



India Meteorological Department
FDP STORM Bulletin No.55 (29-04-2017)

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

SYNOPTIC FEATURES:

- ◆ The Western Disturbance as an upper air cyclonic circulation over north Pakistan & neighbourhood at 3.1 Km above mean sea level persists. The trough aloft at 5.8 km above mean sea level now runs roughly along Long. 68.0°E and north of Lat. 32.0°N.
- ◆ The upper air cyclonic circulation over central Pakistan & neighbourhood extending upto 1.5 Km above mean sea level persists.
- ◆ The upper air cyclonic circulation over east Assam & neighbourhood extending upto 0.9 km above mean sea level persists.
- ◆ The trough from east Bihar to south Chhattisgarh across Jharkhand extending upto 0.9 km above mean sea level persists with two embedded upper air cyclonic circulations one over east Bihar and another over north Chhattisgarh and both extending upto 0.9 km above mean sea level.
- ◆ The trough from south Madhya Maharashtra to Comorin area now runs from south Konkan to Comorin area across Interior Karnataka & interior Tamilnadu and extends upto 1.5 km above mean sea level.
- ◆ The trough from southeast Rajasthan to northeast Arabian sea at 3.1 km above mean sea level has become less marked.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

Current Observation(based on 0600UTC imagery of INSAT 3D):

WESTERN DISTURBANCE (WD) :-

SCT LOW/MED CLOUDS OVER J&K & N/HOOD IN ASSW WD OVER THE AREA (.)

CLOUDS DESCRIPTIONS WITHIN INDIA:-

NORTH:-

SCT LOW/MED CLOUDS OVER HP HARY DLH UTRKND EXT NW UP (.)

EAST:-

SCT LOW/MED CLOUDS WITH EMBDD ISOL WK TO MOD CONVTN OVER E ASSAM ADJ SHWB (.) SCT LOW/MED CLOUDS OVER CHTGH ORS SKM REST ASSAM ARUPR NAGA (.)

WEST:-

SCT LOW/MED CLOUDS WITH EMBDD ISOL WK TO MOD CONVTN OVER E RAJ ADJ MP (.) SCT LOW/MED CLOUDS OVER REST RAJ SE MP MAH (.)

SOUTH:-

SCT LOW/MED CLOUDS WITH EMBDD WK TO MOD CONVTN OVER TLNGN RYLSM NICOBAR ILS (.) SCT LOW/MED CLOUDS OVER KRNTK NW TN (.)

ARABIAN SEA:-

NO SIG CLOUDS OVER THE REGION (.)

BAY OF BENGAL & ANDAMAN SEA:-

SCT LOW/MED CLOUDS WITH EMBDD MOD TO INT CONVTN OVER ANDAMAN SEA TENASSERIM COT (.) SCT LOW/MED CLOUDS OVER SE BAY (.)

CLOUDS DESCRIPTION OUTSIDE INDIA:-

SCT LOW/MED CLOUDS WITH EMBDD MOD TO INT CONVTN OVER SUMATRA STR OF MALACCA MALAY PENINSULA THAILAND CAMBODIA LAOS VIETNAM GULF OF THAILAND BORNEO JAVA ILS & SEA CELEBES ILS MINDANAO N MADAGASCAR N MOZAMBIQUE CHANNEL AND OVER INDIAN OCEAN BET LAT 5.0N TO 7.0S LONG 41.0E TO 84.0E AND BET 6.0S TO 15.5S EAST OF LONG 84.0E (.)

Past Weather:

Convection :-

Moderate to Intense convection was observed over Rajasthan adjoining Haryana, North Telangana, Karnataka.

OLR :-

Upto 200 wm^{-2} was observed over Extreme North West J&K, Upto 230 wm^{-2} was observed over North West Rajasthan Sikkim, Arunachal Pradesh, Nagaland, North Manipur, Upto 250 wm^{-2} was observed over South Interior Karnataka, Telangana.

Westerly Trough & Jet-Stream :

No Trough & Jet stream observed over India.

Dynamic Features:

Positive shear tendency observed over India.

Low Wind Shear is observed over south & neighborhood and Medium to high wind shear over rest parts of India.

A positive Vorticity field is observed over Madhya Pradesh, North Telangana and Kerala.

Positive Low Level Convergence observed over Rajasthan, Haryana, Madhya Pradesh, Telangana. Negative low level convergence is observed over rest parts of India.

RADAR and RAPID observation:

Strong echoes (dBZ > 30 and height around 12km) were seen in DWR Jaipur, Patiala, Bhopal, Kolkata, Machhilipatnam at 1350UTC..

RAPID RGB Satellite imagery of 1300hrs IST indicates convective clouds over Orissa, Coastal Andhra Pradesh , Chhattisgarh.

Environmental condition (dust etc) and its forecast based on 00 UTC 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 northern-western and northern India. PM10 concentration is expected decrease over northern India for next five days.

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

2. NWP MODEL GUIDANCE:

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

1. Weather Systems:

12UTC Charts of Day-0 to Day-4 show feeble trough in MSLP 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 and Bay of Bengal :(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 Day0-4. At 500 hPa trough over NW India in Day-0-Day-1 and another on Day-3.

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

500hPa Jet core (>60kt) Weaker core winds at 12 UTC on all days over India.

3. Convergence at 850 hPa:

At 12UTC Day-0: At some isolated locations over Odisha, Jharkhand, Chattisgarh and AP. Additionally over one or two locations in MP and Maharashtra.

At 12UTC Day-1: Prominent high values over NW India over Punjab and Haryana.

At 12 UTC on Day-1: Prominent high values over Punjab, HP, Haryana and western UP.

At 12UTC on Day-2: High values over Bihar and adjoining eastern UP.

At 12 UTC on Day-3&4: Prominent over the western ghats and over Jharkhand and Chattisgarh.

4. Low level Vorticity:-Positive Vorticity ($>15 \times 10^{-5}/s$):

At 12UTC on Day-1-4 :Prominent over NE mainly Assam

At 12UTC on Day1-2 : Prominent over NW India over Punjab and Haryana. Over east mainly over Bihar and SHWB.

At 00UTC : very high values along the line of low level confluence and strong convergence..

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

Day0: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Saurashtra_Kutch, Konkan_Goa, Coastal_AP, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala,

Day1: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Chhattisgarh, Coastal_AP, Telangana, TN_Puducherry, Coastal_Karnataka, SI_Karnataka, Kerala,

Day2: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Himachal_Pradesh, Odisha, Konkan_Goa, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, Uttarakhand Himachal_Pradesh, Jammu_Kashmir, Odisha, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala,

Day4: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Konkan_Goa, Madhya_Maharashtra, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala,.

