



India Meteorological Department

FDP STORM Bulletin No. 41 (16-04-2018)

1. CURRENT SYNOPTIC SITUATION:

NWFC INFERENCE (0300UTC of the Day):

- ♦ The Western Disturbance as an upper air cyclonic circulation at 3.1 km above mean sea level over Jammu & Kashmir and neighbourhood has moved away east north-eastwards.
- ♦ A fresh Western Disturbance as an upper air cyclonic circulation lies over north Pakistan and neighbourhood and extends upto 3.1 km above mean sea level.
- ♦ The other Western Disturbance as a trough in mid and upper tropospheric westerlies now runs with its axis at 5.8 km above mean sea level roughly along Long 65°E to the north of Lat 28°N.
- ♦ Another fresh Western Disturbance is likely to affect Western Himalayan region and adjoining plains from 19th onwards.
- ♦ The cyclonic circulation over West Rajasthan and neighbourhood now lies over northeast Rajasthan and adjoining Haryana and extends upto 0.9 km above mean sea level.
- ♦ A cyclonic circulation lies over West Madhya Pradesh and adjoining southeast Rajasthan and extends upto 1.5 km above mean sea level.
- ♦ The trough from north Bihar to Manipur now seen as a cyclonic circulation over Sub Himalayan West Bengal and neighbourhood and extends upto 1.5 km above mean sea level.
- ♦ The trough of low at mean sea level over Maldives Lakshadweep area now lies over equatorial Indian Ocean and adjoining southeast Arabian Sea with the cyclonic circulation aloft extending upto 1.5 km above mean sea level.
- ♦ The other trough of low at mean sea level over Equatorial Indian Ocean and adjoining southeast Bay of Bengal & neighbourhood now lies over Equatorial Indian Ocean and adjoining central parts of south Bay of Bengal with the embedded cyclonic circulation extending upto 3.1 km above mean sea level.
- ♦ A cyclonic circulation at 1.5 km above mean sea level lies over Interior Karnataka and adjoining Rayalaseema.
- ♦ A north south wind discontinuity runs from north Madhya Maharashtra to interior Tamilnadu across interior Karnataka at 0.9 km above mean sea level.

SATELLITE OBSERVATIONS during past 24 hrs and current observation:

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

Western disturbance (WD):

Broken multi-layered clouds with embedded moderate to intense convection over North Pakistan, adjoining Afghanistan, Jammu & Kashmir, (minimum CTT minus 79deg C) and over the area between lat 37.0N to 47.0N, long 70.0E to 82.0E and weak to moderate convection over Himachal Pradesh, Punjab, Haryana, Delhi, Northwest Uttar Pradesh, in association with another WD over the area.

Westerly Trough & Jet Stream:

Trough in westerlies runs roughly along long 61.0E & north of lat 30.0N. Jet Stream observed over Rajasthan & Uttar Pradesh.

Convective Activity: Nil**Precipitation Nowcast Based on WMO Scope Product:**

Based on 0200 UTC satellite data indicate that precipitation is likely to take place during next three (03 hrs) over West Jammu & Kashmir, and central Tamilnadu.

Clouds descriptions within India:

Scattered low/medium clouds with embedded moderate to intense convection seen over West Jammu & Kashmir and Nicobar Islands. Scattered low/medium clouds with embedded weak to moderate convection seen over East Jammu & Kashmir, Himachal Pradesh, Punjab, Haryana, Delhi, west Uttar Pradesh, Southwest Uttarakhand, North Gujarat and East Rajasthan, adjoining Northwest Madhya Pradesh. Scattered low/medium clouds with embedded isolated weak convection seen over Tamilnadu. Scattered low/medium clouds seen over rest Uttarakhand,, rest West Uttar Pradesh, Northeast Jharkhand, North Gangetic West Bengal, Sub-Himalayan West Bengal, Sikkim, Northeastern States, West Rajasthan, Goa, South Interior Karnataka, Kerala Lakshadweep and Andaman Islands.

Arabian Sea:-

Scattered low/medium clouds with embedded intense to very intense convection seen over Central parts of South Arabian Sea (minimum CTT minus 93° C).

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded intense to very intense convection seen over South Bay south of lat 8.5N east of long 83.0E and adjoining South Andaman Sea (minimum CTT minus 93°C).

Past Weather:**Convection (during last 24 hrs):**

Moderate to Intense convection was observed over J&K East Madhya Pradesh Chhattisgarh Vidarbha Marathwada Telangana Rayalseema Karnataka Kerala Tamilnadu and Weak to Moderate convection observed over Himachal Pradesh Uttarakhand Punjab Gujarat Rajasthan Haryana Delhi West Uttar Pradesh Jharkhand Odisha Sikkim North-East States rest Maharashtra.

OLR:

Up-to 230wm⁻² observed over Jammu & Kashmir North Himachal Pradesh North Uttarakhand Sikkim Arunachal Pradesh West Telangana Karnataka Kerala Tamilnadu and Up-to 250 wm⁻² observed over North Gujarat East Meghalaya Assam Nagaland North Manipur.

Synoptic Features (Westerly Trough & Jet Stream): Trough in Westerly's roughly along Longitude 61.0E & north of Latitude 30.0N

Dynamic Features:-

Up to 30- 60 Knots wind shear is observed over North & Central India and 5-15 over south peninsula India.

Negative Shear tendency is observed over J & K, Rajasthan.

A positive Vorticity field at 850 hPa is observed over J & K, Himachal Pradesh, Uttarakhand, West Uttar Pradesh, East Madhya Pradesh, East Jharkhand.

