



India Meteorological Department

FDP STORM Bulletin No. 81 (26-05-2018)

1. CURRENT SYNOPTIC SITUATION:

NWFC INFERENCE (0300UTC of the Day):

- ♦ The Northern Limit of Monsoon (NLM) continues to pass through lat. 50N/ Long 800E, lat.80N/ Long 870E, Car-Nicobar and lat. 110N/ Long 990E. Conditions are favourable for further advance of Southwest Monsoon into some parts of South Arabian Sea, Comorin-Maldives areas; some more parts of South Bay of Bengal, Andaman Sea and Andaman & Nicobar Islands during next 24 hours. Conditions are very likely to become favourable for further advance of Southwest Monsoon into some more parts of South Arabian Sea, Lakshadweep, Comorin area, South Kerala, South Tamilnadu, some more parts of south Bay of Bengal, remaining parts of Andaman Sea and some parts of east-central Bay of Bengal during subsequent 48 hours.
- ♦ The Very Severe Cyclonic Storm '**Mekunu**' over Oman moved further northwestwards with speed 8 Kmph during past 06 hours, weakened into a Severe Cyclonic Storm and lay centered at 0830 hrs IST of today, 26th May 2018 over Oman near latitude 17.4°N and longitude 53.2°E, about 100 km west-northwest of Salalah. It is very likely to continue to move northwestwards and weaken into a cyclonic storm during next 06 hours and into a Depression during subsequent 06 hours.
- ♦ A low pressure area is likely to develop over East-central Bay of Bengal around 28th May.
- ♦ The cyclonic circulation over Interior Tamilnadu & neighbourhood now lies over south Tamilnadu & neighbourhood and extends upto 7.6 km above mean sea level tilting southwest-wards with height.
- ♦ The cyclonic circulation over South coastal Tamilnadu & neighbourhood has merged with the above cyclonic circulation.
- ♦ The cyclonic circulation over South Kerala coast & neighbourhood has also merged with above cyclonic circulation.
- ♦ A cyclonic circulation extending upto 2.1 km above mean sea level lies over southeast Arabian Sea off Kerala coast.
- ♦ A north-south trough at 1.5 Km above mean sea level runs from east Madhya Pradesh to the cyclonic circulation to south Tamilnadu neighbourhood across Vidarbha and interior Karnataka.
- ♦ The feeble Western Disturbance as an upper air cyclonic circulation over eastern parts of Afghanistan & neighbourhood between 3.1 and 5.8 km above mean sea level persists.

SATELLITE OBSERVATIONS during past 24 hrs and current observation:

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

Vortex (MEKUNU) over south-west Arabian Sea:

Vortex (Mekunu) over Oman coast centred near 17.8N/53.2E (overland). Associated broken low/med clouds with embedded intense to very intense convection seen over area bet lat 15.0N to **22.0N LONG 49.0E to 56.0.0E**.

Low Level Circulation:

Broken low/medium clouds with embedded moderate to intense convection seen over southeast Arabian Sea adjoining Lakshadweep, area bet lat 6.5N to 14.5N long 66.0E to 72.0E in association with low level circulation over the area.

Clouds Descriptions within India

North:-

Isolated low/medium clouds over Jammu & Kashmir, North Himachal Pradesh and North Uttarakhand.

East:-

scattered low/medium clouds with embedded moderate to intense convection seen over Sikkim, Sub-Himalayan West Bengal, Bhutan, West Assam, west Arunachal Pradesh, and Meghalaya. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over East Bihar, Jharkhand, North Odisha, Nagaland and Manipur. Scattered low/medium clouds over rest parts of the region.

West:-

Scattered low/medium clouds with embedded isolated weak convection over extreme South Konkan and Goa. Scattered low/medium clouds over Southeast Madhya Pradesh, adjoining Vidarbha.

South:-

Broken low/medium clouds with embedded intense to very intense convection over Lakshadweep and Andaman & Nicobar Islands. Scattered low/medium clouds with embedded isolated weak to moderate convection seen over rest parts of the region except North Telangana.

Arabian Sea:

Broken low/medium clouds with embedded intense to very intense convection over Lakshadweep adjoining Arabian Sea between lat 8.0N to 15.5N east of long 67.5E.