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

Day0: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Punjab, Himachal_Pradesh, Jammu_Kashmir, West_RJ, East_RJ, Odisha, West_MP, Guj_Reg, Saurashtra_Kutch, Konkan_Goa, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,

Day1: Arunachal_Pradesh, Assam_Meghalaya, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Hry_ChD_Delhi, Punjab, Himachal_Pradesh, Jammu_Kashmir, West_RJ, East_RJ, Odisha, West_MP, East_MP, Madhya_Maharashtra,

Marathwada, Vidarbha, 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, West_UP, Uttarakhand, Hry_Chd_Delhi, Punjab, Himachal_Pradesh, Jammu_Kashmir, Odisha, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Jharkhand, Bihar, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Konkan_Goa, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,

Day4: Arunachal_Pradesh, Sub_Himalayan_WB, Uttarakhand, Hry_Chd_Delhi, Himachal_Pradesh, Jammu_Kashmir, West_RJ, East_RJ, Odisha, Konkan_Goa, Madhya_Maharashtra,

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

Day0: Arunachal_Pradesh, NE_NMMT, Sub_Himalayan_WB, Bihar, Jammu_Kashmir, Madhya_Maharashtra, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka, Kerala,

Day1: Arunachal_Pradesh, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Punjab, Himachal_Pradesh, Jammu_Kashmir, Odisha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, SI_Karnataka, Kerala,

Day2: Arunachal_Pradesh, NE_NMMT, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Odisha, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, NE_NMMT, Sub_Himalayan_WB, Uttarakhand, Odisha, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka, Kerala,

Day4: Arunachal_Pradesh, Sub_Himalayan_WB, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Konkan_Goa, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Coastal_AP, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala

8. Rainfall and thunder storm activity:

Day1: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Himachal_Pradesh, Jammu_Kashmir,

Day2: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Himachal_Pradesh, Jammu_Kashmir, Rayalseema, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, East_UP, Himachal_Pradesh,

Day4: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT,

Day5: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Jammu_Kashmir,

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

1. Weather Systems:

The quasi-stationary CYCIR over Odisha and adjoining areas would persist during next 48 hours. Another CYCIR over Punjab and adjoining areas moves eastward and lies over central UP and adjoining areas on day3. Forecasts show a north-south trough over south peninsula would persist during next 5 days. Forecasts also show the feeble CYCIR over extreme NE parts of India will persist for the next 5 days. Contour at 500 hPa shows a feeble WD would affect the northern parts of the India during next two days.

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

500hPa Jet core (>60kt): No presence of jet core over the Indian region for the next 5 days.

3.Low level Vorticity:-Positive Vorticity 850hPa (>12 x 10⁻¹/s):

850hPa Positive Vorticity (>12 x 10⁻¹/s): Mostly over the region of CYCIR at 850 hPa, along the foot hill of Himalaya and parts of central India and along trough over south peninsula 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. 3-3.5 mostly along east coast, eastern part of the country, along west coast and over Gujarat and adjoining south Rajasthan but less than threshold value 4 all over the country during next 5 days.

Lifted Index (< -2): Less than threshold value mostly along east coast, south peninsula, west coast, Gujarat, Rajasthan, over Gangetic West Bengal and over Bihar, Jharkhand, east UP and parts of north eastern states during next 5 days.

Total Total Index (> 50) : Above threshold value over the most parts of central and eastern parts of India at 06 UTC and 12 UTC during next 36 hours and west and north-western parts of India during 36 hours to 114 hours.

Sweat Index (> 300): Mostly along east coast, along west coast, Gujarat and adjoining areas of Rajasthan, Gangetic plain, eastern part of India and north eastern states during next 5 days.

CAPE (> 1000): Mostly along east coast, west coast, Gujarat and adjoining areas of Rajasthan, over eastern part of India and parts of north eastern states during next 5 days.

CIN (50-150): Mostly along east coast, west coast, Gujarat and adjoining areas, parts of north eastern states and over eastern part of India during next 5 days.

5. Rainfall and thunderstorm activity:

10-40 mm rainfall over NE states during next five days.

10-40 mm rainfall over J&K, HP and Uttarakhand during next 48 hours.

10-40 mm rainfall over Gangetic West Bengal during day2 to day3.

10-40 mm rainfall over Andhra Pradesh during next 72 hours.

10-40 mm rainfall over south peninsula during next four days.

IMD WRF based on 00 UTC of the day:-

Model Reflectivity (Max.dBz)

15-35 dBZ Model reflectivity over some parts of J&K, HP and Uttarakhand during next 2 days.

20-30 dBZ over parts of UP and Bihar during day2 to day3.

15-30 dBZ over parts of Andhra Pradesh, eastern parts of India and over parts of NE states during next 72 hours.

Spatial distribution of Total Total Index, K-Index, CAPE and CIN

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

K-Index (> 35): Less than threshold value over the country during the next 72 hour.

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

CIN (50-150): CIN values are mostly less than threshold value over coastal regions, higher than over central parts of India and within threshold limit over parts of north eastern states and south peninsula at 12 UTC during next three days.

Rainfall activity

Rainfall activity (10-40 mm) over parts of J&K, HP and Uttarakhand during next two days.

10-40 mm over Gangetic West Bengal during day2 to day3.

10-40 mm over south peninsula and NE states during next 3 days.

3.IOP ADVISORY FOR 24 and 48 Hrs:

SummaryandConclusions:

Day 1 & Day 2:

In association with the upper air cyclonic circulation over central Pakistan & neighbourhood thunderstorms accompanied by gusty winds is expected over Northwest India on day 1 and day 2. Duststorms are expected over west Rajasthan on day 1. In association

with the upper air cyclonic circulation over east Assam & neighbourhood and the trough from east Bihar to south Chhattisgarh across Jharkhand heavy rainfall is expected over East and Northeast India on day 1 and day 2.
In association with the trough from south Konkan to Comorin area across Interior Karnataka & interior Tamilnadu thunderstorms are also likely over South Peninsular India.