Negative Low Level Convergence is observed over J & K, Himachal Pradesh, Uttarakhand, Punjab, Haryana, Delhi, West Uttar Pradesh, East Rajasthan, Coastal Andhra Pradesh and North-East States

Precipitation:**IMR:**

Rainfall upto 130-150 mm observed over some parts of North Karnataka and

Upto 70-90 mm observed over West J&K North Interior Karnataka adjoining Marathwada West parts of South Interior Karnataka Kerala and

Upto 10-30 mm observed over some parts of North Tamilnadu West Telangana and

Upto 01-10 mm observed over East J&K South Himachal Pradesh North Uttarakhand West Punjab Haryana adjoining North-West Uttar Pradesh Central Rajasthan South-East Madhya Pradesh North Chhattisgarh Vidarbha Sikkim Arunachal Pradesh rest Tamilnadu.

HEM :

Rainfall upto 139-208 mm observed over some parts of North Karnataka and

Upto 70-139 mm observed over West J&K West parts of South Interior Karnataka Central Kerala

Upto 7-20 mm observed over Arunachal Pradesh North Tamilnadu

Upto 0.1-7 mm observed over North Gujarat Rajasthan Haryana adjoining North-West Uttar Pradesh East Madhya Pradesh Vidarbha Chhattisgarh adjoining Odisha Sub Himalayan West Bengal Meghalaya Assam South Nagaland North Manipur rest Kerala rest Tamilnadu

RADAR and RAPID RGB Observation:

Isolated/multiple moderate echoes (dBZ 45-50 and height 10-212km) are seen in DWR Agartala & Mohanbari at 1312IST. Light to moderate echoes are also seen in DWR Srinagar, Delhi and Patiala at around 1300IST.

RAPID RGB Satellite imagery at 1230IST indicates significant convection over Jammu & Kashmir, Himachal Pradesh, West Uttarakhand, West Uttar Pradesh, Meghalaya, West Arunachal Pradesh, Nagaland and Nicobar Islands.

Environmental Condition (dust etc) and its Forecast based on 00UTC of date:

Higher Dust concentration was observed over northern Africa, Arab countries and western part of India. Dust concentration is expected to increase over north-western part of India for next few days.

Particulate matter concentration is expected to remain in moderate category for next 2 days in Delhi.

Delhi – SAFAR analysis & Forecast	16.04.2018	17.04.2018
PM10 (micro-g/m ³)	236	244
PM2.5 (micro-g/m ³)	102	100

2. NWP MODEL GUIDANCE:

NCMRWF (NCUM forecast based on 00UTC the day):

1. Weather Systems:

Low level CYCIRS, Troughs: 00 UTC of Day 2-5: A deep trough and associated strong winds over Bangladesh and adjoining NE region
12 UTC of Day 0: A weak CYCIR at 925 hPa over west Rajasthan and adjoining Pakistan

Confluence & wind Discontinuity regions: 12 UTC of Day 0-2: 925hPa N-S discontinuity over Southern Peninsular India and in Day 1-2 SW-NE discontinuity over MP Chhattisgarh & Odisha

Synoptic Systems: 00 UTC of Day 1-3: WD as a weak trough at 500 hPa over J & K and adjoining Pakistan, a fresh WD and associated cyclonic circulation approaching J & K in Day 4.

00UTC of Day 2-5: 925 hPa anticyclone over Bay of Bengal In Day 3-5 associated south-easterly winds are stronger along the east coast and over Bangladesh

2. Location of jet and jet core (>60kt) at 500hPa): 12UTC of Day 0-3: Nil **Day 4:** Over Gujarat & Rajasthan associated with approaching WD
12 UTC Day 1-2: Strong westerlies over East U.P, Bihar, Bangladesh & NE states

3. Convergence at 850 hPa:

Day/Index: Subdivisions with Lower Level Convergence > 15×10^{-5} /s

Day0: NE NMMT, Madhya Maharashtra, Tamilnadu, Puducherry, NI Karnataka,

Day1: East Rajasthan, Odisha, Tamilnadu, Puducherry, SI Karnataka, Kerala,

Day2: NE NMMT, Gangetic WB, Jharkhand, Madhya Maharashtra, Tamilnadu, Puducherry, NI Karnataka, SI Karnataka, Kerala,

Day3: Assam Meghalaya, NE NMMT, East MP, Madhya Maharashtra, Tamilnadu, Puducherry, NI Karnataka, SI Karnataka,

Day4: Assam Meghalaya, Gangetic WB, Jharkhand, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, East MP, Gujarat Region, Madhya Maharashtra, Vidarbha, Chhattisgarh, Telangana, Tamilnadu, Puducherry, SI Karnataka,

4. Low level Vorticity:-Positive Vorticity:

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

Day0: Bihar, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Madhya Maharashtra,

Day1: Jharkhand, Bihar, Jammu Kashmir,

Day2: Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Bihar, Uttarakhand, Himachal Pradesh,

Day3: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Jharkhand, Bihar, Uttarakhand, Himachal Pradesh, Tamilnadu, Puducherry,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Jharkhand, Bihar, Jammu Kashmir, Tamilnadu, Puducherry,

5. Showalter Index: -3 to -4[Very unstable]: Day/Index: Subdivisions with Showalter Index < -4

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, Coastal AP, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, Telangana, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Odisha, Coastal AP, Tamilnadu, Puducherry, Coastal Karnataka, SI Karnataka, Kerala

6. Spatial distribution of TTI: TTI >50 [Scattered Thunderstorms few severe]:

Day/Index: Subdivision with Total Totals Index > 52

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West Rajasthan, East Rajasthan,
Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Vidarbha, Chhattisgarh,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Coastal Karnataka, NI Karnataka,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Chhattisgarh, Coastal AP, Telangana, Coastal Karnataka, NI Karnataka, SI Karnataka,
Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Tamilnadu, Puducherry

