



India Meteorological Department
FDP STORM Bulletin No.68(12-05-2017)

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

Forecast synoptic conditions from dynamical models and present large scale features indicate that conditions are becoming favourable for the likely advance of the south-west monsoon over south Andaman sea and Nicobar Islands and parts of south east Bay of Bengal by around 15th May 2017.

The upper air cyclonic circulation over central parts of south Uttar Pradesh and adjoining north Madhya Pradesh, now lies over southeast Uttar Pradesh & neighbourhood and extends upto 0.9 Km above mean sea level.

An upper air cyclonic circulation lies over north-west Madhya Pradesh & neighbourhood and extends upto 1.5 km above mean sea level.

The upper air cyclonic circulation over North Interior Karnataka & adjoining Telangana now lies over North Interior Karnataka & neighbourhood and extends upto 0.9 km above mean sea level. A trough runs from this system to south Kerala across south Interior Karnataka and extends upto 0.9 km above mean sea level.

The upper air cyclonic circulation over Assam & Meghalaya and neighbourhood now lies over east Assam & neighbourhood and extends between 1.5 & 2.1 km above mean sea level.

The Western Disturbance as a trough in mid-tropospheric westerlies at 5.8 km above mean sea level roughly along Longitude 64.0°E and north of Latitude 25.0°N persists.

An upper air cyclonic circulation lies over Maldives and adjoining Lakshadweep areas and extends between 1.5 & 3.1 km above mean sea level.

An upper air cyclonic circulation lies over eastern parts of Bihar and adjoining Sub Himalayan West Bengal & Sikkim and extends between 1.5 & 2.1 km above mean sea level.

An upper air cyclonic circulation lies over South Andaman Sea and adjoining Malay Peninsula and extends upto 3.1 km above mean sea level.

The east west trough from central Rajasthan to south Assam 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:

Scattered low/medium clouds with embedded moderate to intense convection were seen over Bay Islands. Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over S Chhattisgarh, Meghalaya, E Assam, E Bangladesh, SW Rajasthan, N Kerala and S Tamilnadu. Scattered low/medium clouds with embedded isolated weak convection were seen over Haryana adjoining NW Uttar Pradesh & Delhi. Scattered low/medium clouds were seen over J & K, Himachal Pradesh, SE Punjab, N Uttarakhand, N Rajasthan, Madhya Pradesh, Maharashtra, and rest parts of East and South India.

Arabian Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over Southeast Arabian Sea south of latitude 10.0°N & Comorin.

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over SE Bay of Bengal and Andaman Sea.

Past Weather:

Convection:-

Moderate to Intense convection was observed over J&K Himachal Pradesh Uttarakhand Punjab Haryana Delhi Rajasthan Bihar West Bengal Meghalaya Jharkhand Odisha Telangana Karnataka Kerala Tamilnadu.

OLR:-

Upto 200 wm^{-2} was observed over South Interior Karnataka, South Kerala.

Upto 230 wm^{-2} was observed over J&K North Himachal Pradesh, North Uttarakhand, , West Rajasthan, Rest Karnataka, Tamilnadu North Kerala.

Upto 250 wm^{-2} was observed over North East Odisha, Sikkim, Meghalaya, Central Assam, Arunachal Pradesh

Westerly Trough & Jet-Stream:.

No Westerly Trough & Jet Stream

Dynamic Features

Low to Medium wind shear is observed over India.

Positive shear tendency is observed over India.

A positive Vorticity field is observed over Vidarbha East Madhya Pradesh adjoining Jharkhand Goa Coastal Karnataka.

Positive Low Level Convergence observed over Uttar Pradesh Maharashtra, East Madhya Pradesh, Bihar, Jharkhand and Negative low level convergence observed over the rest parts of India.

Precipitation:

IMR:

Rainfall upto 30 mm was observed over Extreme South-East Jharkhand adjoining West Bengal, Central Karnataka, North Tamilnadu.

Rainfall upto 20 mm was observed over North Uttarakhand, North West Bengal.

Rainfall upto 10 mm was observed over North West Rajasthan, Extreme North Madhya Pradesh, South Chhattisgarh, South East Odisha, South West Bengal adjoining Odisha, Meghalaya adjoining Assam, Extreme East Arunachal Pradesh

HEM:.

Rainfall upto 70 mm was observed over North Uttarakhand, South Interior Karnataka, North Tamilnadu, South Kerala.

Rainfall upto 14 mm was observed over South Chhattisgarh, North East Odisha..

Rainfall upto 07 mm was observed over West Rajasthan West Bengal Meghalaya, East Arunachal Pradesh, East Assam, Nagaland, Manipur, rest Tamilnadu North Kerala.

RADAR and RAPID Observation:

DWR Composite at 12450hrs IST indicated isolated convection over central parts of coastal Tamilnadu.

RAPID RGB satellite imagery at 1200hrs IST showed convective clouds over Andaman & Nicobar Islands, Tamilnadu, Meghalaya, South Assam, Nagaland, Manipur and NW Haryana.

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

Higher Dust concentration was observed over northern Africa and some parts of eastern Asia. Dust concentration is expected to remain high over western and northern India for next five days. High PM10 concentration was observed over north-western and northern India.

2. NWP MODEL GUIDANCE:

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

1. Weather Systems: 12UTC Charts of Day-2-4, show evolution of heat low extending from over NW India and adjoining Pakistan south-eastwards over the IG plains, with MSLP values lower than 994hPa

12UTC charts on days from Day0-4: show a zones of wind discontinuity at 925 hPa :(i) SW-NE extending from northern Karnataka-Telangana-Maharashtra region to Chhattisgarh-Jharkhand region.