24 hour Advisory for IOP:

Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura and Arunachal Pradesh
Gangetic West Bengal, Orissa, Sub Himalayan West Bengal
Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab, Delhi, West Uttar Pradesh, East Rajasthan
Kerala, Interior Tamilnadu, Interior Karnataka, Telangana, Rayalaseema, Coastal Andhra Pradesh,
Chhattisgarh and south Madhya Maharashtra

48 hour Advisory for IOP:

Assam, Meghalaya, Nagaland, Manipur, Mizoram, Tripura and Arunachal Pradesh
Gangetic West Bengal, Orissa, Jharkhand, Bihar, Sub Himalayan West Bengal
Jammu and Kashmir, Himachal Pradesh, Uttarakhand, Haryana, Punjab, Delhi, West Uttar Pradesh
Kerala, Interior Tamilnadu, Interior Karnataka, Telangana, Rayalaseema, Coastal Andhra Pradesh,

ForNCMRWFNWPproducts:(<http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php>)

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

ForSynopticplotteddataandcharts

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

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

ForRAPIDtool:

<http://rapid.imd.gov.in/>

LowLevelWinds

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

Upperlevelwinds

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

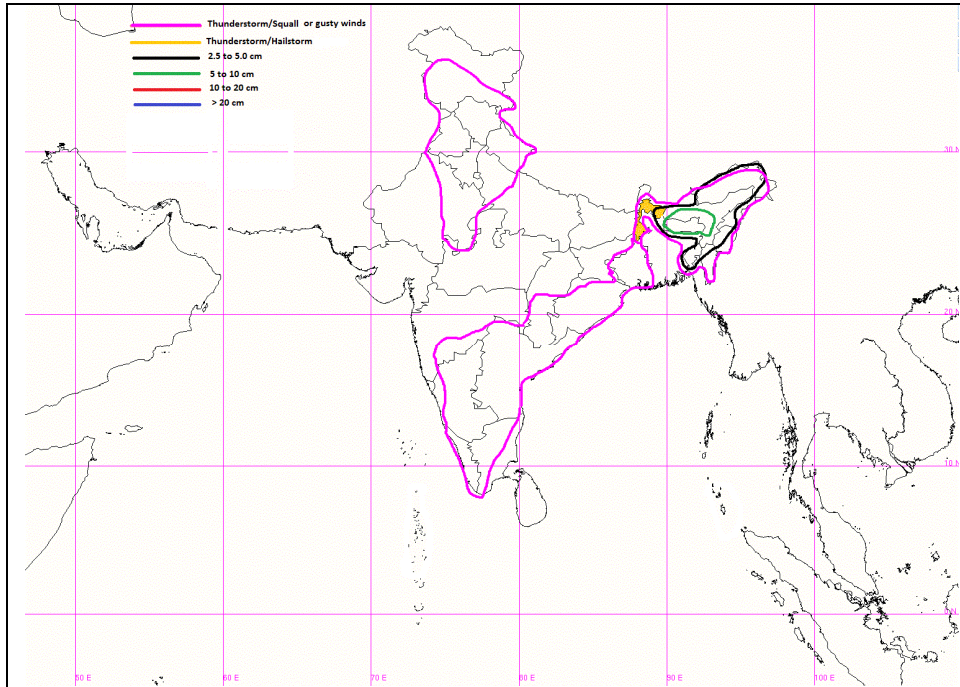
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ForRadarmagesofthepast24hoursincludingmosaicofimages:

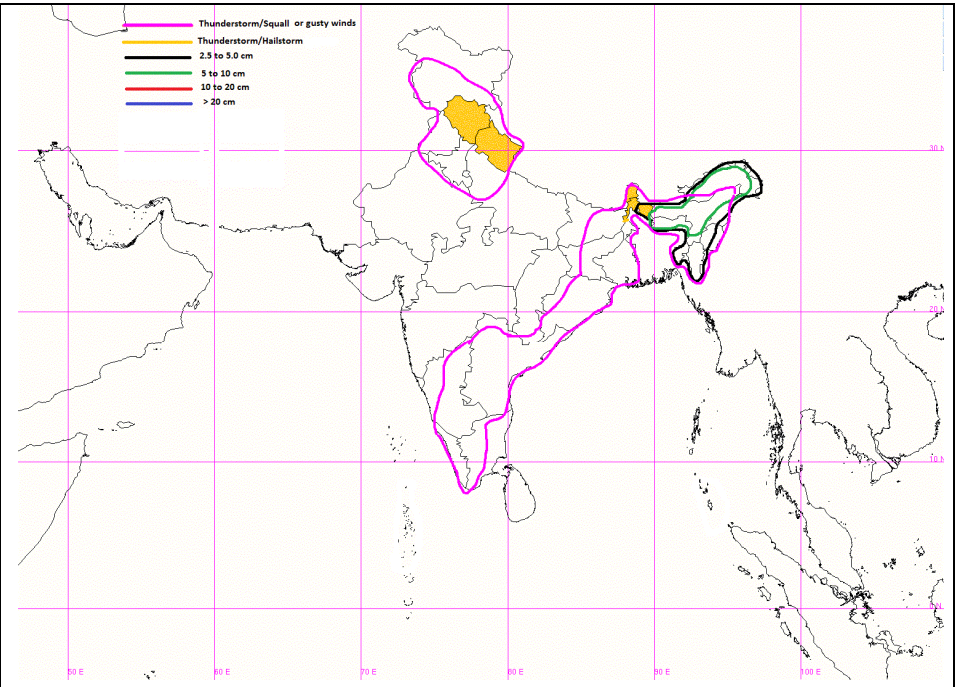
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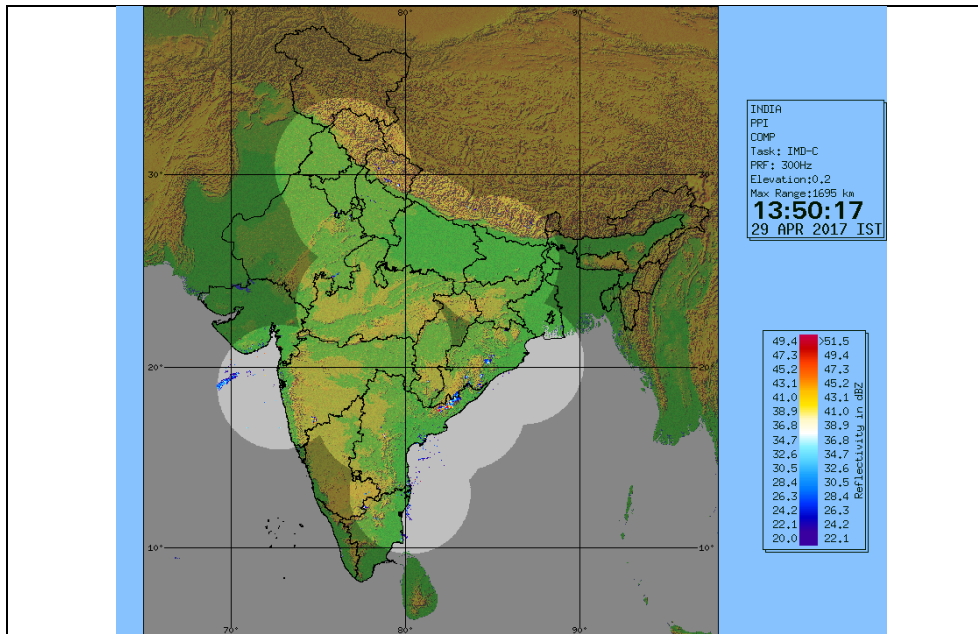
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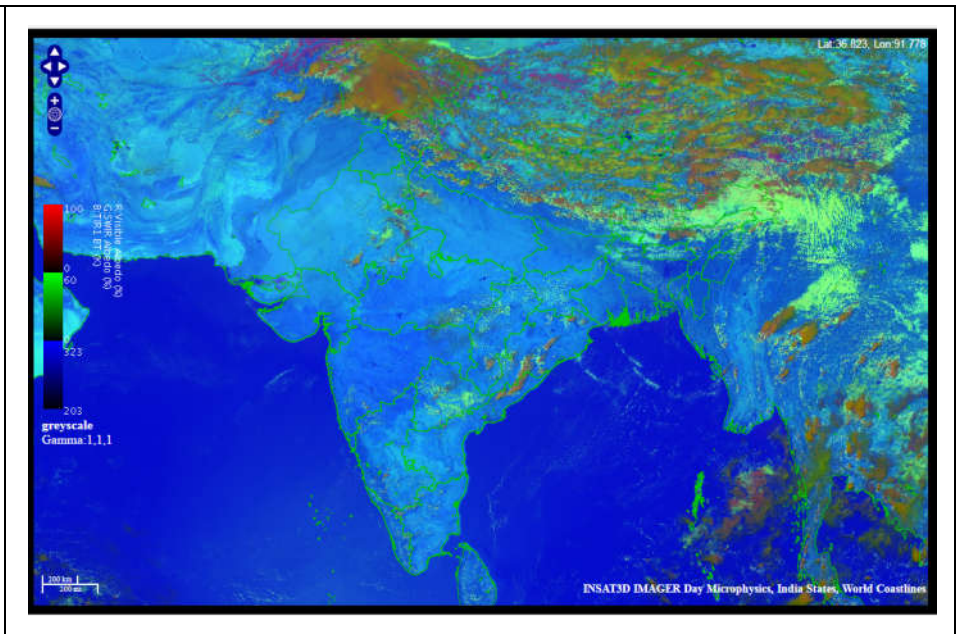
IOP Advisory for 24 hours