Bay Of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded intense to very intense convection over south Bay adjoining central Bay & Andaman Sea.

Past Weather:

Convection (during last 24 hrs):

Moderate to Intense convection was observed over North-East States Chhattisgarh Orissa Jharkhand Sikkim West Bengal Karnataka Kerala Tamilnadu Vidarbha adjoining Madhya Pradesh Bihar Lakshadweep islands Andaman & Nicobar Islands.

OLR:-

Upto **280** wm^{-2} was observed over North J&K North Himachal Pradesh Karnataka Tamilnadu Kerala Orissa Jharkhand West Bengal North East States.

Synoptic features:

Jet-Stream: No Jet Stream is observed over India.

Dynamic Features:

Wind Shear, Vorticity & Convergence: Wind shear up to 30- 60 Kts is observed over Northern India. Wind shear upto 5-20 kts is observed over rest parts of India.

A Positive Vorticity is observed over Madhya Pradesh Gujrat Bihar North East States Maharashtra Kerala Tamilnadu Bay islands & Lakshadweep.

Positive low level convergence observed over the country except North Chhattisgarh adjoining Jharkhand.

Precipitation:

IMR:

Rainfall Up to **150** mm was observed over South Interior Karnataka North Kerala North-west Tamilnadu Lakshadweep West Assam Meghalaya Jharkhand North Orissa (.)

Rainfall Up to 90 mm was observed over Rayalseema Rest North Tamilnadu (.)

Rainfall Up to **50** mm was observed over Rest North-East states (.)

DWR and RAPID Observations:

Moderate to Strong isolated/multiple echoes were seen on DWR Visakhapatnam & Machilipatnam (dBZ >55 and height around 18km) and Nagpur (dBZ 50-55 and height around 13-14km) domains at around 1545IST. Isolated/multiple light to moderate echoes were also seen on DWR Agartala, Mohanbari, Bhopal, Paradeep, Kochi and Thiruvananthapuram DWR domains at around 1545 IST.

RAPID RGB Satellite imagery at 1500 IST indicated significant convection over Assam, Meghalaya, Arunachal Pradesh, South east Madhya Pradesh, Chhattisgarh, Odisha adjoining North Coastal Andhra Pradesh, South Interior Karnataka, Kerala, Tamilnadu, Lakshadweep and Andaman & 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 decrease over IGP and north India.

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

Delhi – SAFAR analysis & Forecast	26.05.2018	27.05.2018
PM10 (micro-g/m ³)	226	204
PM2.5 (micro-g/m ³)	85	77

2. NWP MODEL GUIDANCE:

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

1. Weather Systems:

Low level Cycirs, Troughs:

00&12UTC of Day 1-5: A CYCIR at 850 hPa over BOB off AP coast is gradually intensifies and moving north northeast towards of Bangladesh in Day 2-5

00UTC of Day0-2: A CYCIR at 850Hpa over Tamilnadu and Kerala is moving towards northwest in Day-2.

00UTC of Day2-4: CYCIR over Madhya Pradesh and adjoin region

00UTC of Day1-4: 850hPa N-S trough from MP to north Karnataka and west Telangana region

00UTC of Day1-5: VSCS **Mekunu** over north AS moved to Oman and lying over till Day-3 and further is weakening in Day-4.

Confluence & Wind Discontinuity Regions:

12 UTC of Day 0-2: 850/925hPa SW-NE line of discontinuity extending from east UP to Karnataka.

Synoptic Systems:

00 UTC of Day 1-4: Western disturbance as a trough, moving though J&K to Tripura via Bihar and West Bengal

2. Location of jet and jet core (>60kt) at 500hPa: NIL. Strong westerly over Pakistan.

3. Convergence at 850 hPa:

Day/Index: Subdivisions with Lower Level Convergence > 15 x 10⁻⁵ /s

Day0: Jharkhand, Himachal_Pradesh, East_MP, Madhya_Maharashtra, Chhattisgarh, NI_Karnataka,

Day1: Jharkhand, Himachal_Pradesh, Jammu_Kashmir, West_MP, East_MP, Madhya_Maharashtra, Marathwada, Coastal_AP, SI_Karnataka,

Day2: Bihar, Odisha, West_MP, East_MP, Madhya_Maharashtra, Marathwada, Coastal_AP, TN_Puducherry,

Day3: Assam_Meghalaya, East_UP, West_UP, Hry_Chhd_Delhi, Punjab, East_RJ, West_MP, East_MP, Coastal_AP, TN_Puducherry,

Day4: Assam_Meghalaya, NE_NMMT, Jharkhand, West_MP, East_MP, Vidarbha, TN_Puducherry.