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

Day/Index: Subdivisions with K Index > 40

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Marathwada, Chhattisgarh, Coastal AP, Telangana, Rayalseema, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, Odisha, Konkan Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Odisha, Konkan Goa, Madhya Maharashtra, Chhattisgarh, Coastal AP, Telangana, Rayalseema, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Odisha, Chhattisgarh, Coastal AP, Telangana, Rayalseema, Tamilnadu, Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,
Day4: Arunachal Pradesh, Sub Himalayan WB, Odisha, Chhattisgarh, Coastal AP, Telangana, Rayalseema, Tamilnadu, Puducherry, Coastal Karnataka, SI Karnataka, Kerala

8. Rainfall and thunder storm activity:

Day/Index: Subdivisions with Precipitation > 2 cm

Day1: Punjab, Himachal Pradesh, Jammu Kashmir, Tamilnadu, Puducherry, Kerala,
Day2: Assam Meghalaya, NE NMMT, Sub Himalayan WB, Himachal Pradesh, Jammu Kashmir,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jammu Kashmir,
Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Jammu Kashmir,
Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Uttarakhand, Himachal Pradesh, Jammu Kashmir

*****Rainfall > 4cm over J & K in 00 UTC of Day 5 and > 8cm over Meghalaya in Day 3**

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Synoptic analysis indicates that a fresh Western Disturbance as an upper air cyclonic circulation lies over north Pakistan and neighborhood will bring thunder squall with hail activity over Jammu and Kashmir, Himachal Pradesh on Day-1. The thunderstorm with gusty winds may likely over Punjab, Haryana, west UP and North Rajasthan on Day-1.

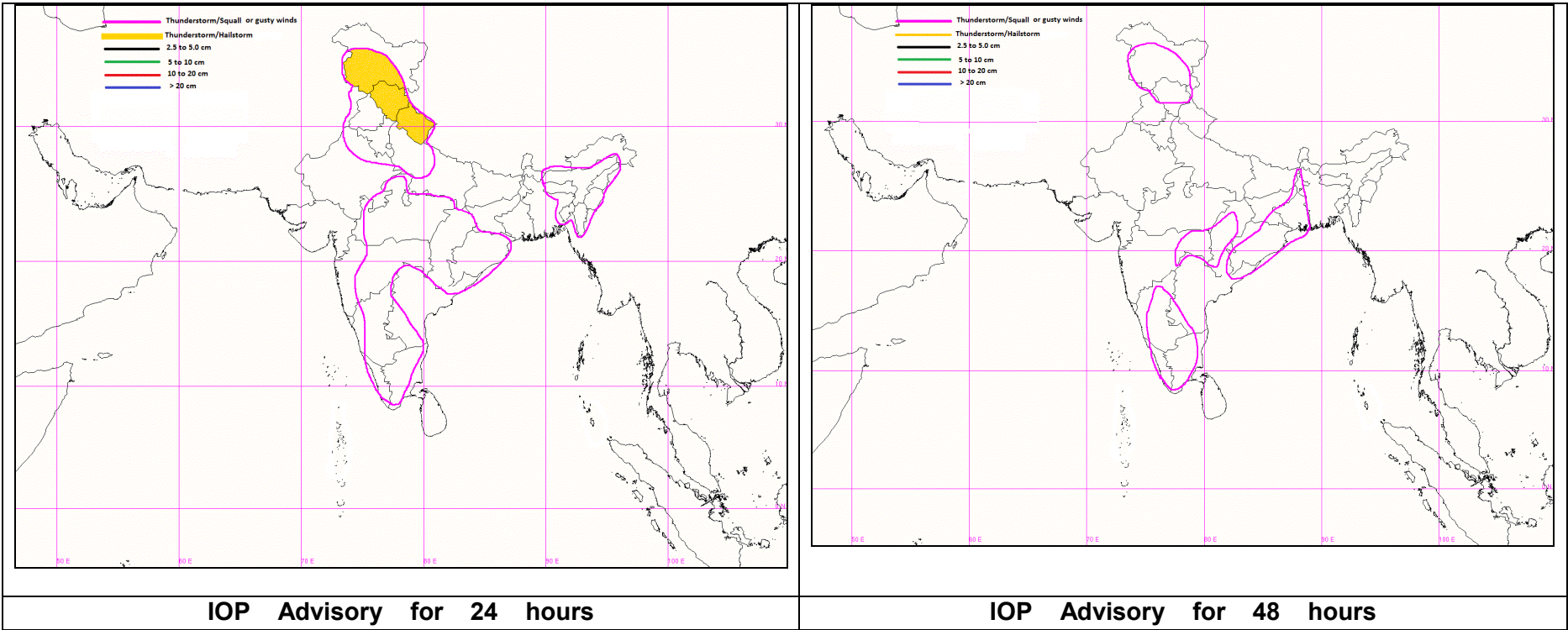
A cyclonic circulation lies over West Madhya Pradesh and adjoining southeast Rajasthan, this will trigger the thunderstorm with gusty winds activity over Madhya Pradesh, Chhattisgarh and Vidarbha on Day-1.