12UTC charts on days from Day0-2: S-N extending from southern parts of TN to northern parts of Telangana-AP region.

Over Bay of Bengal a weak CYCIR is seen (Day-1) south of Andaman and Nicobar Islands and move north-westwards towards AP coast (Day-3&4). On Day-4 it is located over central BoB.

At 500hPa Day-2 to Day-4 strong anticyclone is evolving over west western India

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 $> 15 \times 10^{-5}$ /s

Day0: Madhya Maharashtra, SI Karnataka,

Day1: Madhya Maharashtra,

Day2: Assam Meghalaya, Jharkhand, Madhya Maharashtra,

Day3: Gangetic WB, Jharkhand, Punjab, Jammu Kashmir, Odisha, Madhya Maharashtra, NI Karnataka,

Day4: Gangetic WB, Jharkhand, Punjab, Odisha, TN Puducherry

4. Low level Vorticity:-Positive Vorticity:

Day/Index : Subdivisions with Lower Level Vortex $> 15 \times 10^{-5}$ /s

Day0: Bihar,

Day1: Bihar, Uttarakhand, Himachal Pradesh,

Day2: Assam Meghalaya, Gangetic WB, Uttarakhand, Himachal Pradesh, TN Puducherry,

Day3: Assam Meghalaya, Gangetic WB, Jharkhand, Bihar, Odisha, TN Puducherry,

Day4: Gangetic WB, Jharkhand, Bihar, Odisha, Konkan Goa, TN Puducherry

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

Day/Index : Subdivisions with Showalter Index < -4

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Jharkhand, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, 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, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, 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, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

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

Day/Index : Subdivisions with K Index > 40

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Guj Reg, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Marathawada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

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

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

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

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, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day1: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa,

Day2: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra,

Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Vidarbha, Chhattisgarh, Telangana,

Day4: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, East UP, West UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry

8. Rainfall and thunder storm activity:

Day/Index : Subdivisions with Precipitation > 2 cm

Day1: Sub Himalayan WB, Bihar, Andaman Nicobar, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Coastal Karnataka, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jammu Kashmir, Andaman Nicobar,

Day4: Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, Jammu Kashmir, Andaman Nicobar,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jammu Kashmir, Andaman Nicobar,

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

1. Weather Systems:

00 UTC analyses shows a low level CYCIR over east Rajasthan and adjoining regions along with a trough of low from this CYCIR to east UP and this low pressure system will persist for the next 2 days. A north-south oriented trough starting from the CYCIR over east UP and adjoining regions to central India region and this trough of low will persist for the next 2 -3 days.

Analyses also shows a low level CYCIR over NE India and this CYCIR will persist for the next 2 days.

Another CYCIR forms over south interior Karnataka and adjoining regions in day-1 and moves a little northward direction in next 2 days. The wind analysis at 500 hPa does not show any prominent trough in westerlies over India except over NE states on day 1 in northeast-southwest direction and during day 2-4 with north-south orientation..

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 ($>12 \times 10^{-1}/s$):

Analysis shows low level positive vorticity mainly over the foothills of Himalaya, along the west coast of India, east UP, Bihar, SHWB, Jharkhand, GWB and isolated pockets of NE states.

Forecast shows vorticity core zones mainly along the foothills of Himalaya, west coast of India, and isolated pockets of GWB and NE states, Marathwada, interior parts of Karnataka and few pockets along the east coast bordering Odisha and SHWB along with few regions of the north eastern states for the 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 Jharkhand, GWB, along the east of India and few pockets in NE India and along the west coast of India. Forecast shows significantly high threshold values over west coast of India, GWB and eastern coast for the next 3 days.

Lifted Index (< -2): The areas with index less than -2 lies along east coast regions, GWB, Odisha, coastal AP, and along the west coast of India and Kerala coast with gradually the above threshold value mainly extended towards southern coastal regions.

Sweat Index (> 400): 00UTC shows significant values over major parts along with the east coast extending up to coastal TN and also over west coast of India and few isolated pockets in the NE states. The significant zones are confined along east coast of India over GWB, Odisha, Bangladesh and adjoining regions and high value of SI observed over GWB and south AP coastal regions and NE region for next 5 days and also over few pockets in the south west region.

Total Total Index (> 50): Analysis shows significant values over few pockets in Gujarat, MP and adjoining areas. Above threshold value in most regions of central and western India and adjoining northern parts of India along with areas bordering north west India for the next 2-3 days.

CAPE (> 1000): Mostly along east coast of India over GWB, Odisha and adjoining AP regions along with parts in south peninsular region and coastal Kerala and Karnataka during the next 5 days.

CIN (50-150): Maximum CIN values are found in some areas of GWB and along east coast over Odisha, coastal AP and Tamil Nadu and also along the west coast of India for the next 2-3 days

5. Rainfall and Rainfall activity:

10-40 mm rainfall is forecasted tomorrow over Kerala, Karnataka, some parts of the NE states, J&K, HP, and also some parts of Orissa, Telangana and Tamilnadu regions. Rainfall activity over south interior Karnataka will increase for the next 2-3 days and decrease thereafter. Rainfall activity will increase from day-2 onwards over NE states and light to moderate rainfall will continue over coastal Orissa, AP, Telangana and western parts of Tamilnadu for the next 2 days

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, an upper air cyclonic circulation lies over east Assam & neighbourhood and extends between 1.5 & 2.1 km above mean sea level due to which Assam & Meghalaya and NMMT may experience the thunder storm with gusty wind on Day-1 and Day-2.