4. Low level Vorticity:-Positive Vorticity:

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

Day0: Arunachal_Pradesh, Assam_Meghalaya, Bihar, East_UP, Uttarakhand, Himachal_Pradesh, West_MP, Madhya_Maharashtra,

Day1: Arunachal_Pradesh, Assam_Meghalaya, Jharkhand, Bihar, West_UP, Hry_Chhd_Delhi, Madhya_Maharashtra, TN_Puducherry, Kerala,

Day2: Arunachal_Pradesh, Assam_Meghalaya, Bihar, Jammu_Kashmir, Madhya_Maharashtra, TN_Puducherry, Kerala,

Day3: Assam_Meghalaya, NE_NMMT, East_UP, West_UP, Himachal_Pradesh, TN_Puducherry, Kerala,

Day4: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, East_UP, 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, Gangetic_WB, Jharkhand, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Konkan_Goa, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, 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, East_MP, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,

Day2: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_AP, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, Assam_Meghalaya, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,

Day4: Arunachal_Pradesh, Sub_Himalayan_WB, Gangetic_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Hry_Chhd_Delhi, Himachal_Pradesh, Jammu_Kashmir, Odisha, West_MP, East_MP, Chhattisgarh, Coastal_AP, Rayalseema, TN_Puducherry, 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, Sub_Himalayan_WB, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, East_MP, Konkan_Goa, Vidarbha, Chhattisgarh, Telangana, NI_Karnataka,
- Day1: Arunachal_Pradesh, Sub_Himalayan_WB, East_UP, West_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, East_MP, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,
- Day2: Arunachal_Pradesh, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, East_MP, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, NI_Karnataka,
- Day3: Arunachal_Pradesh, Sub_Himalayan_WB, Bihar, East_UP, West_UP, Uttarakhand, Hry_Chhd_Delhi, Punjab, Himachal_Pradesh, Jammu_Kashmir, Chhattisgarh,
- Day4: Arunachal_Pradesh, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Hry_Chhd_Delhi, Punjab, Himachal_Pradesh, Jammu_Kashmir, West_RJ, East_RJ, Odisha, West_MP, East_MP, Chhattisgarh, Coastal_AP, Rayalseema, TN_Puducherry, SI_Karnataka

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

Day/Index: Subdivisions with K Index > 40

- Day0: Arunachal_Pradesh, Assam_Meghalaya, Sub_Himalayan_WB, Jharkhand, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, East_MP, Konkan_Goa, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka, Kerala,
- Day1: Arunachal_Pradesh, NE_NMMT, Sub_Himalayan_WB, Jharkhand, East_UP, Himachal_Pradesh, Jammu_Kashmir, Odisha, East_MP, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, Coastal_Karnataka, NI_Karnataka, SI_Karnataka,
- Day2: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, East_MP, Konkan_Goa, Madhya_Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka,
- Day3: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, Uttarakhand, Himachal_Pradesh, Jammu_Kashmir, Odisha, East_MP, Madhya_Maharashtra, Vidarbha, Chhattisgarh, Coastal_AP, Telangana, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka,
- Day4: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Jharkhand, Bihar, East_UP, West_UP, Uttarakhand, Hry_Chhd_Delhi, Himachal_Pradesh, Jammu_Kashmir, Odisha, West_MP, East_MP, Saurashtra_Kutch, Chhattisgarh, Coastal_AP, Rayalseema, TN_Puducherry, NI_Karnataka, SI_Karnataka

8. Rainfall and thunder storm activity:

Day/Index: Subdivisions with Precipitation > 2 cm

Day1: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, Jammu_Kashmir, Andaman_Nicobar, TN_Puducherry, Kerala,