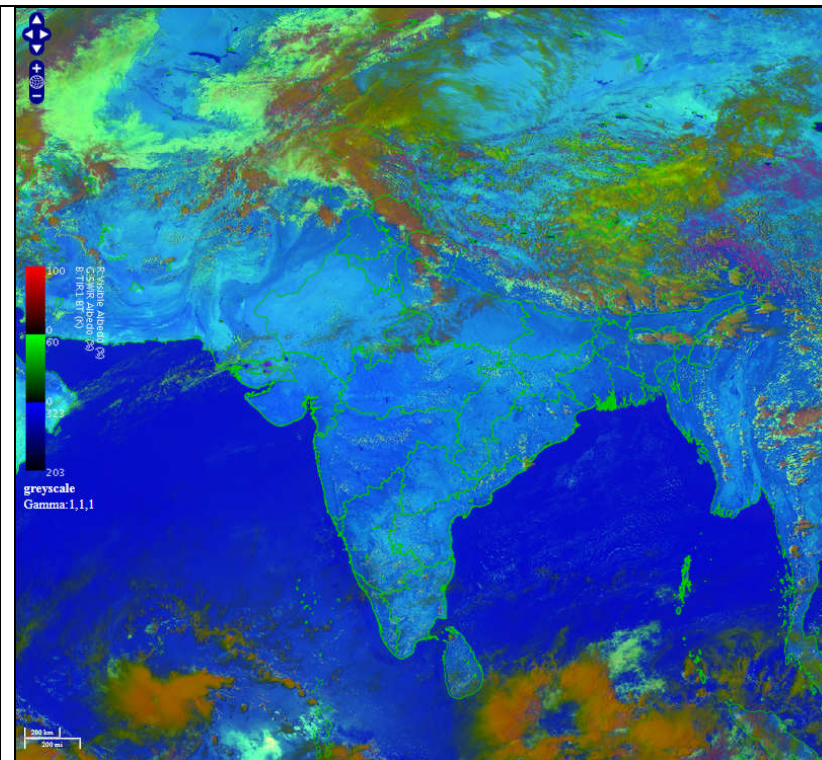
Another cyclonic circulation over Interior Karnataka and adjoining Rayalaseema will bring thunderstorm with gusty winds activity mainly over North and South Interior Karnataka, Rayalaseema and Kerala on Day-1.

Day-1 & Day-2:

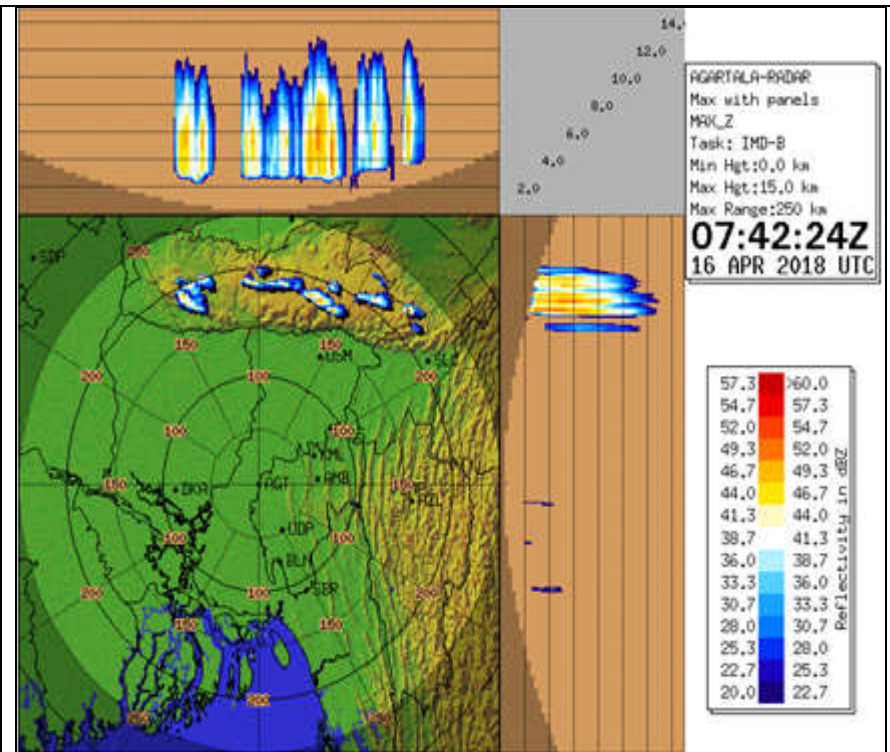
Significant Rainfall: Nil	Significant Rainfall: Nil
Thunderstorm with Squall/Gusty winds: Punjab, Haryana, Delhi, West Uttar Pradesh, North Rajasthan Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura Madhya Pradesh, Chhattisgarh, Vidarbha Odisha, North Coastal Andhra Pradesh, Rayalaseema, Interior Karnataka, Kerala, Tamilnadu Marathawada, South Madhya Maharashtra	Thunderstorm with Squall/Gusty winds: Jammu & Kashmir, Himachal Pradesh Chhattisgarh, Vidarbha Odisha, Genetic and Sub-Himalayan West Bengal North Coastal Andhra Pradesh, Interior Karnataka, Kerala, Tamilnadu
Thunderstorm with squall &Hailstorm: Jammu & Kashmir, Himachal Pradesh, Uttarakhand	Thunderstorm with Hailstorm: Nil

Graphical Presentation of Potential Areas for Severe Weather:

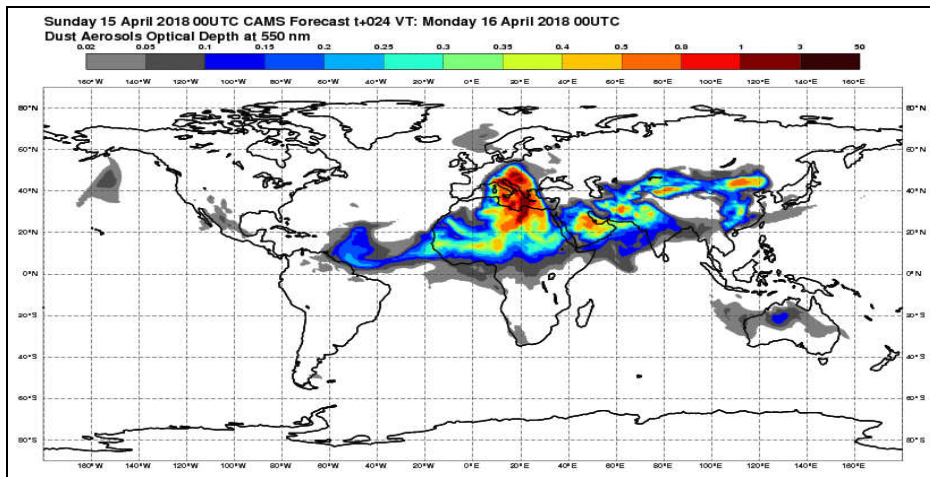




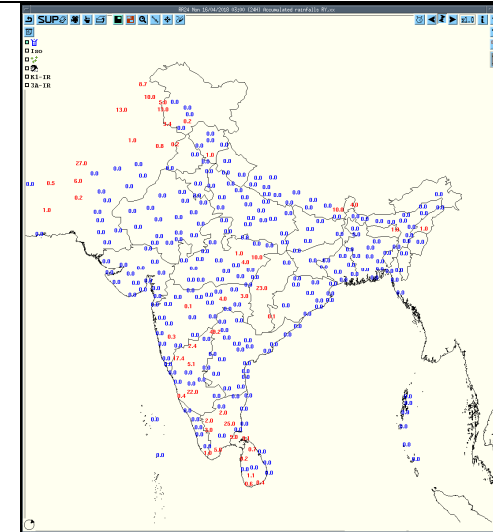
RAPID RGB Imagery at 1230 IST of the Day



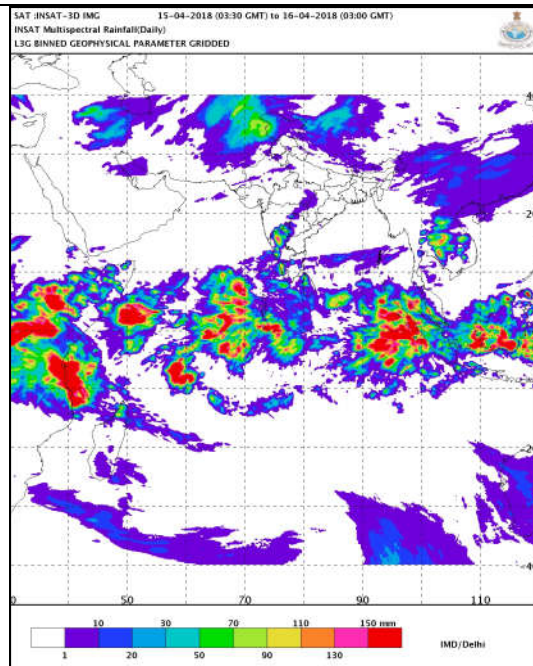
DWR Agartala at 1312 IST of the Day



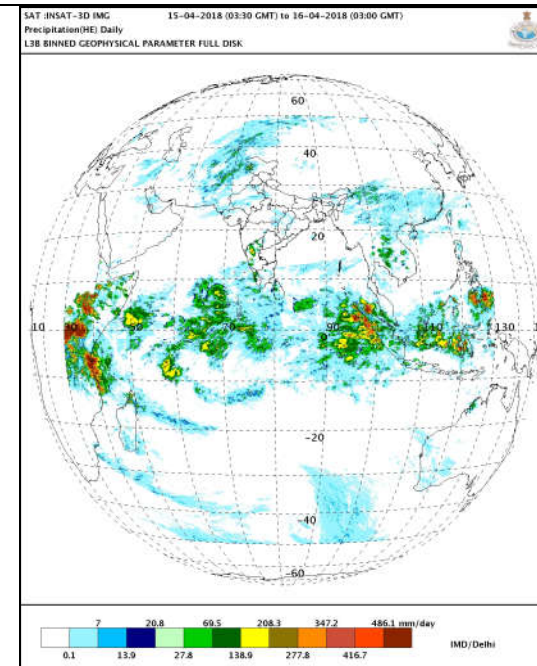
Dust Forecast



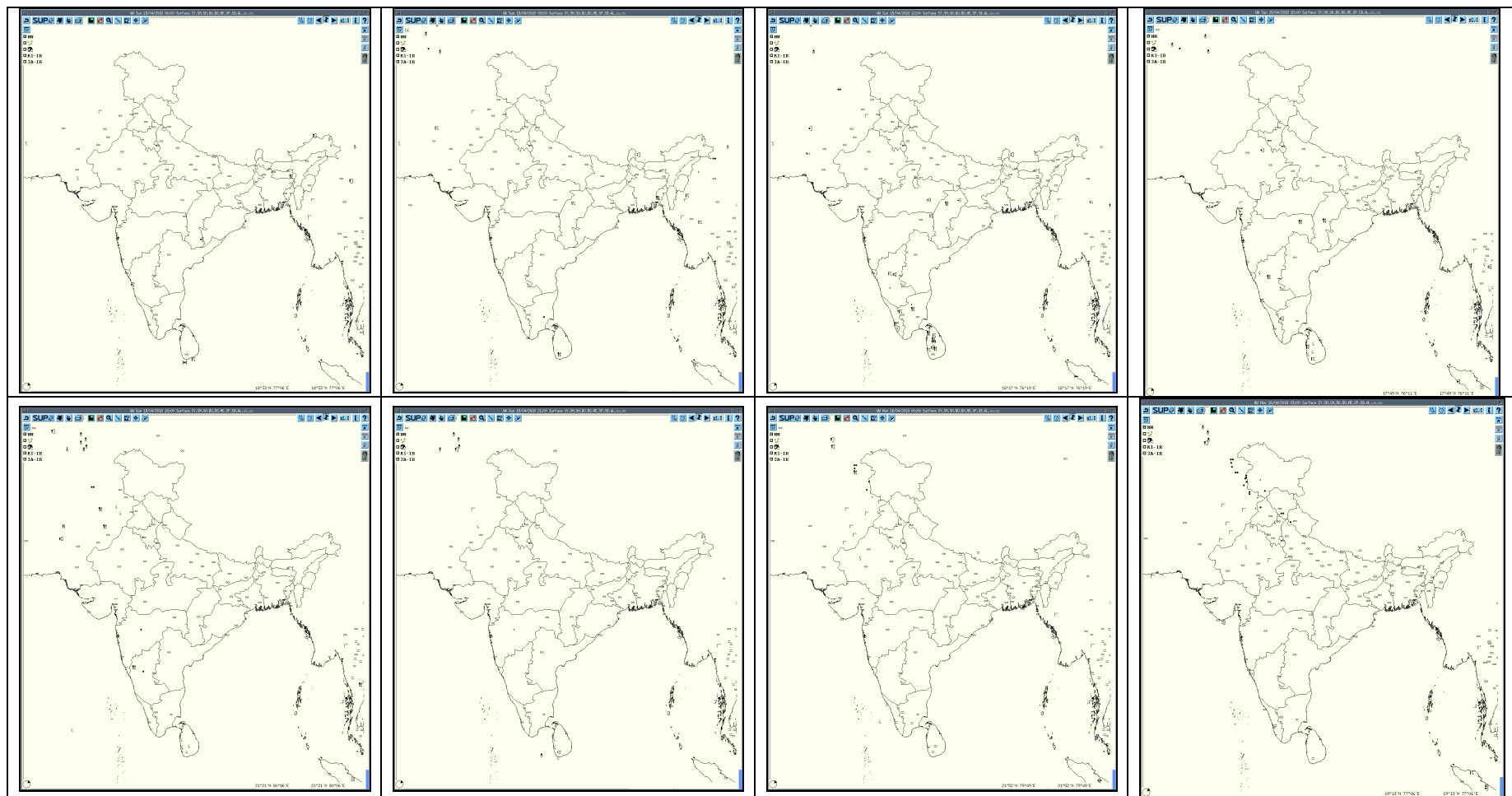
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



