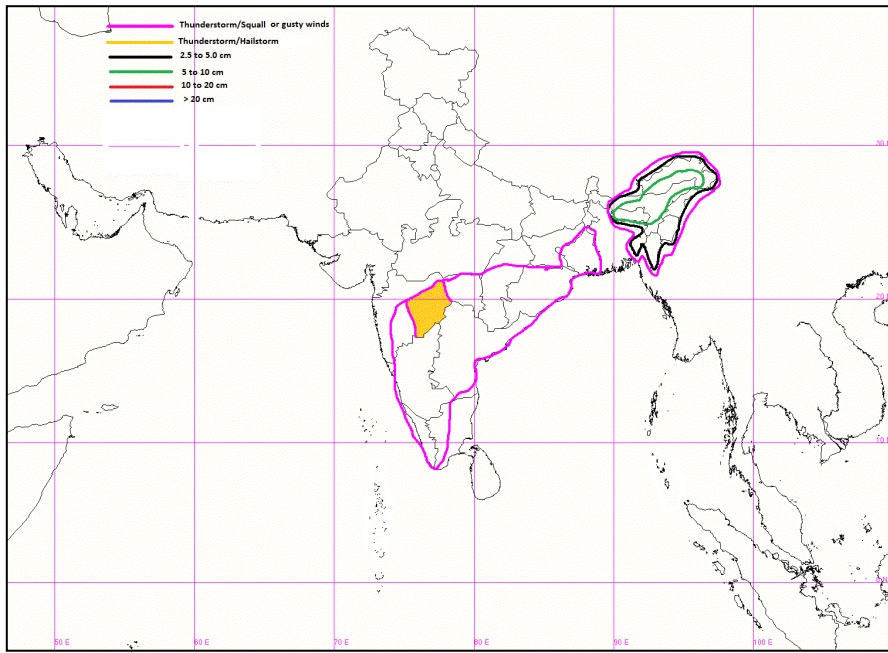
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg

ForRadarimagesofthepast24hoursincludingmosaicofimages:

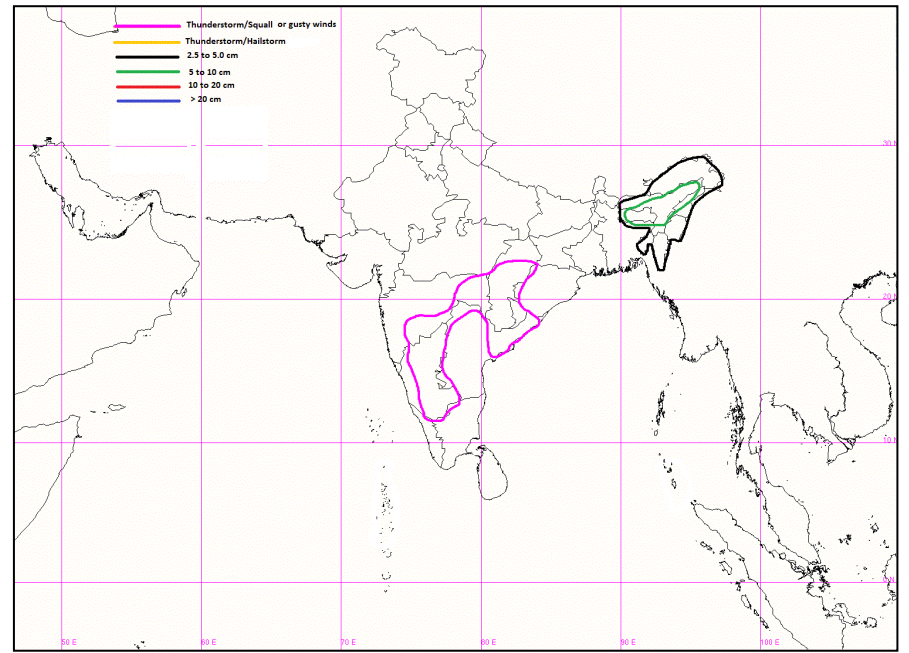
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Satellite sounder based T- Phigram