Another upper air cyclonic circulation lies over eastern parts of Bihar and adjoining Sub Himalayan West Bengal & Sikkim and extends between 1.5 & 2.1 km above mean sea level. This will give rise to thunder storm with gusty wind over Bihar, Jharkhand, Sub Himalayan West Bengal and Sikkim on Day-1.

Another upper air cyclonic circulation lies over North Interior Karnataka & neighbourhood and a trough runs from this system to south Kerala across south Interior Karnataka and extends upto 0.9 km above mean sea level. This will give rise to thunder storm with gusty wind over Kerala, South and North Interior Karnataka including Interior Tamilnadu on Day-1

24 hour Advisory for IOP:

Kerala, Interior Tamilnadu, Coastal Karnataka, South and North Interior Karnataka
Assam, Meghalaya, Nagaland, Meghalaya, Mizoram and Tripura
Sub Himalayan West Bengal, Sikkim, GWB, Jharkhand, Bihar, Chhattisgarh, Orissa
North Coastal Andhra Pradesh
South Madhya Maharashtra, Vidarbha

48 hour Advisory for IOP:

Kerala, Interior Tamilnadu, South Interior Karnataka,
Assam, Meghalaya, Nagaland, Manipur, Mizoram and Tripura
Gangetic West Bengal, North Orissa

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>

Past24hourHEMandIMRainfall(upto03UTCof today)

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

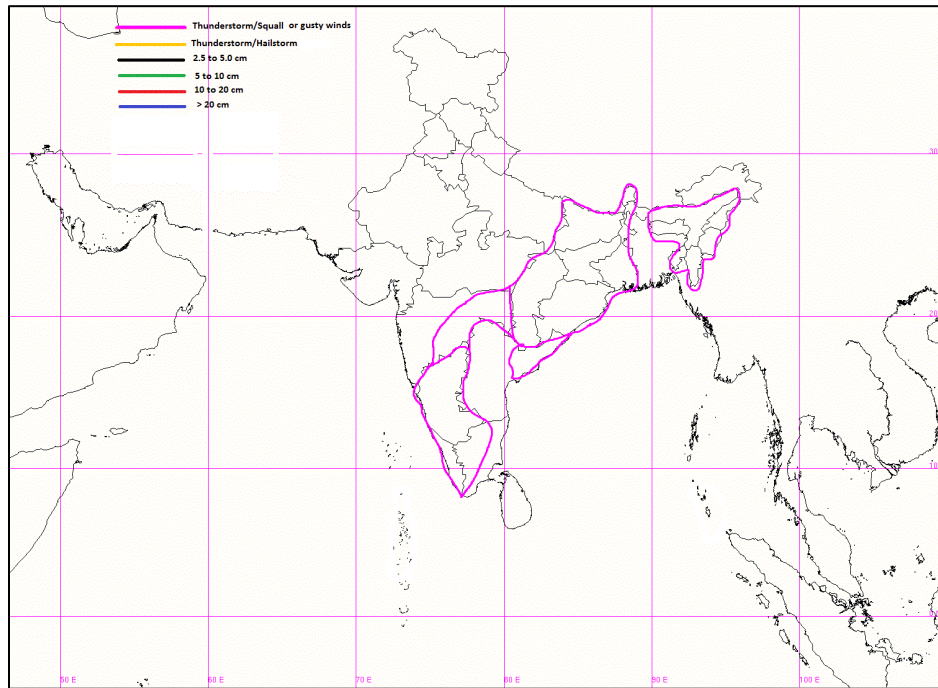
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg