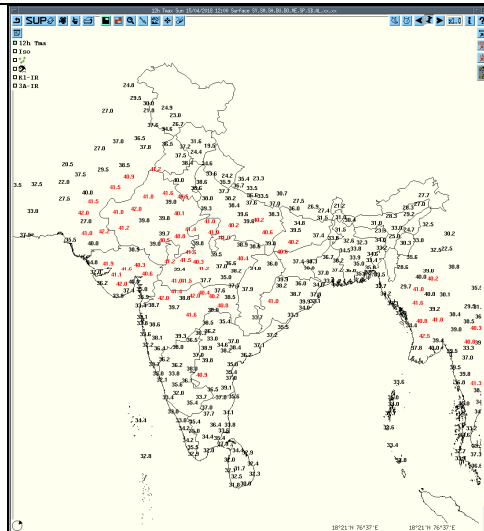
IMR



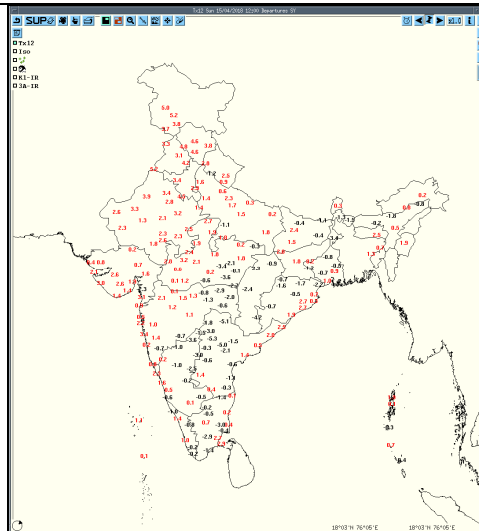
HEM



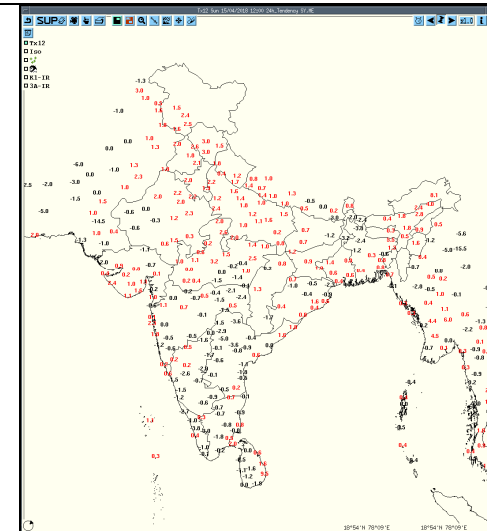
3hourly Past weather at 06, 09, 12, 15, 18, 21 UTC of yesterday and 00 & 03 hrs UTC of today