Day2: Arunachal_Pradesh, Assam_Meghalaya, Sub_Himalayan_WB, Bihar, Andaman_Nicobar, TN_Puducherry, SI_Karnataka, Kerala,

Day3: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, Jammu_Kashmir, TN_Puducherry, Coastal_Karnataka, Kerala,

Day4: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, Bihar, East_UP, Jammu_Kashmir, Coastal_Karnataka, Kerala,

Day5: Arunachal_Pradesh, Assam_Meghalaya, NE_NMMT, Sub_Himalayan_WB, East_UP, Andaman_Nicobar, Kerala

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

1. Synoptic Systems:

The analysis based on 00 UTC indicates a cyclonic circulation over South Tamil Nadu and adjoining area in lower Troposphere (925hPa). The forecast shows it will persist till day2 with slight South westward shift. The analysis shows a North- South Trough in lower troposphere (850hPa) extends from East Madhya Pradesh to this cyclonic circulation across Vidharbha and Interior Karnataka. The forecast shows the trough will persist for next 48 hours. Another cyclonic circulation is seen in the analysis over South east Arabian sea off Kerala coast. The forecast shows it will persist till day2.

2. Location of Jet and Jet Core (>60kt) at 500hPa:

Although the presence of strong westerlies is found over Eastern parts of the India, North and North western parts of India during next 3 days and over NE states on day 3 but no jet core over the Indian region for the next 3 days..

3. Low Level Vorticity {850hPa Positive Vorticity ($>12 \times 10^{-1}/s$)}:

Low level Positive Vorticity is seen mostly from J&K up to Foothills of Himalaya, along the North- South Trough, around the cyclonic circulations, central parts of India, NE states, extreme south peninsular India and coastal and Interior Kerala and coastal Tamil Nadu during next 3 days; Low level Positive Vorticity is also seen over parts North west Rajasthan and adjoining Punjab region from day 1 onwards.

4. Spatial distribution of T-storm Initiation Index, Lifted Index, Total Total Index, CAPE, CIN and Sweat Index [High potential for thunderstorm]:

T-Storm Initiation Index (> 3): over parts of Gujarat, Southern parts of East and west Rajasthan, East Uttar Pradesh, Gangetic Plains, Bihar, Jharkhand, Gangetic West Bengal, SHWB, Orissa, coastal Maharashtra, Konkan & Goa, coastal and Interior Karnataka, Kerala, Tamil Nadu, Telangana, Rayalaseema, Madhya Maharashtra, Marathwada, Vidharbha, Chhattisgarh, East and west Madhya Pradesh, Andhra Pradesh, along east and west coast of India, Sikkim, Assam, Tripura and adjoining areas on day 1; it remains over same region on day 2 and 3 but also appears

over parts of west Uttar Pradesh and Uttarakhand; Significant zone lies over Gujarat, South Rajasthan, coastal areas along the east coast and west coast, GWB, SHWB, Bihar, Jharkhand, East Uttar Pradesh, Orissa, Andhra Pradesh, Telangana, coastal Maharashtra, Madhya Maharashtra, Vidharbha, Chhattisgarh, Interior Karnataka and West Madhya Pradesh.

Lifted Index (< -2): Similar to T-storm Index lies over Gujarat, South Rajasthan, Gangetic plains and along east and west coast of India with an extension over Interior Karnataka and Telangana, East Uttar Pradesh, Bihar, Jharkhand, Madhya Pradesh, Orissa, GWB, SHWB, Assam, Arunachal Pradesh, Meghalaya, Mizoram, Tripura and adjoining areas, Telangana, Vidharbha, Chhattisgarh, Andhra Pradesh, coastal Maharashtra, Konkan & Goa, coastal and Interior Karnataka, Kerala, Tamil Nadu, Madhya Maharashtra and Marathwada on day 1, it remains over same region on day 2 and 3 but also appears over parts of west Uttar Pradesh and Uttarakhand; Significant zone with maximum negative value is found over East Uttar Pradesh, Bihar, SHWB and coastal Andhra Pradesh.