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

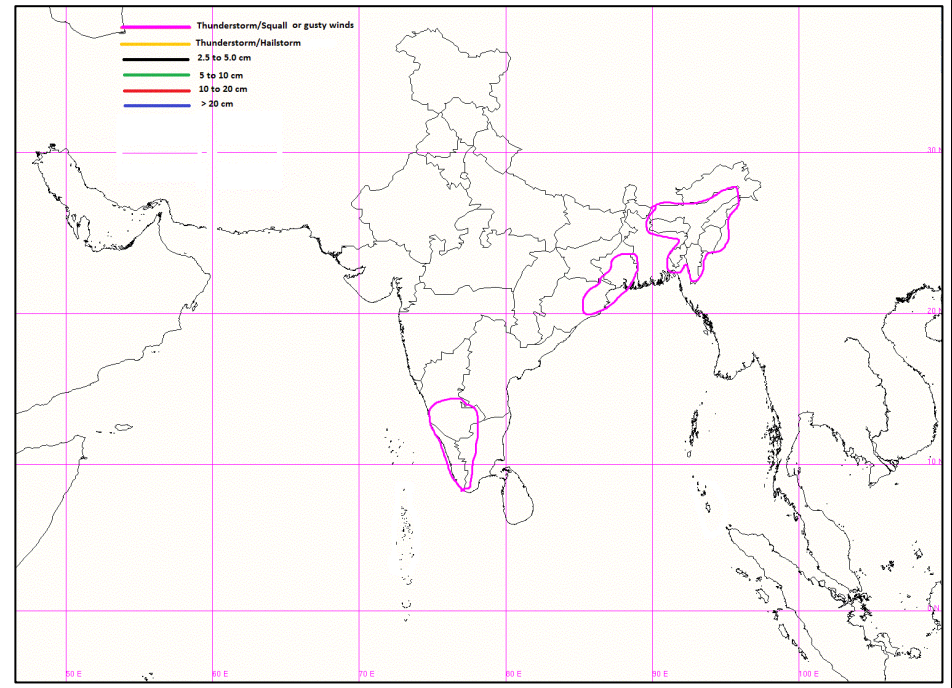
http://ddgmui.imd.gov.in/dwr_img/

Satellite sounder based T- Phigram

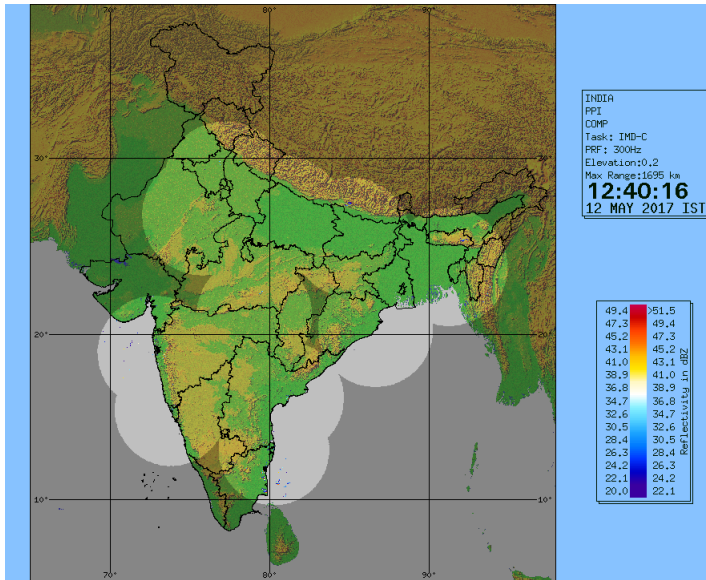
http://satellite.imd.gov.in/map_skm2.html