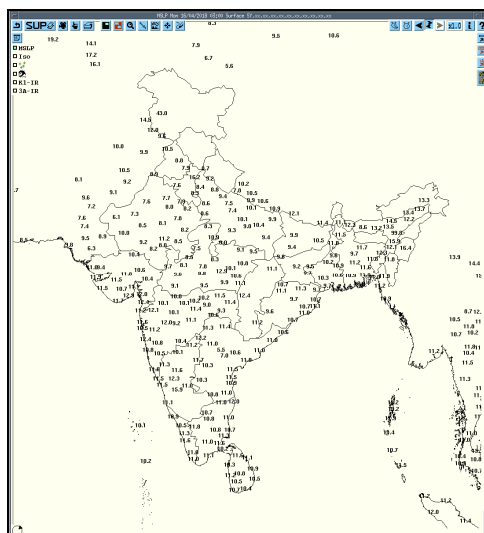
Tmax



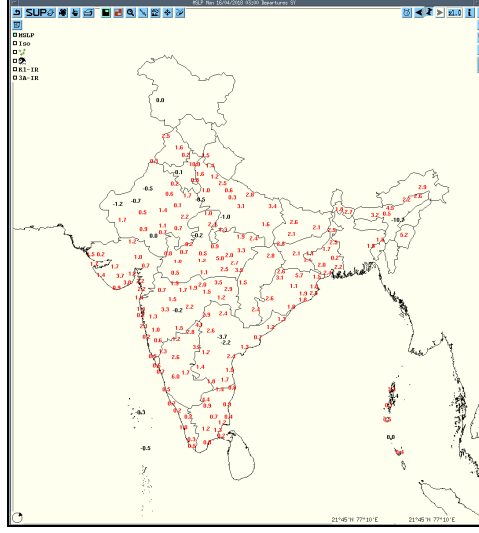
Departure Tmax



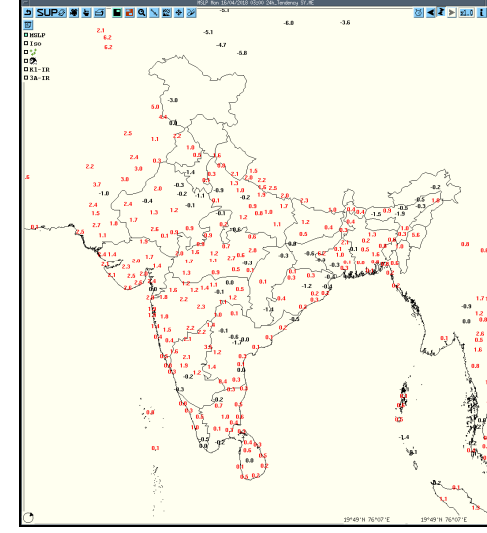
Tendency Tmax



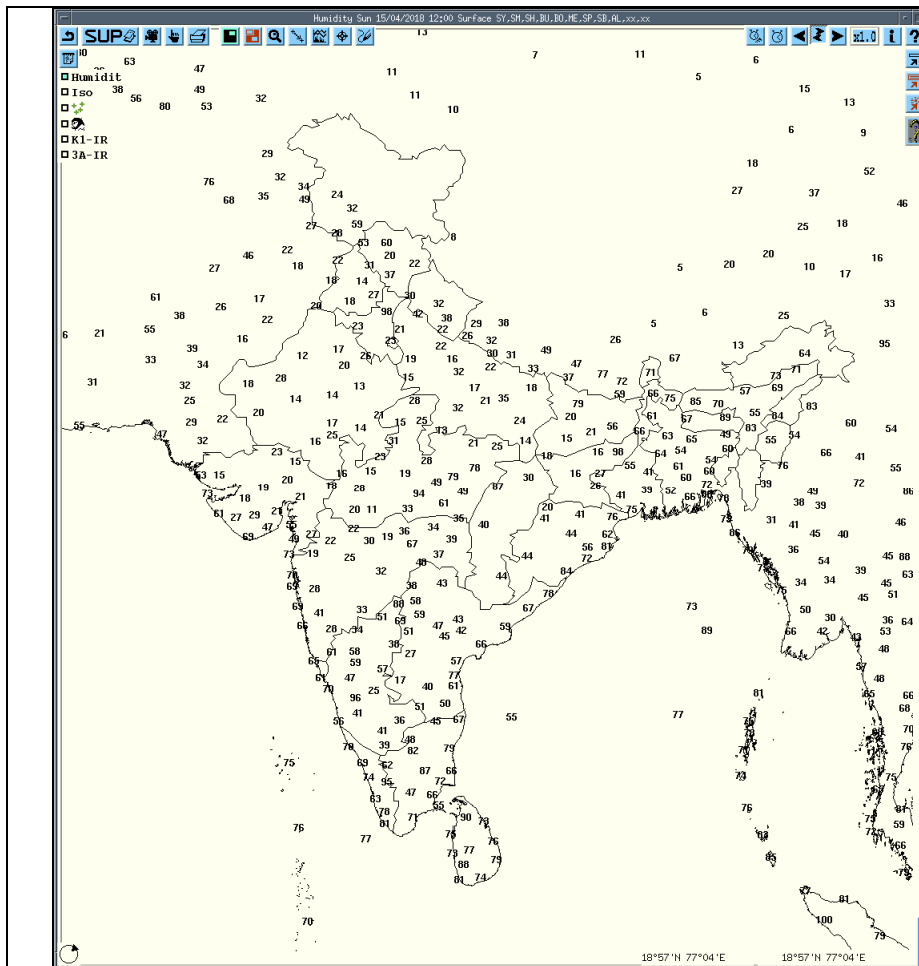
MSLP



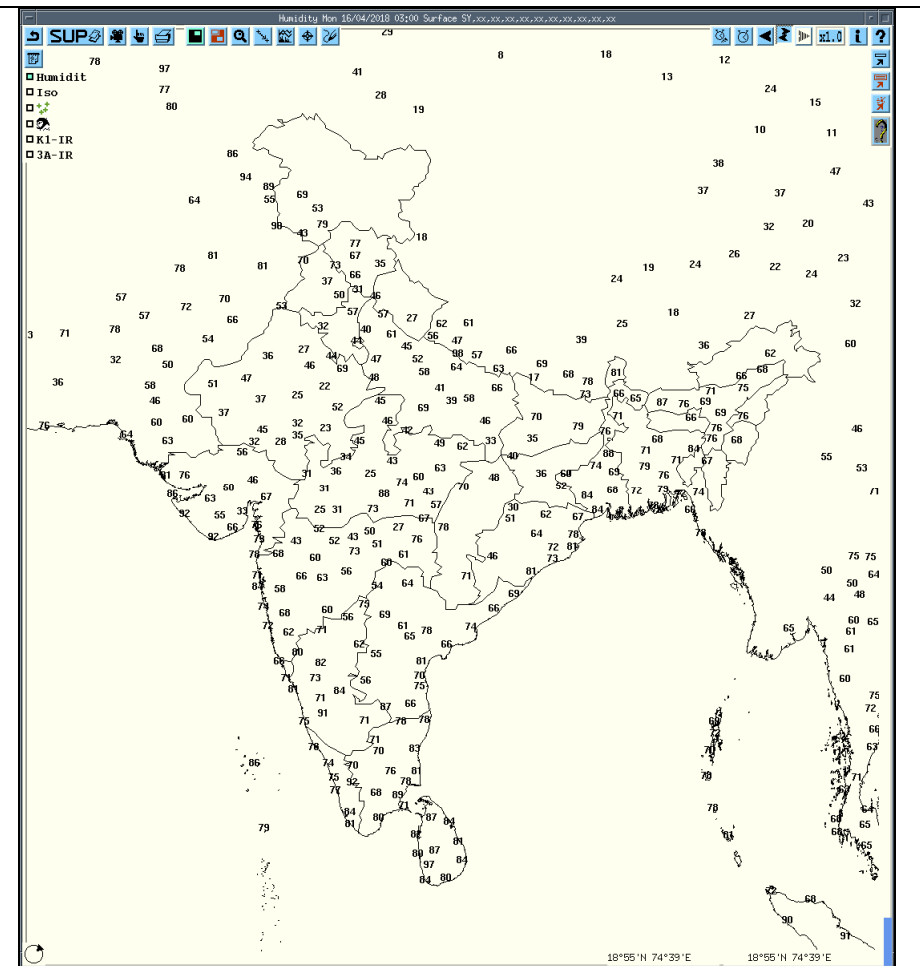
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday