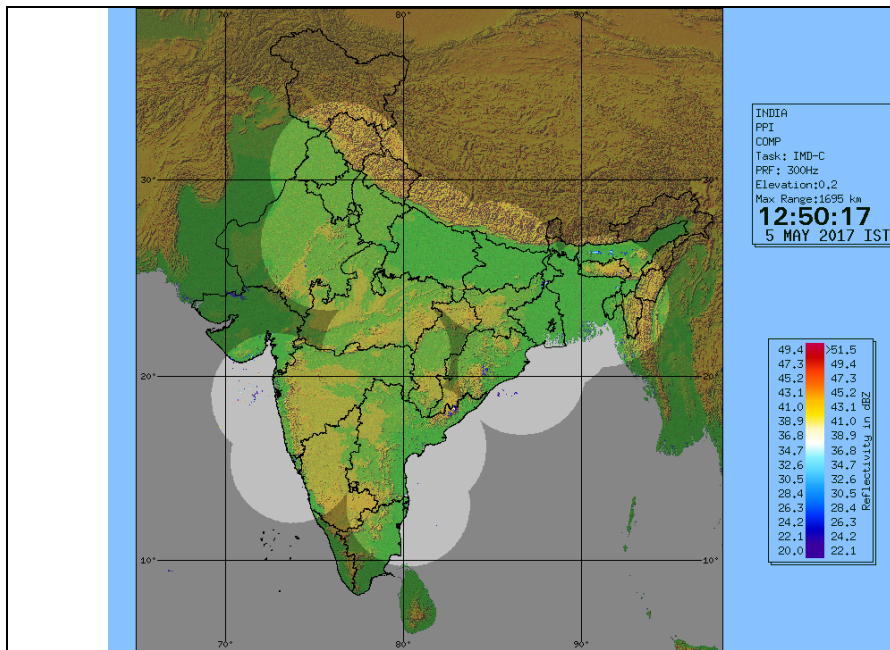
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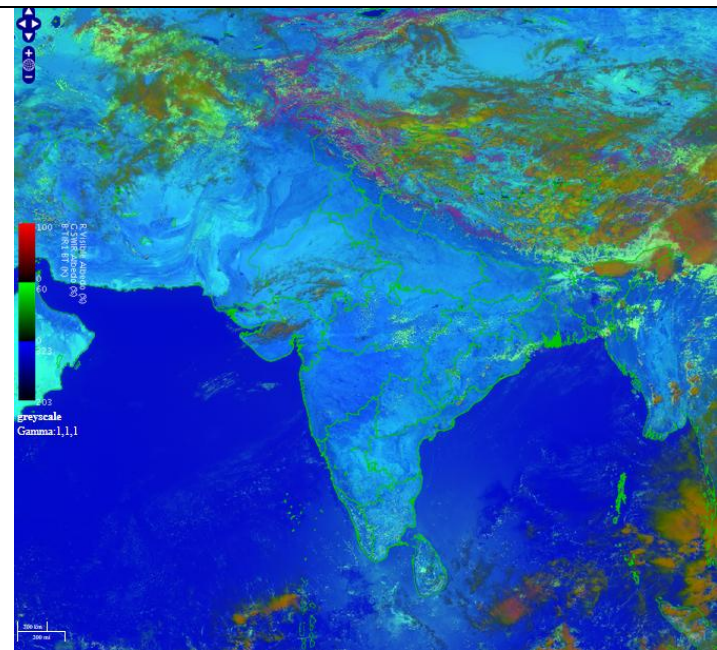
IOP Advisory for 24 hours