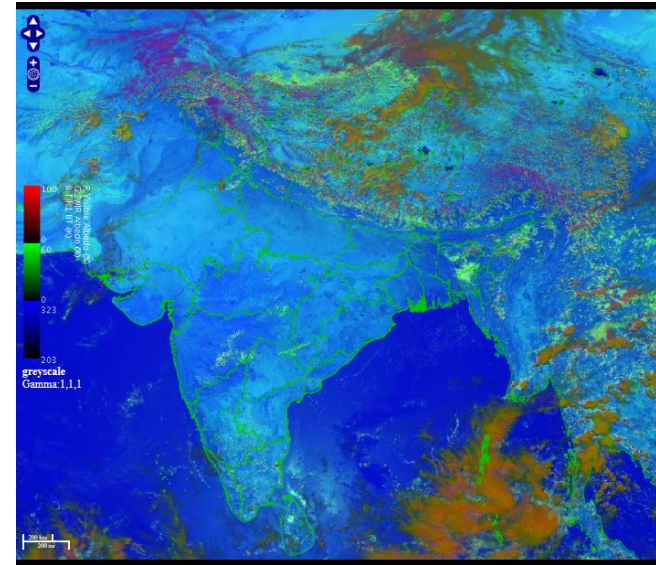
IOP Advisory for 24 hours



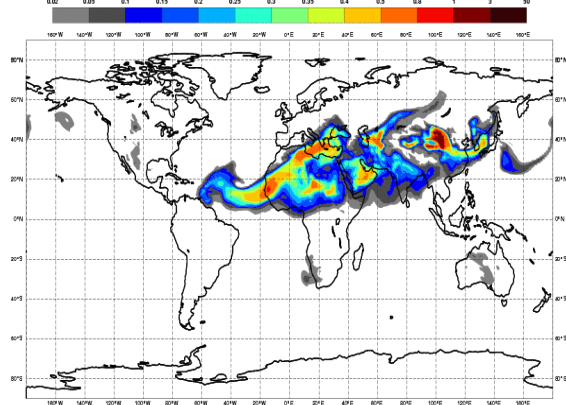
IOP Advisory for 48 hours



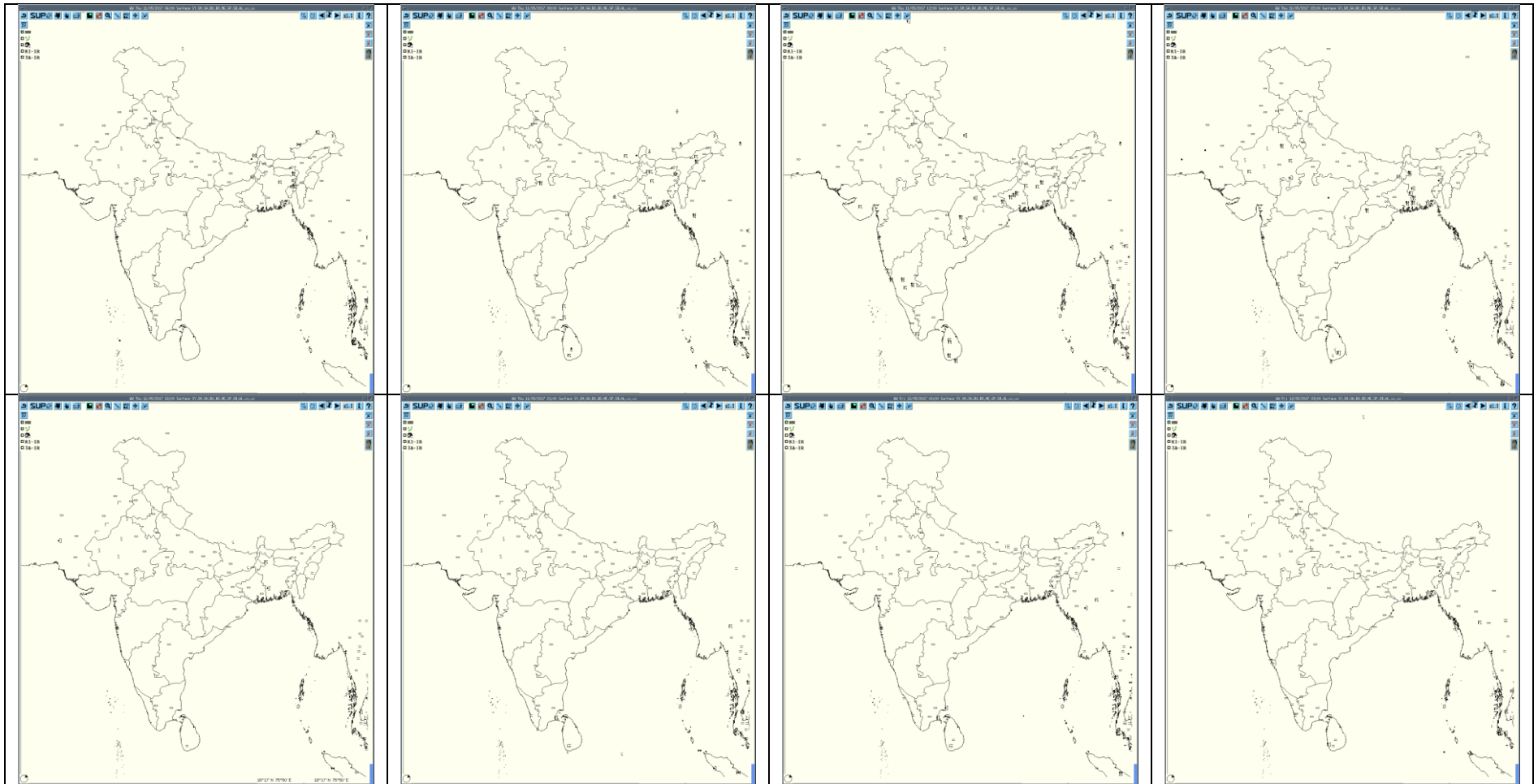
DWR Composite at 1240hrs IST of today



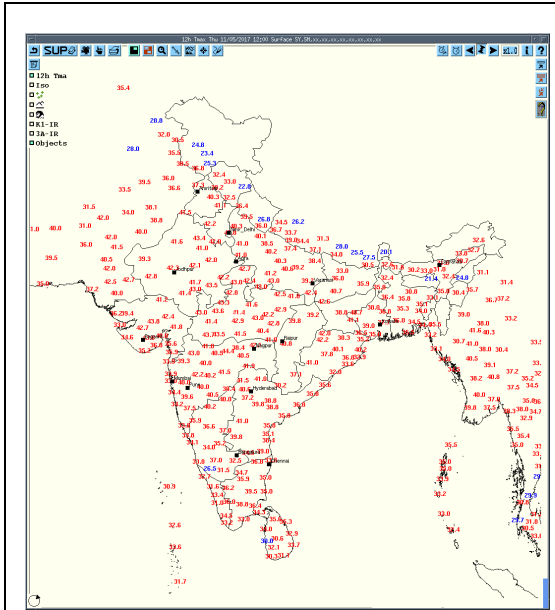
RAPID RGB Image of INSAT 3D at 1200 hrs IST of today



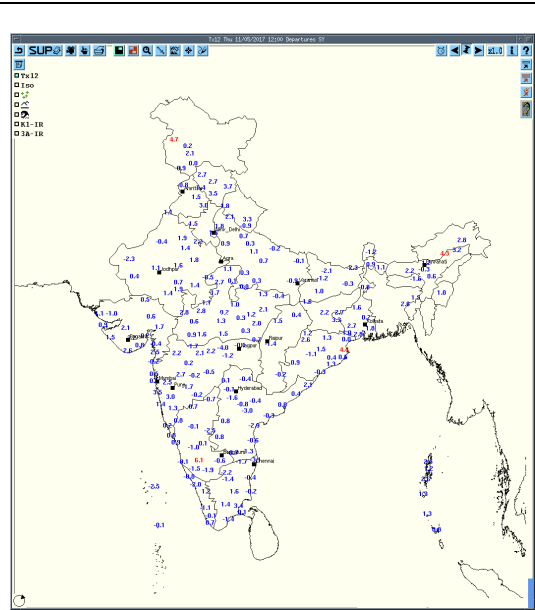
HEM Rainfall



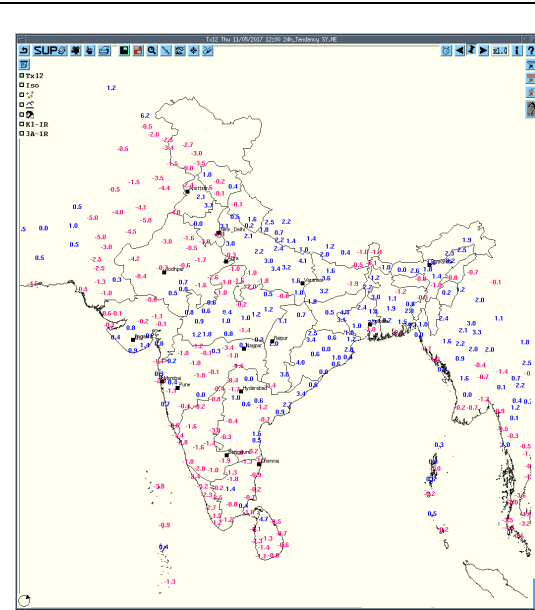
3hourly Past weather at 06, 09,12,15,18, 21UTC of yesterday and 00 & 03hrs UTC of today