RH at 03UTC today

Past 24 hours DWR Report:

DWR Station	Date	Time interval of observation	Organization of the cells (isolated single cell/multiple cells convective regions/squall lines) with height of 20 dBZ echo top and maximum reflectivity	Formation w.r.t. radar station & direction of movement	Remarks	Associated severe weather, if any	Districts affected
Patiala	16-04-18	150300 - 151200	NO ECHO	--	--	--	--
		151200 - 151500	Multiple echoes Reflectivity: 33.5 dbz Ht. 9-10 km	SW sector Dir. NE ly	_____	TS/RA	Hissar, Bhiwani, Ellanabad
		151500-160000	NO ECHO	--	--	--	--
		160000-160252	Multiple echoes Reflectivity: 33.5 dbz Ht. 9-10 km	NE,NW Sectors Dir. NE ly	_____	RA/DZ	Ropar, Nawanshar, Nangal
Patna	16-04-18	150300-160300	Nil	Nil	Nil	Nil	Nil
Lucknow	16-04-18	150300-160300	Nil	Nil	Nil	Nil	Nil
Kolkata	16-04-18	150300-160300	Nil	Nil	Nil	Nil	Nil
Visakhapatnam	16-04-18	150900	Isolated single cells with maximum reflectivity of 54dBz and maximum height of 10kms	W & NW (70 KMS) moving SEly	Single CB cells formed at 0811UTC and developing . Max. reflectivity of 54dBz observed at 0851UTC	-	Visakhapatnam Dist. Of A.P
		151200	Multiple cells with maximum reflectivity of 62dBz and maximum height of 14kms	W (75 kms) & NW (62 KMS) moving SEly	CB cells developing since last observation and matured well (62dBz, 14 kms) at 1021 UTC. Dissipating start from 1151UTC.	-	Visakhapatnam Dist. Of A.P

Realised past 24hrs TS/SQ/HS Data:

Realised TS/HS/SQ during past 24 hours ending at 0300UTC of today(received from RMCs/MCs)						
Name of Station Reporting	Region	State/Sub Division	Weather Event (TS/Hail/Squall)	Date	Time of Commencement (IST)	Time of end (IST)
Ramgundam	South India	Telangana	Thunderstorm	15-04-18	1215	1235
Nagpur	Central India	Vidarbha	Thunderstorm	15-04-18	1430	1545
Bramhapuri	Central India	Vidarbha	Thunderstorm	15-04-18	2105	2140
Wardha	Central India	Vidarbha	Thunderstorm	15-04-18	1800	1845
Yeotmal	Central India	Vidarbha	Thunderstorm	15-04-18	1400 1800	1600 2000
Gondia	Central India	Vidarbha	Thunderstorm	15-04-18	1740	2200
Jabalpur	Central India	Chhattisgarh	Thunderstorm	15-04-18	1630	1800
Raipur	Central India	Chhattisgarh	Thunderstorm	15-04-18	1905	2050
Ambikapur	Central India	Chhattisgarh	Thunderstorm	15-04-18	1540	1615
Pendra Rd	Central India	Chhattisgarh	Thunderstorm	15-04-18	1330	1800
Chandigarh	Northwest India	Chandigarh	Thunderstorm	16-04-18	0630	0710
Shimla	Northwest India	Himachal Pradesh	Thunderstorm	16-04-18	0730	0800
Barapani	Northeast India	Meghalaya	Thunderstorm	15-04-18	1600	1630
Shillong	Northeast India	Meghalaya	Thunderstorm	15-04-18	1020	1140
Tadong	East India	SHWB	Thunderstorm	15-04-18	1450	1510
Thiruvananthapuram City	South India	Kerala	Thunderstorm	15-04-18	1405	1415

IMPORTANT LINKS:

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 RANDHRA PRADESHID tool:

http://rAndhra_Pradeshid.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(upto03UTCof today)

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

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

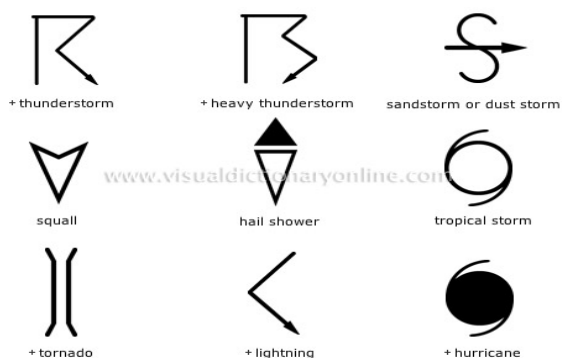
For Radar images of the past 24 hours including mosaic of images:

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

Satellite sounder based T- Phigram

http://satellite.imd.gov.in/mAndhra_Pradesh_skm2.html

WEATHER SYMBOLS:



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