IOP Advisory for 48 hours



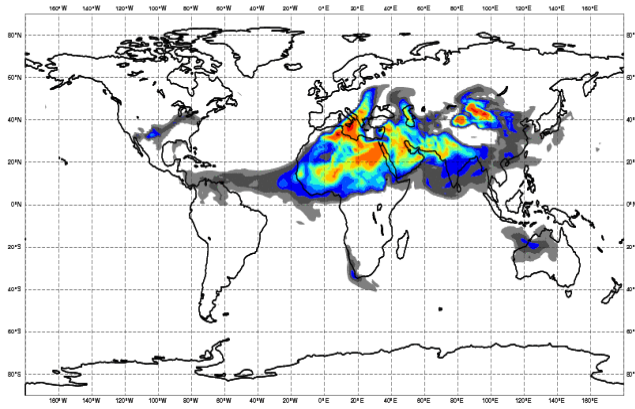
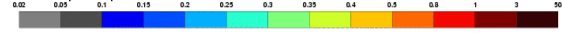
DWR Composite at 1350hrs IST of today



RAPID RGB Image of INSAT 3D at 1530 hrs IST of today

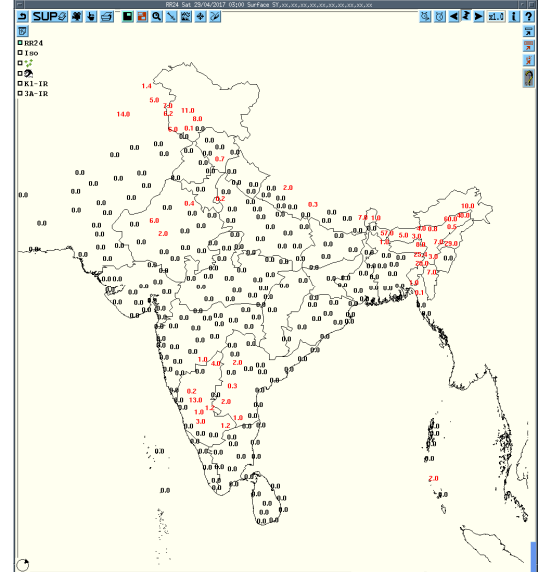
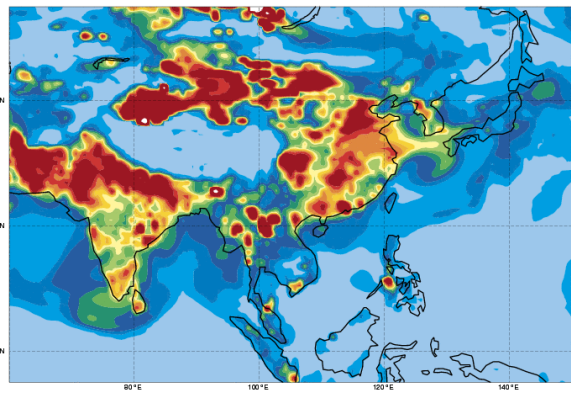
Friday 28 April 2017 00UTC CAMS Forecast t+024 VT: Saturday 29 April 2017 00UTC

Dust Aerosols Optical Depth at 550 nm



Friday 28 April 2017 00UTC CAMS Forecast t+024 VT: Saturday 29 April 2017 00UTC

Surface PM10 [$\mu\text{g}/\text{m}^3$]