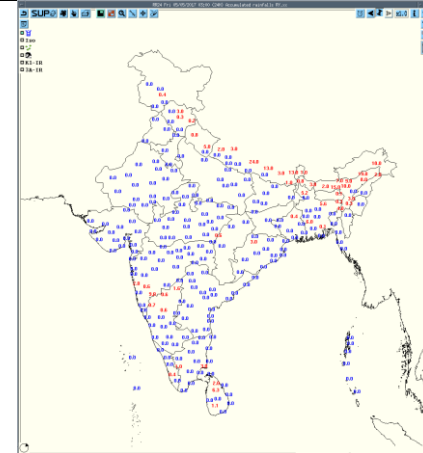
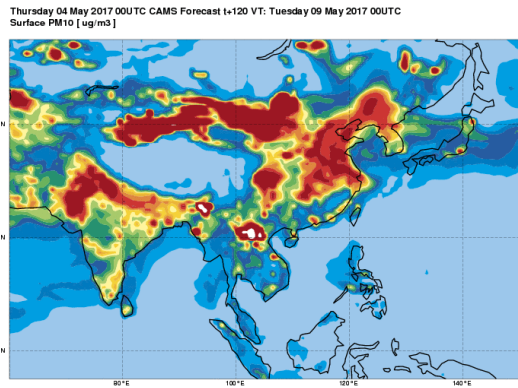
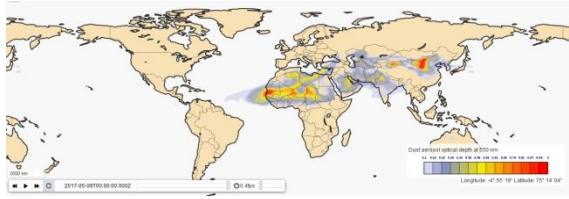
IOP Advisory for 48 hours



DWR Composite at 1hrs I250ST of today



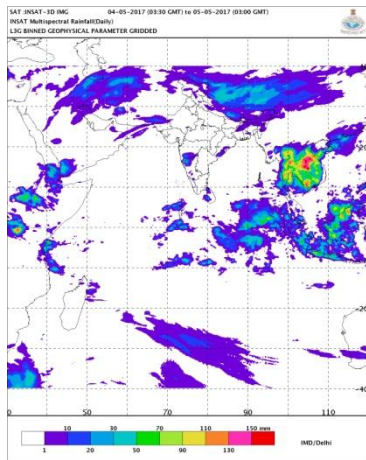
RAPID RGB Image of INSAT 3D at 1200 hrs IST of today



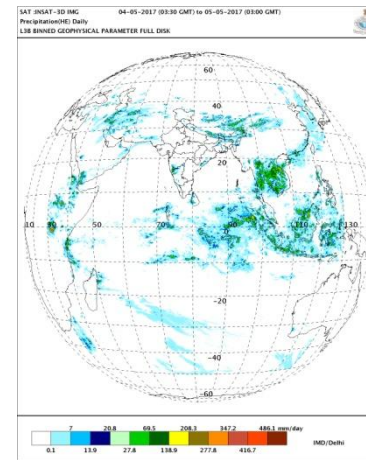
Forecast Dust Concentration for 00UTC of 9th May