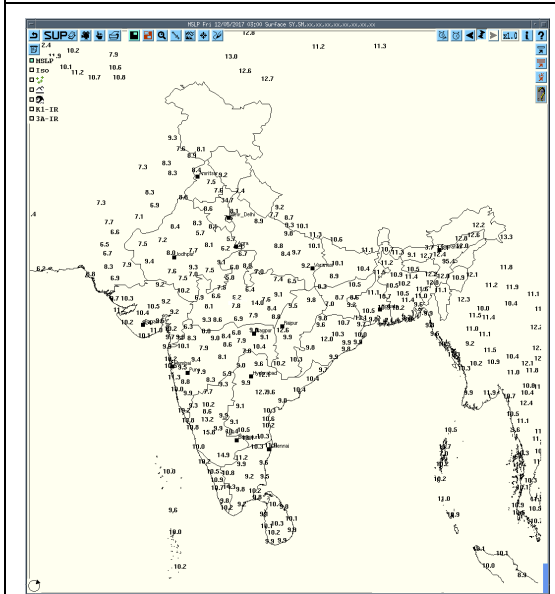
Tmax



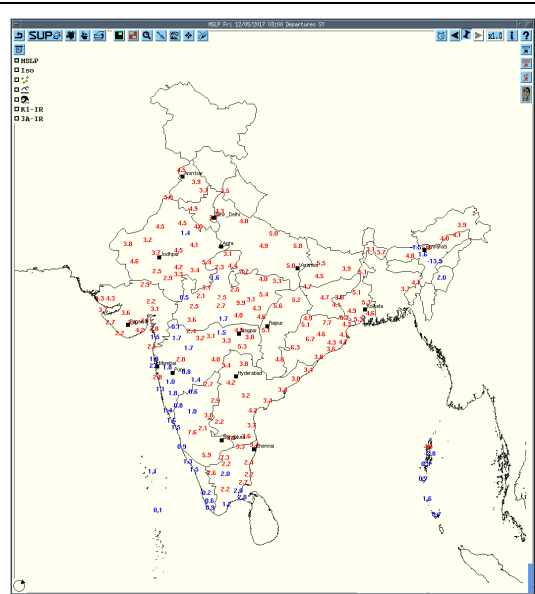
Departure Tmax



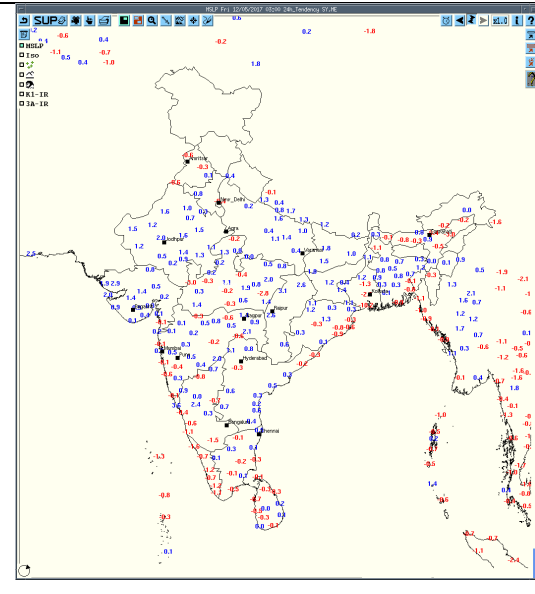
Tendency Tmax



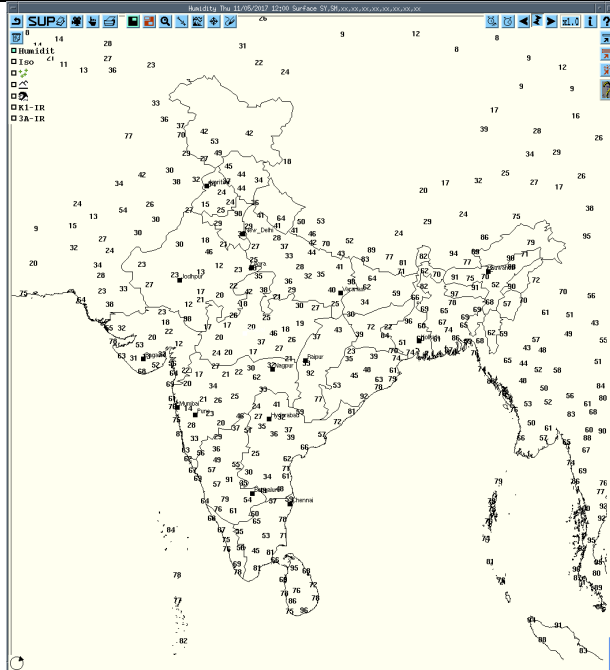
MSLP



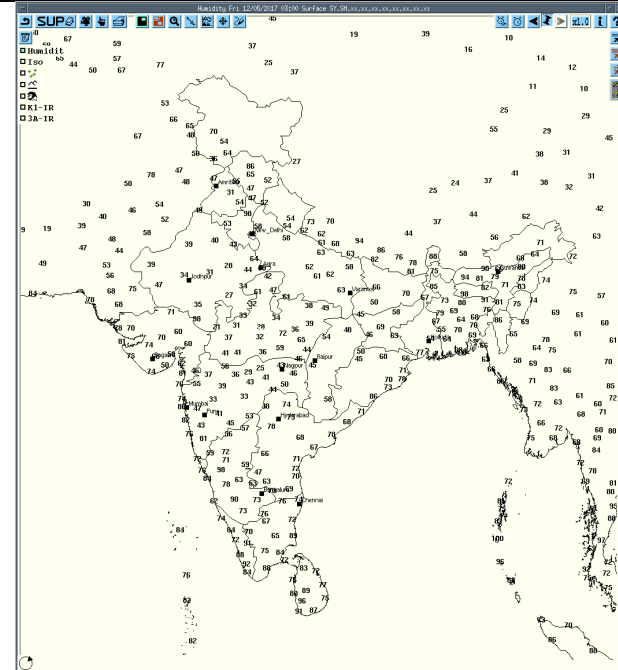
Departure MSLP



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
11-05-17	0600 UTC	Purnea	E India	Bihar	Thunderstorm
		Shillong	NE India	Meghalaya	Thunderstorm
		Kailasahar	NE India	Tripura	Thunderstorm
11-05-17	0900 UTC	Guna	C India	Madhya Pradesh	Thunderstorm
		Ranchi	E India	Jharkhand	Thunderstorm with hail
		Puducherry	South India	Puducherry	Thunderstorm
		Nagapattinam	South India	Tamilnadu	Thunderstorm
		North Lakhimpur, Jorhat	NE India	Assam	Thunderstorm
		Shillong	NE India	Meghalaya	Thunderstorm
11-05-17	1200 UTC	Rajkot	West India	Gujarat	Thunderstorm
		Karwar, Haveri, Shimoga, Chitradurga	South India	Karnataka	Thunderstorm
		Punalur	South India	Kerala	Thunderstorm
		Raipur, Ambikapur	Central India	Chhattisgarh	Thunderstorm
		Jamshedpur	East India	Jharkhand	Thunderstorm
		Shantiniketan, Panagarh, Bankura	East India	West Bengal(GWB)	Thunderstorm
		Jharsuguda	East India	Odisha	Lightening
11-05-17	1500 UTC	Barmer, Churu, Jaipur, Kota	NW India	Rajasthan	Thunderstorm
		Jharsuguda	East India	Odisha	Thunderstorm
		Raipur	Central India	Chhattisgarh	Lightening
		Digha, Kolkata(Alipore & Dumdum)	East India	West Bengal(GWB)	Thunderstorm
		Purnea	East India	Bihar	Thunderstorm