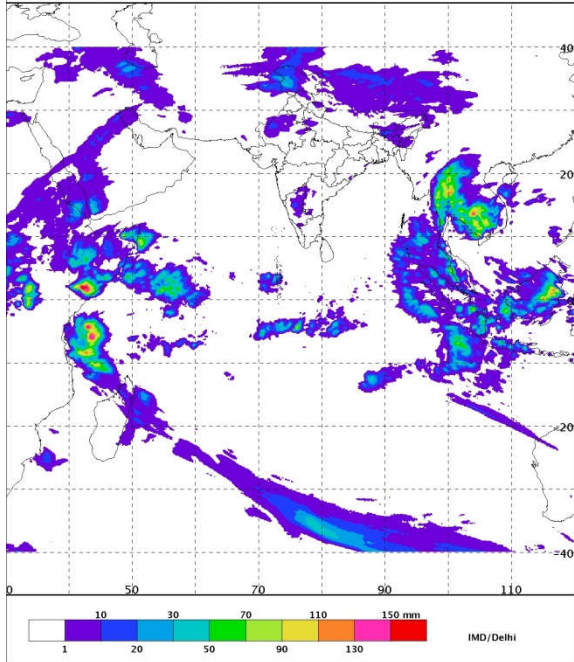


Forecast Dust Concentration for 00UTC of 29th April

PM 10 forecast for 00UTC of 29th April

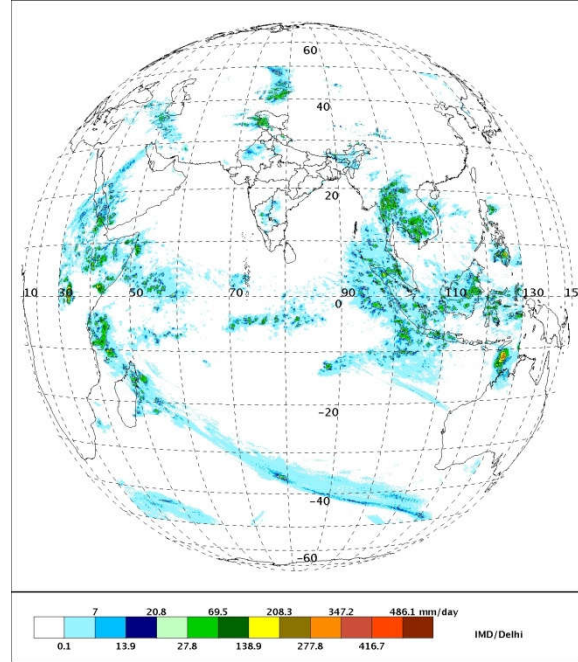
Accumulated 24 Hour rainfall (in red) recorded at 0300 UTC of today

SAT :INSAT-3D IMG 28-04-2017 (03:30 GMT) to 29-04-2017 (03:00 GMT)
INSAT Multispectral Rainfall(Daily)
L3G BINNED GEOPHYSICAL PARAMETER GRIDDED

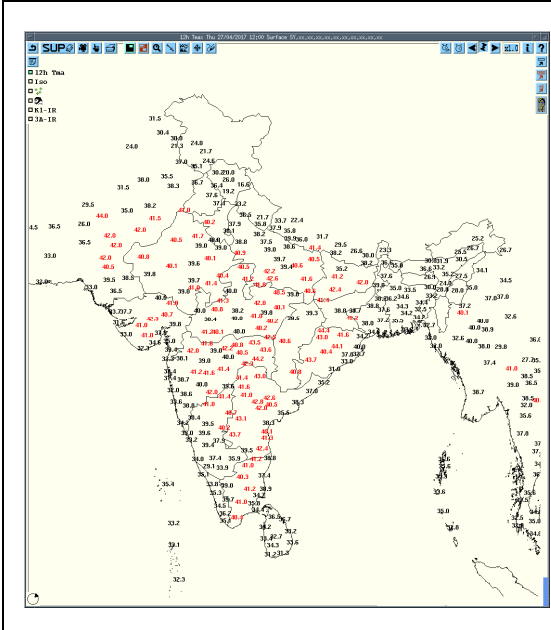


IMR Rainfall

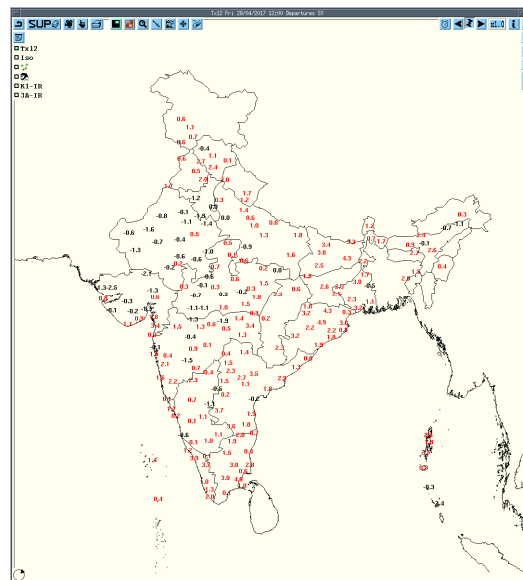
SAT :INSAT-3D IMG 28-04-2017 (03:30 GMT) to 29-04-2017 (03:00 GMT)
Precipitation(HE) Daily
L3B BINNED GEOPHYSICAL PARAMETER FULL DISK