PM10 Forecast for 00UTC of 9th May

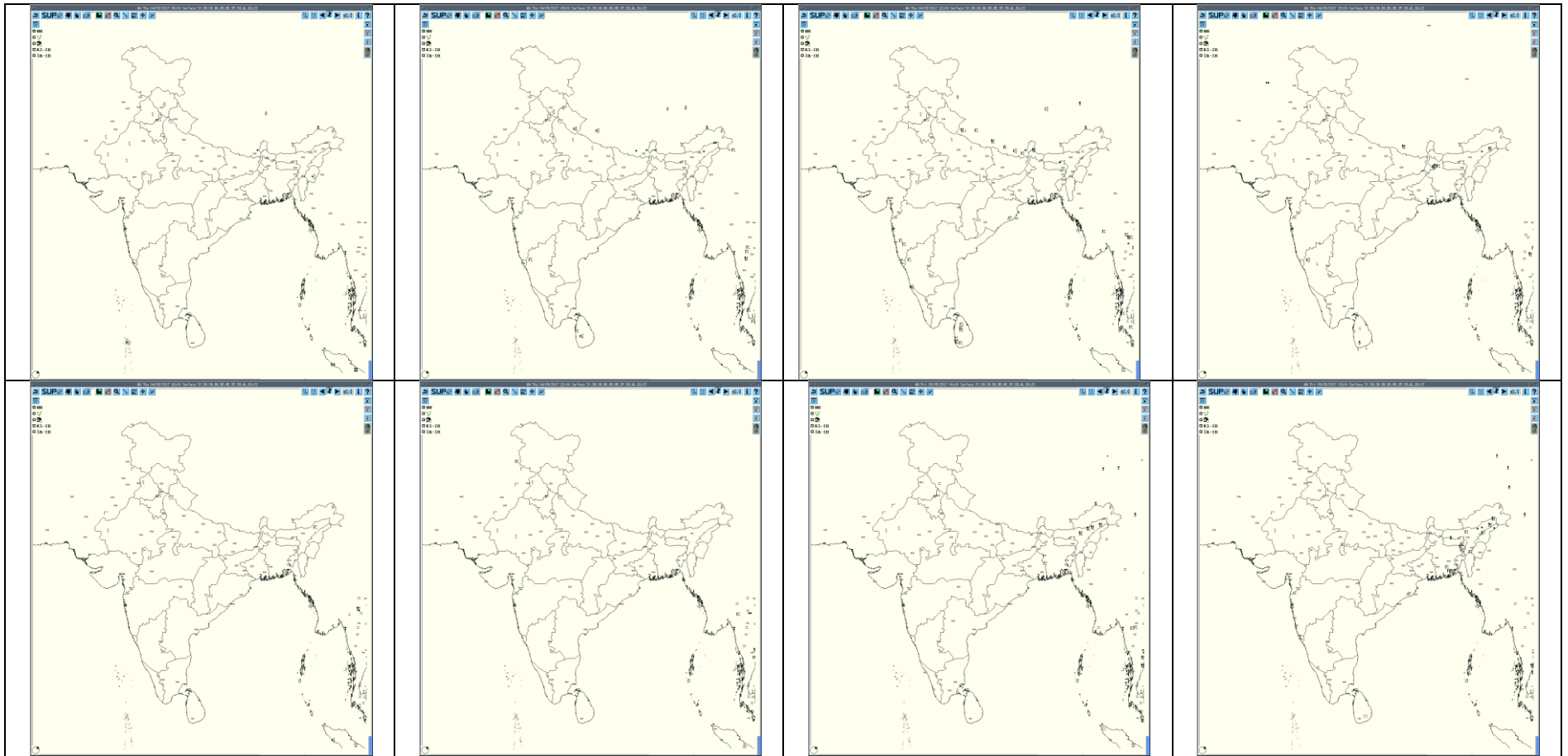
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