11-05-17	1800 UTC	Bhagalpur	East India	Bihar	Lightening
		Digha	East India	West Bengal(GWB)	Thunderstorm
11-05-17	2100 UTC	Bhagalpur	East India	Bihar	Thunderstorm
		Tondi	South India	Tamilnadu	Thunderstorm
		Atirampattinam	South India	Tamilnadu	Lightening
12-05-17	0000 UTC	Tondi	South India	Tamilnadu	Thunderstorm
		Pamban	South India	Tamilnadu	Lightening
12-05-17	0300 UTC	Nil	Nil	Nil	Nil

Past 24 hours DWR Report:

Radar Station name	Date of Reporting	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
Lucknow	12-05-17	110300-120300	Nil	Nil	Nil	Nil	Nil
Patna	12/05/2017	110332 - 110632	Multiple Cells. Maximum Reflectivity : 53.50 dBZ Echo Top : 14.0 KM	Range: 223 km NE from DWR Patna Movement-SE	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunderstorm with Rain	SUAPUL, MADHPURA, ARA RIA, KISHANGANJ, PURNIA.
		110632 - 110722	NIL	NIL	NIL	NIL	NIL
		110722 - 110952	Multiple Cells. Maximum Reflectivity : 47.0 dBZ Echo Top : 14.0 KM	Range: 227 km SE from DWR Patna Movement-Easterly	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunderstorm with Rain	BANKA, BHAGALPUR
		110952 - 120300	NIL	NIL	NIL	N/A	NIL.
Patiala	12-05-2017	11 MAY 0302 UTC-0602 UTC	NO ECHOS	-----			-----
		11 MAY 0602UTC-0902 UTC	ISOLATED cells Max= 43 dBz Ht.=8-9 km	NE SECTOR. MOVING TOWARDS East .	-----		UTTARKASI, GANGOTRI
		11 MAY 0902UTC-1202 UTC	Multiple cells Max= 50.0 dBz Ht.=12-13 km	NE SECTOR. MOVING TOWARDS East .	-----		UTTARKASI, GANGOTRI, NAHAN