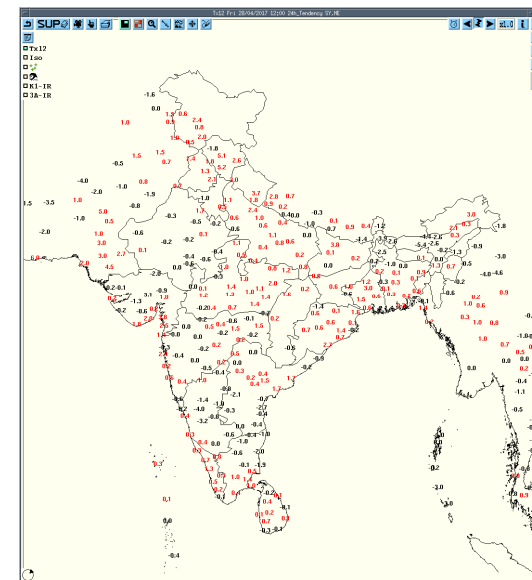
HEM Rainfall



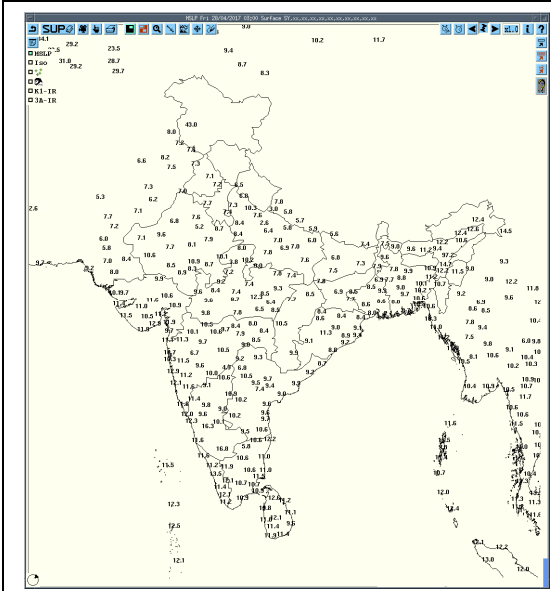
Tmax



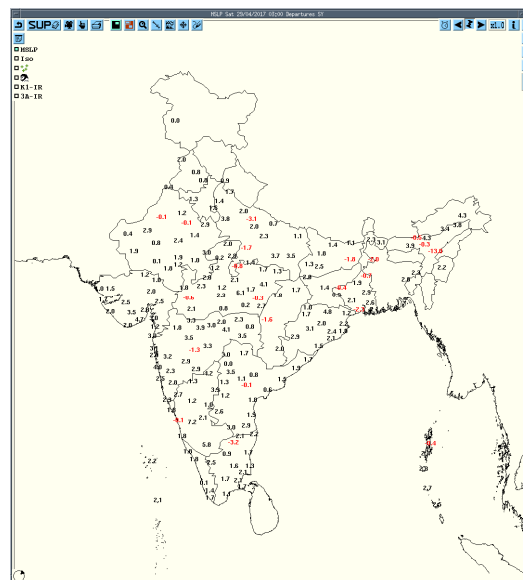
DepartureTmax



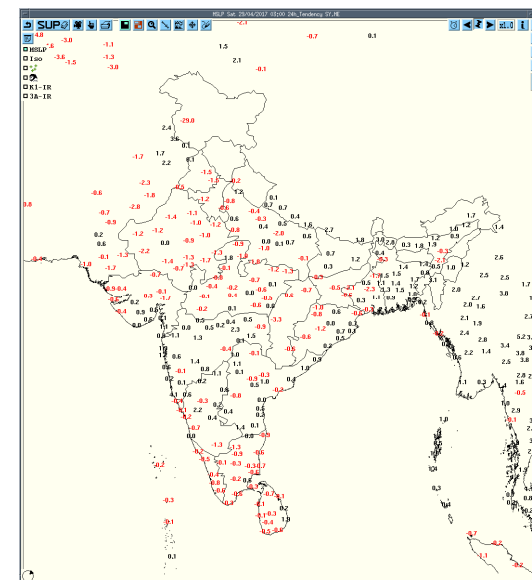
TendencyTmax



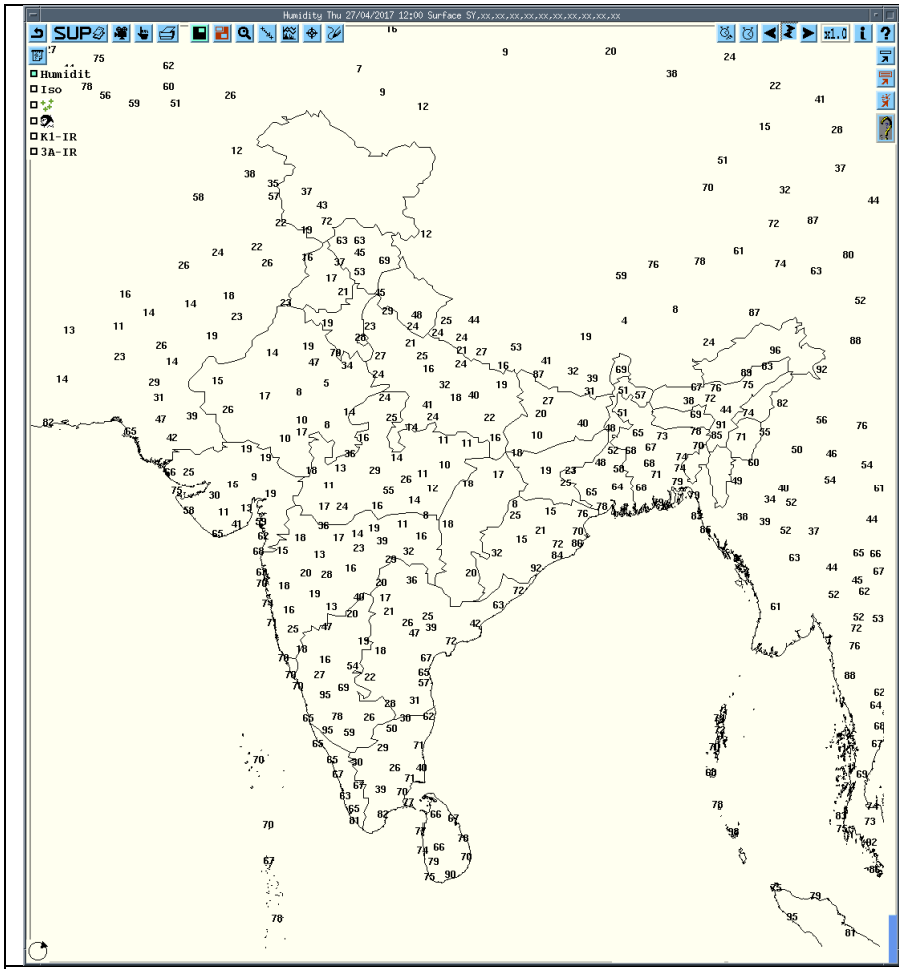
MSLP



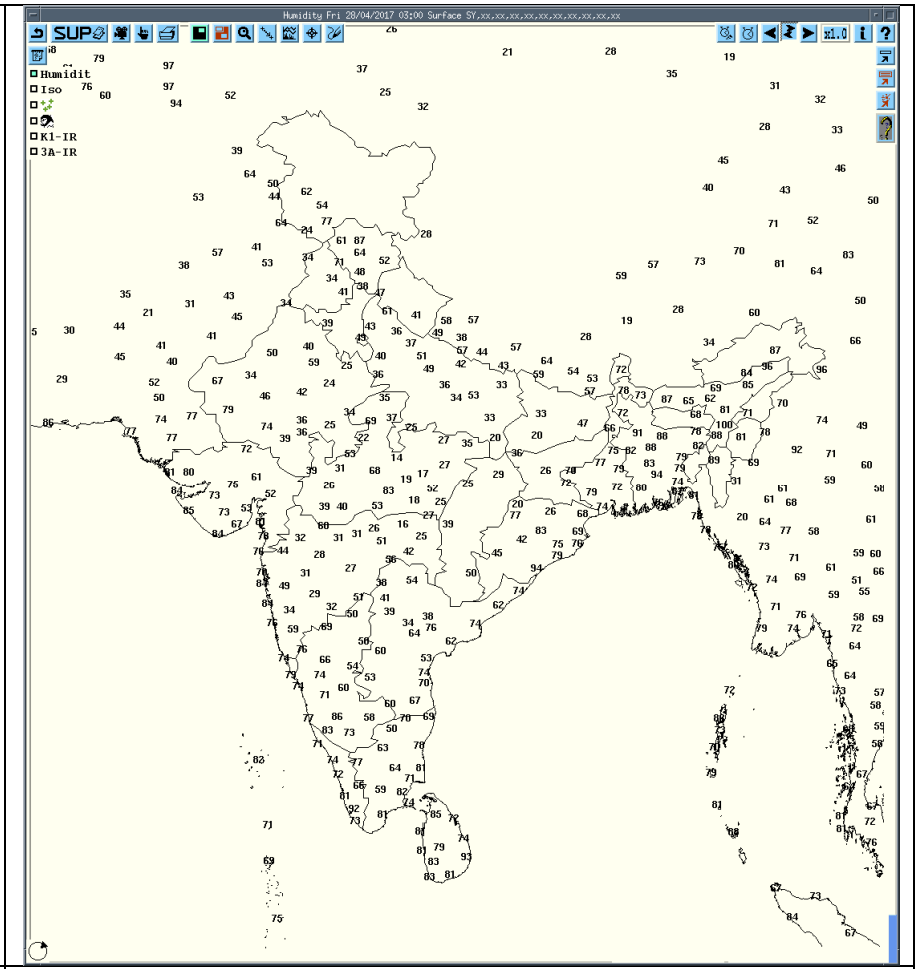
DepartureMSLP



TendencyMSLP



RH at 12UTC yesterday



RH at 03UTC today

Realized weather past 24 hours(Based on SYNERGIE Products)

Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
28-04-17	0600 UTC	Nil	Nil	Nil	Nil
28-04-17	0900 UTC	Gangtok	East India	Sikkim	Thunderstorm
		Dibrugarh	Northeast India	Assam	Thunderstorm
28-04-17	1200 UTC	Baderwah	North India	Jammu and Kashmir	Thunderstorm
		Ajmer, Phalodi	North India	Rajasthan	Thunderstorm
		Agra	North India	Uttar Pradesh	Thunderstorm
		Baghdogra	East India	SHWB	Thunderstorm
		Jorhat, Kailashahr	Northeast India	Assam	Thunderstorm
		Gopalpur	East India	Orissa	Thunderstorm
		Sholapur	West India	Madhya Maharashtra	Thunderstorm
		Chitradurga, Shimoga, Haveri	South India	Karnataka	Thunderstorm
		Chamrajnagar	South India	Tamil Nadu	Thunderstorm
28-04-17	1500 UTC	Churu	North India	Rajasthan	Lightning
		Hyderabad, Anantapur	South India	Andhra Pradesh	Thunderstorm
		North Lakhimpur, Guwahati	Northeast India	Assam	Thunderstorm
		Gadag	South India	Karnataka	Thunderstorm
28-04-17	1800 UTC	Churu, Jodhpur, Barmer	North India	Rajasthan	Thunderstorm
		Hissar	North India	Haryana	Lightning

		Guwahati, North Lakhimpur	Northeast India	Assam	Thunderstorm
		Gadag, Belgaum	South India	Karnataka	Lightning
28-04-17	2100 UTC	Guwahati	Northeast India	Assam	Thunderstorm
29-04-17	0000 UTC	Nil	Nil	Nil	Nil
29-04-17	0300 UTC	Banihal, Kokarnag, Batote	North India	Jammu and Kashmir	Thunderstorm
		Sundernagar	North India	Himachal Pradesh	Thunderstorm

Past 24hours 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
DWR HYDERABAD	27/28.04. 2017. (0300 UTC to 0300 UTC)	27/0712-0902 UTC	Isolated cells with an average height of 10 Km with a max reflectivity of 47 dBZ at 0832 and dissipated by 0912	SSE (127 Kms) moving in E- ly Direction at a speed of 10 Kmph.	Cells started forming at 0652 UTC at SSE (110 Kms) from radar, Matured a bit in size. Max reflectivity was between 0752 and 0842TC .	Light Thunderstorm with or without rain	Not known.
		27/ 0832-1022 UTC	Isolated cells with an average height of 10 Km with a max reflectivity of 51.5 dBZ at 0932 and dissipated by 1022	SSE (195 Kms) moving in E- ly Direction at a speed of 10 Kmph.	Cells started forming at 0812 UTC at SSE (195 Kms) from radar, matured bet.. 0912 and 0942 UTC .	Moderate Thunderstorm with or without rain	Not known.
		27/ 1102 - 1232 UTC	Isolated cells with an average height of 10 Km with a max reflectivity of 55.5 dBZ at 1122 and dissipated by 1232	SE (212 Kms) moving in S- ly Direction at a speed of 10 Kmph.	Cells started forming 1042 UTC at SSE (200 Kms) from radar, Matured a bit in size. Max reflectivity was between 1052 and 1152UTC .	Light Thunderstorm with or without rain	Not known.
		27/ 1132 - 1332 UTC	Isolated cells with an average height of 11 Km with a max reflectivity of 56.5 dBZ at 1252 and dissipated by 1332	E (105 Kms) moving in ENE- ly Direction at a speed of 10 Kmph.	Cells started forming 1132 UTC at ENE (90 Kms) from radar, Matured a bit in size. Max reflectivity was between 1232 and 1302 UTC .	Moderate Thunderstorm with or without rain	Not known.
		27/ 1232 - 1552 UTC	Isolated cell started forming at 1202 and became BKN by 1232 covering area more than 200 Sq Km with < 40dBz	SSW (140 Kms) E- ly Direction at a speed of 10 Kmph.	Cells started forming 1202 UTC at SSW (140 Kms) from radar.		Not known.

Patiala	08/04/20 17	28 April 0302 to 29 April 0252 UTC	Nil	Nil	No Echoes	Nil	Nil
Machhilipatnam	03Z of 28/04/17 to 03Z of 29/04/17	0901 to 1111 UTC	Isolated Multiple cells with average height of 7.0 km with maximum reflectivity of 56.5 dBZ	NE(200KM) and moving SW ly direction with average speed of 9.2kmph	Cells started forming at 0901UTC at NE (200km) from radar. Maximum reflectivity during 0901 to1111 and died down at 1121UTC	Possibility of Thunder storm with moderate winds.	Visakhapatnam, and East Godavari Districts
	03Z of 28/04/17 to 03Z of 29/04/17	1121 to 1151UTC	Isolated cell average height of 5km with maximum reflectivity of 60.0dBZ	NE(180KM) -Stationary	Cell started forming at 1121UTC at NE (180km) from radar. Maximum reflectivity during 1121 to 1151 and died down at 1201 UTC	Possibility of Thunder storm with hail and moderate winds.	East Godavari District
	03Z of 28/04/17 to 03Z of 29/04/17	1041 to 1231UTC	Isolated Multiple cells average height of 6.0 km with maximum reflectivity of 56.5dBZ	W(230KM) and moving SW ly direction with average speed of 7.2 kmph	Cells started forming at 1041UTC at W (230km) from radar. Maximum reflectivity during 1041 to 1221 and died down at 1231 UTC	Possibility of Thunder storm and moderate winds.	Prakasam District
	03Z of 28/04/17 to 03Z of 29/04/17	1221 to 1401UTC	Isolated Multiple cells average height of 7.0 km with maximum reflectivity of 61.5dBZ	NW(194KM) and moving SE ly direction with average speed of 18.9 kmph	Cells started forming at 1221UTC at NW (194km) from radar. Maximum reflectivity during 1221 to 1401 and died down at 1411 UTC	Possibility of Thunder storm with Hail and moderate winds.	Khammam District
	03Z of 28/04/17 to 03Z of 29/04/17	2041 to 2301UTC	Isolated Multiple cells average height of 7.0 km with maximum reflectivity of 55dBZ	W(223KM) and moving SW ly direction with average speed of 10.3 kmph	Cells started forming at 2041UTC at W (223km) from radar. Maximum reflectivity during 2041 to 2301 and died down at 0021 UTC	Possibility of Thunder storm and moderate winds.	Nalgonda District.