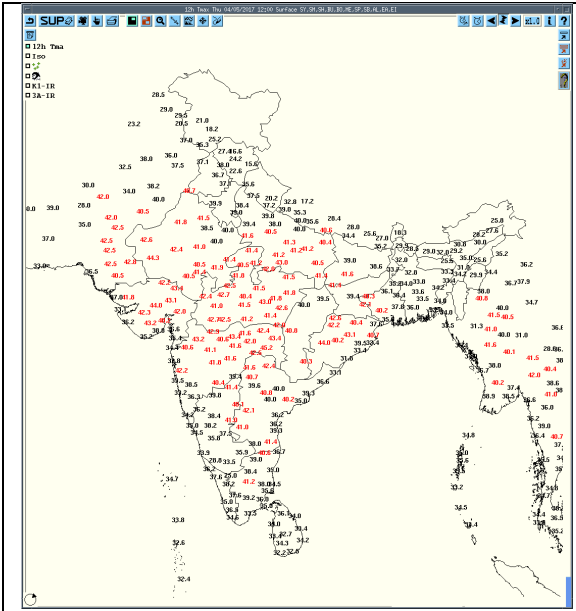
IMR Rainfall



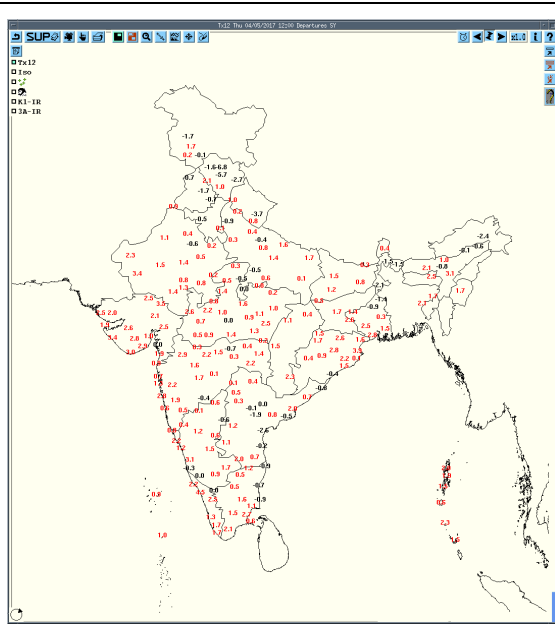
HEM Rainfall



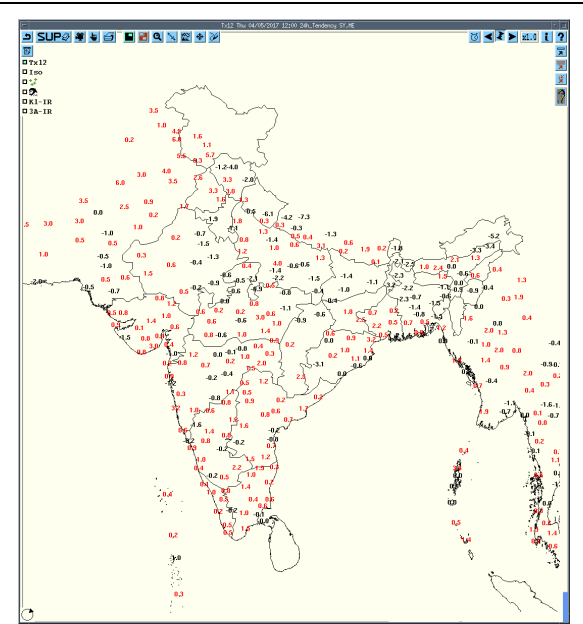
3hourly Past weather at 06, 09,12,15,18, 21UTC of yesterday and 00 & 03hrs UTC of today