		11 MAY 1202UTC- 1502 UTC	Multiple cells ,max dBz=45, ht=13-14km	NE SECTOR. MOVING TOWARDS East .			UTTARKASI, GANGOTRI, RAJGARH
		11 MAY 1502UTC- 1802 UTC	Multiple cells ,max dbz=43.0 , Ht 8-9 km	SW AND SE SECTORS. MOVING TOWARDS East .			ROHTAK,MAHAM , BHIWANI ,JHAJJAR
		1802 UTC OF 11 MAY TO 0252 UTC OF 12 MAY	NO ECHOS	-----			-----
Hyderabad	12-05-17	110712 - 111052 UTC	Isolated cells with an average height of 10 Km with a max reflectivity of 59.0 dBZ	WNW (136 Kms) moving in SW- ly Direction at a speed of approx 7.5 kmph	Cells started forming at 0712 utc. Matured between 0912 and 1032 with max ref of 59 dBz and dissipated by 1052 UTC	Moderate Thunderstorm with or without rain	Tandur and Sangareddy districts.
Nagpur	12-05-17	110722- 111432	Multiple	a)240 km SE, moving SWS'ly	a)maxZ=44 , ht. of cloud =6 to 9 km for maxZ 44		Thunderstorm warning started at 0812 and continuous till 1332. Mostly in SW and SE region at a regular interval . Duststorm warning started at 1322 & continuous till 2302 mostly in SW & NE region at a regular interval
		110722- 111252	Multiple	b)30 km S, moving SWS'ly	b)maxZ=40 , ht of cloud 1 to 7.5 km & maxZ =54 & ht. of cloud= 1 to 7.5 km		
		110752- 111242	Multiple	140 km SW	maxZ=52 at 0912 with ht. of cloud=2 to 7 km		
		110752- 111242	Multiple	200 to 250 km in NE	ht. of cloud = 1 to 8 km, maxZ varies around 40		
		120002- 120332	Nil				
JAIPUR	12-05-17	110912- 112052	Multiple cell with average height of 9.0 km maximum reflectivity 56 dBZ	Cells develop 0912 UTC moving SW towards NE at speed & direction 26 km/hr to 32	Cells continuous forming from 0912 UTC SE, NW, SW, N,		BIKANER, CHURU, JHUNJHUNU, NAGPUR, JAIPUR,

				km/hr	SW, S & W of Jaipur and multiple cell was observed and maximum reflectivity during 1442-1542 UTC and died down at 2022 UTC.		DAUSA, AJMER, BUNDI, KOTA, TONK, BHARATPUR, KARAUALI, DHOLPUR, ALWAR, SIKAR, SAWAIMADHOPUR
Agartala	12-05-17	110300 - 110622	Multi cell with Maximum Height 12km and maximum reflectivity 47 dBZ (at 0442 UTC)	Formed 75 km N of DWR AGT and moved 40kmph E-wards	Cells Dissipated at 0622 UTC ,over N-Tripura	N/A	N/A
		110700 - 110820	Multi cell with Maximum Height 11km and maximum reflectivity 44 dBZ (at 0712 UTC)	Formed 190 km NNE of DWR AGT and moved E wards at around 25kmph	Cells Dissipated at 0820 UTC ,over 180 km NE from DWR AGT	N/A	N/A
		110822 - 111042	Multi cell with Maximum Height 15km and maximum reflectivity 42 dBZ (at 0852 UTC)	Formed 140 km NW of DWR AGT and moved 30kmph E-wards	Cells Dissipated at 1042 UTC , over 80 km E from DWR AGT	N/A	N/A
		111920 - 12022	Multi cell with Maximum Height 09km and maximum reflectivity 40 dBZ (at 2102 UTC)	Formed 200 km NW of DWR AGT and moved 40kmph E-wards	Cells Dissipated at 0222 UTC , over 120 km NE from DWR AGT	N/A	N/A
Kolkata	12-05-2017	110301 – 110712 UTC	NIL	NIL	NO ECHO	NIL	NIL
		110801 UTC	1. Isolated Single cell with maximum reflectivity of 62.0 dBz at 0801 UTC and maximum height of 16.84 Km at 0801 UTC	WSW(212.9 km)	1. Isolated single cells seen at 0801 UTC in WSW at a distance of 212.9 km from radar. Matured.	Thunderstorm /Hail/ Rain	N/A
		111031 - 111801 UTC	2. Multicelled system with maximum reflectivity of 66.0 dBz at 1252 UTC and maximum height of 15.76 Km at 1031 UTC	W to NNW (175.8 km)	2. Multicelled system seen at 1031 UTC in W to NNW at a distance of 175.8 km from radar. Matured	Thunderstorm /Hail/ Rain	N/A
			3. Multicelled system with maximum reflectivity of 63.5 dBz at 1031 UTC and maximum height of	NNE (225.1 km)	3. Multicelled system seen at 1031 UTC in NNE at a distance of 225.1 km from	Thunderstorm /Hail/ Rain	N/A

			13.17 Km at 1031 UTC		radar. Matured		
		120001 – 120300 UTC	NIL	NIL	NO ECHO	NIL	NIL
Machilipatnam	12-05-17	111001 to 111301 UTC	Isolated Multiple cells average height of 8.5 km with maximum reflectivity of 62 dBZ	NE(212KM) and moving SW ly direction with average speed of 12 kmph	Cell started forming at 1001UTC, at NE (249km) from Radar the maximum reflectivity during 1011 to 1241 UTC and died down at 1301UTC	Possibility of Thunder storm with Hail and rain with light winds.	Malkangiri District
		111011 to 111121UTC	Isolated Multiple cells average height of 8km with maximum reflectivity of 55.5 dBZ	SW (249KM) and moving SW ly direction with average speed of 10 kmph	Cells started forming at 1011UTC at SW(235km) from radar with maximum reflectivity during 1021 to 1111 and died Down at 1121UTC	Possibility of Thunder storm with Rain and light winds.	Nellore District

∞	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