Kolkata	28-04-2017	0311-0921 UTC	NIL	NIL	NO SIGNIFICANT ECHO	NIL	NIL
		0931 – 1121 UTC	Single cell with maximum reflectivity of 60.0 dBz at 1001 UTC and maximum height of 14.4 Km at 1051 UTC .	SW (236 km) Almost no movement.	Formation started at 0931 UTC in SW at a distance of 236 km from Radar. Matured and dissipated at 1121 UTC in SW at a distance of 243 km from Radar.	Thunderstorm /Rain	N/A
		1131 – 2351 UTC	NIL	NIL	NO SIGNIFICANT ECHO	NIL	NIL
	29-04-2017	0001 – 0302 UTC	NIL	NIL	NO SIGNIFICANT ECHO	NIL	NIL
MC JAIPUR	29/04/17	0832 - 1900 UTC	Multiple cell average height of 4.7 km maximum reflectivity 50.5 dBZ	NE & EAST wards at speed direction 36m km/hr	Cells started forming 0832 UTC NE Jaipur and multiple cell was observed and maximum refelectivity during 0942-1202 UTC and died down at 1900 UTC.	TSRA was reported at isolated places	AJMER,TO NK,SWAIM ADHOPUR, Bharatpur, Pilani, Jhunjhunu, Churu, Alwar, Nagaur Districts
	29/04/2017	2312-0300UTC	MULTIPLE CELLS AVERAGE HEIGHT OF 2.4 KM MAXIMUM REFLEVICITY 50.0 DBZ	SW&SPEED NE WARDS AT 30 KM /HR	Cells started forming at 2312 utc sw from jaipur and multiple cells was observed and maximum reflecitivity during 0112-0302 utc and continue	TSRA WAS REPORTED AT ISOLATED PLACES	AJMER,TO NK DISTRICT S










AGARTALA	29/04/17	280300 - 281120	Multiple Cells continuously formed one after another over the same area for two days with Maximum Height 14 km and maximum reflectivity 47dBZ(at 0550 UTC of 28.04.17 over SE Meghalaya)	Started forming 170 km NNW of DWR AGT since 2000 UTC of 26.04.17 and moved ESE-wards at around 40 kmph	The cells dissipated at 1120 UTC of 28.04.17 over East Meghalaya & Assam	TS with rain	East Khasi hills districts of Meghalaya
		280650 - 281340	Single Cell with Maximum Height 14km and maximum reflectivity 48dBZ(at 0940 UTC over South Assam)	Formed 100 km North of DWR AGT at 0650 UTC of 28.04.17 and moved ESE-wards at around 25 kmph	The cells dissipated at 1340 UTC of 28.04.17 over Manipur	TS with rain	North & Unakoti Districts of Tripura
		280650 - 281530	Multiple Cells with Maximum Height 15km and maximum reflectivity 47dBZ(at 1230 UTC over North Tripura)	Formed 130 km NNW of DWR AGT at 0650 UTC of 28.04.17 and moved ESE-wards at around 25 kmph	The cells dissipated at 1530 UTC of 28.04.17 over Mizoram & adj Myanmar	TS with rain	North, Unakoti & Dhalai Districts of Tripura
		281020 - 290230	Multiple Cells continuously formed one after another over the same area with Maximum Height 16km and maximum reflectivity 55dBZ(at 1210 UTC over West Assam-270 km NNW of DWR AGT)	Started forming 350 km NNW of DWR AGT since 1020 UTC of 28.04.17 and moved ESE-wards at around 50 kmph	The cell dissipated at 0230 UTC of 29.04.17 over South Assam	TS with rain	East Khasi hills districts of Meghalaya
Paradeep	29/04/17	0830-1130	Two Isolated cells having reflectivity of 36dBZ and 40 dBZ observed forming after 1530 IST at a distance of 82 km from north of station and 92km northwest of station respectively with average height of 12 km .After some time they merged together formed a single cell of height 14 km having	Position:1 st cell Lat.: -21.05deg.N Long: -86.38deg.E 2 nd cell Lat: - 20.99degN Lon: - 86.68degE. Cloud movement -SWly	NIL .	TS with slight rain	

			reflectivity 47dBZ at a distance of 75.3 km from north of the station at 1650 IST .After some minutes the cells are dissipated. After that convective clouds formed on the sea surface at distance of 217 km in southeast of the station which were dissipated immediately .				
DWR LUCKNOW	29/04/20 17	280300UTC to 290300UTC	--	--	Radar U/S and under maintenance	--	--
SRINAGAR	29/04/20 17	28 April 03Z to 29April 3Z(24hrs)	Multiple cells developed fromWSW of DWR Srinagar at 0840 UTC and moved ESE direction with average height 9 kms and max reflectivity45-55 dbz	Developed from WSWdirections of DWR site Srinagar and moved towards ESE direction AND PERSISTED TILL 0830 today	Thunderstorm observed/reported at gulmarg,kupwara,qazigund.phalgam,kukernag.bani hal,batote and bhadervah	Light to moderate rain /thunder	Lightto moderate rain at Srinagar,qa zigund,phal gam,kupwar a.kukernagb anihal,batote,and gulmarg .
DWRVSK	28/04/17	0300 UTC-0600 UTC	NIL	NIL	NIL-	-	-
	28/04/17	0600 UTC-0900 UTC	Multiple cells with max reflectivity 57 dbz at Max. Height of 10kms.	NNE(129 km) and moving Ely	Multiple cells formed in W,NW and NNE directions and developing. Maximum reflectivity of 57 dbz shows at 0831UTC onwards.	-	-

	28/04/17	0900 UTC-1200 UTC	Multiple cells with max reflectivity 58 dbz at Max. Height of 13kms.	NE(91 km), NE(192) and moving SEly	Multiple cells formed in W,NE and N directions with Maximum reflectivity of 58 dbz and dissipating from 10.51 UTC onwards.	-	-
	28/04/17	1200 UTC-1500 UTC	Multiple cells at SW 83kms with max reflectivity 44dbz and height 4kms.	-	Multiple small cells in the region where the movement is unpredictable.	-	--
	28/04/17	1500 UTC-1800 UTC	A CELL in convective region SE 150kms with max reflectivity 48dbz and height 4kms.	Southerly movement.	Convective region continued to be formed since previous observation .	-	-
	29/04/17	1800 UTC-0000 UTC	Convective region and a cell at SW 196kms with max reflectivity 45dbz and height 5kms.	Direction is Southerly.	Convective region is formed since previous observation and dissipated at 21.21 UTC.	-	--
Nagpur	28/04/17	0832-0912	Single	90 km SE, moving SE	< 10 dBZ		
		0912-1102	Single	225 km S, nearly standstill	maxZ=25 & ht. of cloud at maxZ =5.5 to 8.2 km		
	29/14/17	0232-continue	Single	130 km W	< 7 dBZ		
		0252-continue	Single	70 km NWW	< 7 dBZ		

∞	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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