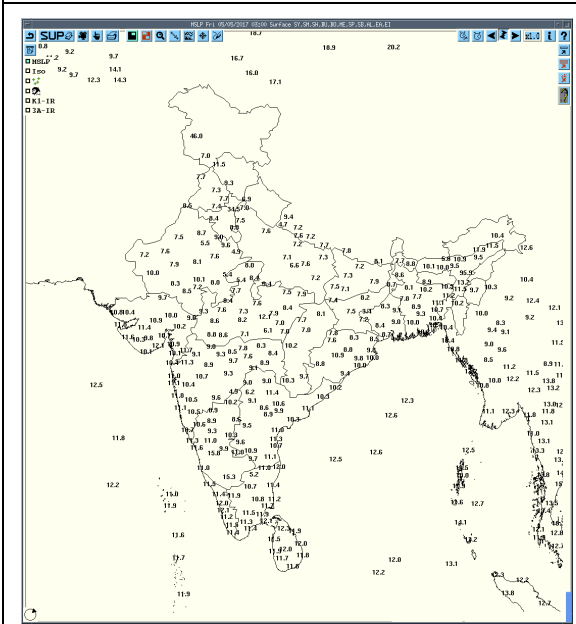
Tmax



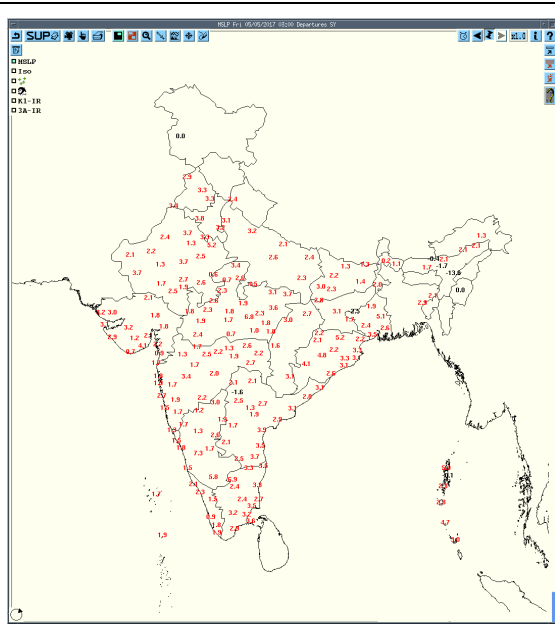
Departure Tmax



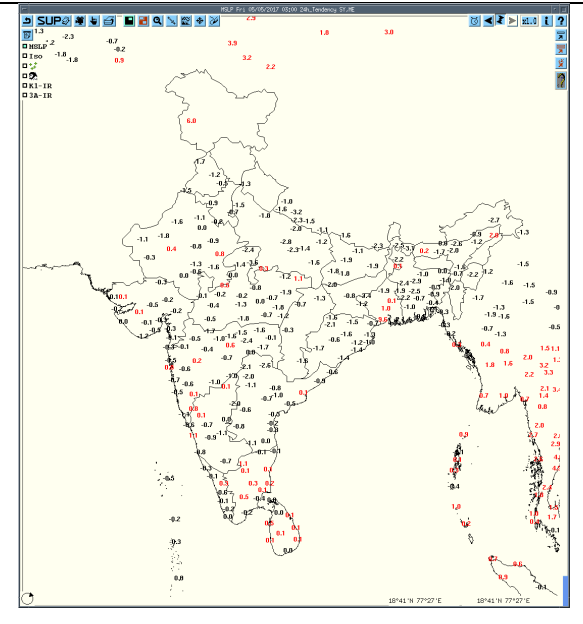
Tendency Tmax



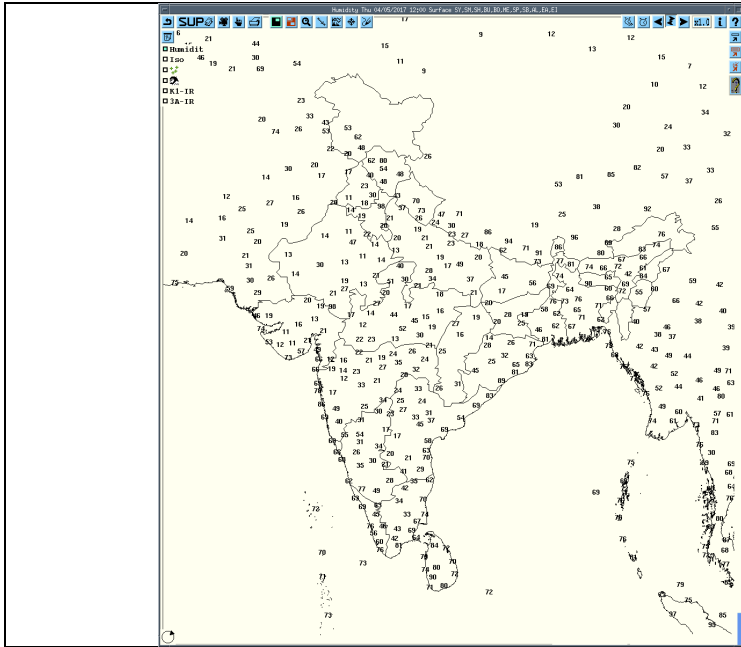
MSLP



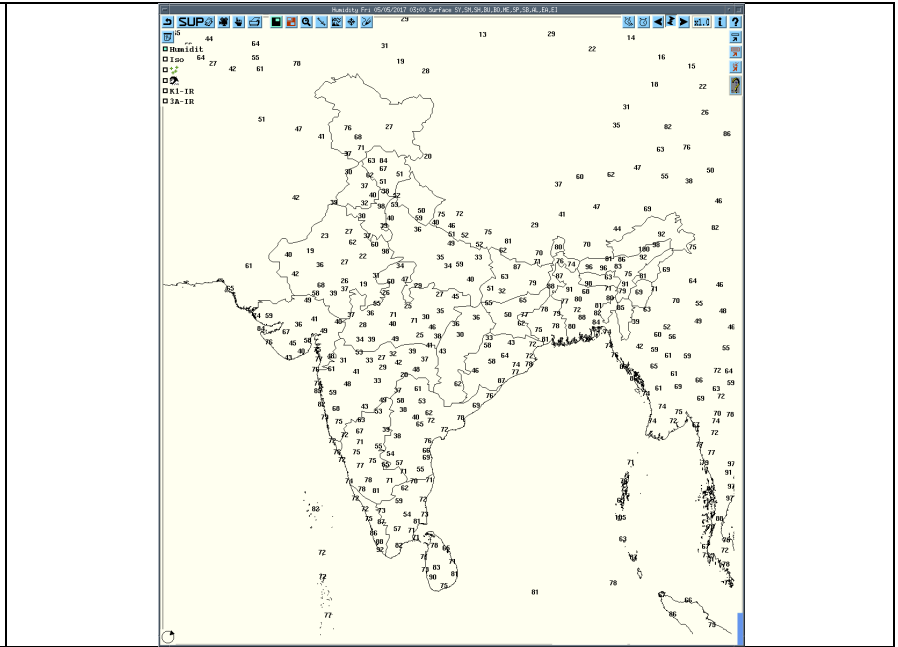
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday



RH at 03UTC today

Realized weather past 24hours (Based on SYNERGIE Products)					
Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
04-05-17	0600 UTC	Nil	Nil	Nil	Nil
04-05-17	0900 UTC	Mukteshwar	Northwest India	Uttarakhand	Thunderstorm
		Belgaum	South India	Karnataka	Thunderstorm
04-05-17 04-05-17	1200 UTC	Agra	Northwest India	Uttar Pradesh	Thunderstorm
		Mahabaleshwar, Satara	Central India	Maharashtra	Thunderstorm
		Belgaum, Baje	South India	Karnataka	Thunderstorm
		Gangtok	East India	Sikkim	Thunderstorm
04-05-17	1500 UTC	Belgaum	South India	Karnataka	Thunderstorm
		Dibrugarh	Northeast India	Assam	Thunderstorm
04-05-17	1800 UTC	North Lakhimpur	Northeast India	Assam	Thunderstorm
04-05-17	2100 UTC	Nil	Nil	Nil	Nil
05-05-17	0000 UTC	Dibrugarh, North Lakhimpur, Tezpur	Northeast India	Assam	Thunderstorm
		Itanagar	Northeast India	Arunachal Pradesh	Thunderstorm
05-05-17	0300 UTC	Passighat	Northeast India	Arunachal Pradesh	Thunderstorm
		Dibrugarh, Majbat, Silchar	Northeast India	Assam	Thunderstorm
		Shillong	Northeast India	Meghalaya	Thunderstorm

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
Paradeep	05/05/17	04/1000-1430 UTC	Isolated cells observed forming after 1530 IST with average height of 5 km at longitude 84 degree E and latitude 20 degree N with reflectivity value reaching upto 40 dBZ.	Isolated cells observed in WESTERN sector in the range of 260-280 degrees & forming in the range of 225 km from RADAR station. Movement-NNWly.	Cells dissipated by 1500 IST.	TS with light rain	Nayagarh, Dhenkanal, Cuttack
		04/1430 UTC beyond	Convective region with av. Reflectivity of 28 dBZ and av. Height of 7 km approx. observed mainly over the sea.	Observed in South sector of RADAR ranging 150-240 degrees and at a distance ranging from 90-250 kms.	NIL	TS with light rain	NIL
Nagpur	04/05/17	0822-2142 UTC	isolated cell with maximum reflectivity 41 DBZ and height 14.0 kms NE direction and range 144 Kms at 1202 UTC moving SE`ly and dissipated at 2142 UTC	Cloud formation starts at 0822UTC ranging from 110 to 150 Kms from radar in all direction moving SE`ly direction		Slight rain	Seoni, Balaghat in M.P.
	05/05/17	0002-0302 UTC	No echoes	-	-	Nil	-
Jaipur	05/05/17		Nil	Nil	Nil	Nil	Nil
Lucknow	05/05/17		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 20 dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associate d severe weather if any	Districts affected
Agartala	05/05/17	050030 - 050430	Multi cell with Maximum Height 12.6km and maximum reflectivity 44 dBZ (at 0302 UTC)	Formed 105 km ESE of DWR AGT at 0302 UTC and moved E-wards at around 50kmph	Cells Dissipated at 0432 UTC	N/A	N/A
		051540 - 052240	Single Cell with Maximum Height 14 km and maximum reflectivity 24 dBZ (at 1540 UTC)	Formed 250 km NW of DWR AGT at 1542 UTC and moved SE-wards at around 50 kmph	Cells Dissipated at 2242 UTC , E-wards 220Km	N/A	N/A
		052140 - 060300	Multi cell with Maximum Height 13km and maximum reflectivity 35 dBZ (at 2140 UTC)	Formed 240 km NW of DWR AGT at 2142 UTC and moved SE-wards at around 40kmph	Cell persist till 0300UTC, N to NW, 160KM	N/A	N/A
Patiala	05/05/17	0300-0600	Multiple cells 7-8km height. 36.0 dBZ max.	NE sector. Movement SE wards.			Palampur, Uttarkashi
		0600-0900	Multiple cells Max dbz=42.5 Ht 8-10 km	NE sector. Movement SE wards.			SHIMLA, SOLAN
		0900-1200	Multiple cells Max dbz=44.5 Ht7-8 km	NE sector. Movement SE wards.			SHIMLA, BILASPUR
		04-5-17 1200-05-05-17 0252	NO ECHO	NIL			NIL
Srinagar	05/05/2017	04 MAY 03Z to 05 May 03Z(24hrs)	A single cell developed in the SW of DWR Srinagar at around 0920 UTC with max. reflectivity 50 DBZ and average height 7km.	Developed at SW of Radar and finally dissipated at around1000 UTC.	NIL	NIL	Very light Rain has occurred in Kupwara district

	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
Radar Station name DWR Machilipatnam	03Z of 05/05/17 to 03Z of 05/05/17	0751 to 0821 UTC	Isolated single cell with average height of 10 km with maximum reflectivity of 55.5 dBZ	NE(244KM) and moving NE ly direction with average speed of 8 kmph	Cells started forming at 0751 UTC at NE (248km) from radar with maximum reflectivity during 0751 to 0821 and died down at 0831UTC	Possibility of Thunder storm with Rain and moderate winds.	Visakhapatnam District
	03Z of 05/05/17 to 03Z of 05/05/17	1031 to 1131UTC	Isolated Multiple cells average height of 9.5 km with maximum reflectivity of 58 dBZ	N(133KM) stationary	Cell started forming at 1031UTC at N (133km) from radar with maximum reflectivity during 1031 to 1121 and died down at 1131 UTC	Possibility of Thunder storm with Rain and moderate winds.	Bhadradir kottadugem District
	03Z of 05/05/17 to 03Z of 05/05/17	0951 to 1241UTC and 1101 to 1451 UTC	<ol style="list-style-type: none"> 1. Isolated Multiple cells average height of 9.5 km with maximum reflectivity of 60 dBZ 2. Isolated Multiple cells average height of 11.5 km with maximum reflectivity of 65.5 dBZ 	NE(203KM) and moving SW ly direction with average speed of 8 kmph NE(248) and moving SW ly direction with average speed of 35.7kmph	<ol style="list-style-type: none"> 1. Cells started forming at 0951UTC at NE(178km) from radar with maximum reflectivity during 0951 to 1241 and merged with the following cell. 2. Cells started forming at 1101UTC at NE(123km) from radar with maximum reflectivity during 1101 to 1441 and died down at 1451 UTC 	<ol style="list-style-type: none"> 1. Possibility of Thunder storm with Hail, Rain and moderate winds. 2. Possibility of Thunder storm with Hail, Rain and strong winds. 	Visakhapatnam and East Godavari Districts

∞	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

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