Total Total Index (> 50): Higher than Threshold value of the Index is seen over parts of J&K, Himachal Pradesh, Chhattisgarh, Telangana, Vidharbha, Madhya Pradesh, Andhra Pradesh, Orissa, Interior Karnataka, Madhya Maharashtra, Marathwada, Sikkim and Arunachal Pradesh on day 1; over most of the parts of the country except west and North west India including Gujarat, West Madhya Pradesh, Punjab, Assam, Tripura, Meghalaya, Mizoram and adjoining areas, Rajasthan on day 2 and 3; Significant zone with Maximum value of the index lies over East Uttar Pradesh, East Madhya Pradesh, Chhattisgarh, Uttarakhand, Bihar and Jharkhand.

Sweat Index (> 300): Is seen over the sub-divisions along east and west coast, areas along foothills of Himalayas, NE states, and most parts of the country except North West Rajasthan, central parts of Madhya Pradesh, Punjab, Haryana, Himachal Pradesh and adjoining Uttarakhand on day 1; and over most of the parts of the country except Central parts of West Madhya Pradesh and North West India on day 2 and 3; significant zone lies over parts of East Uttar Pradesh, Bihar, Jharkhand, Chhattisgarh, GWB and East Madhya Pradesh.

CAPE (> 1000): Mostly seen over parts of Gujarat, southern peninsular India, along west coast and east coast, GWB, Orissa, Bihar, Jharkhand, East Uttar Pradesh, Andhra Pradesh, Rayalaseema, Tamil Nadu, Kerala, Karnataka, Konkan and Goa, Telangana, coastal Maharashtra including Mumbai, south Madhya Maharashtra, Marathwada, Vidharbha, Chhattisgarh, East Madhya Pradesh, Sikkim, Assam, Arunachal Pradesh, Meghalaya, Tripura and adjoining areas during next 3 days; over parts of South West Rajasthan on day 1; over parts of West Uttar Pradesh on day 2 and 3; maximum value of the index is seen over parts of GWB, SHWB, Bihar, Jharkhand, Orissa, coastal and Interior Andhra Pradesh, coastal Tamil Nadu, coastal Maharashtra, South Madhya Maharashtra, Marathwada, coastal Karnataka, Telangana, South Chhattisgarh, East Uttar Pradesh and some parts of Assam and Meghalaya.

CIN (50-150): Over sub-divisions along east and west coast of India, extreme south over Kerala and Tamil Nadu and whole south Peninsular India; the value of the index lies in the above range over most of the parts of the country except Northern parts of west Madhya Pradesh, J&K, North West Rajasthan, Himachal Pradesh, Uttarakhand, Punjab, Haryana, North and North west India on day 1 and 2; and over northern parts of west Madhya Pradesh, North west Rajasthan, J&K and Punjab; significant zone with highest value of the index lies over parts of Gujarat adjoining South West Rajasthan, Madhya Maharashtra, North coastal Maharashtra, South Chhattisgarh adjoining Telangana, Orissa, GWB and Jharkhand..

5. Rainfall Activity:

Above 130 mm Rainfall: over parts of Sikkim on day 3.

70- 130 mm Rainfall: over parts of Kerala and Sikkim on day 3.

40-70 mm Rainfall: over parts of Kerala adjoining South Karnataka during next 3 days; over parts of Arunachal Pradesh on day 1; over parts of Sikkim, Assam, GWB, Jharkhand, Orissa and Tamil Nadu on day 3.

10-40 mm Rainfall: over parts of Kerala, Karnataka, Konkan and Goa, Tamil Nadu, East Bihar, Sikkim and NE states during next 3 days; over parts of GWB, Jharkhand and Chhattisgarh on day 1; over parts of Orissa, Chhattisgarh, East Vidharbha, Telangana and Andhra Pradesh on day 1; over parts of Bihar, Jharkhand, GWB, Orissa and South Chhattisgarh on day 3.

Up to 10 mm rainfall: Over parts of J&K, Himachal Pradesh, Foothills of Himalaya, GWB, SHWB, Sikkim, NE states, Bihar, Jharkhand, Orissa, Chhattisgarh, Kerala, Interior Karnataka, Konkan & Goa, coastal Maharashtra, South Madhya Maharashtra, Marathwada, Vidharbha, East Madhya Pradesh, Tamil Nadu, Telangana, Rayalaseema and Andhra Pradesh during next 3 days; over parts of East Uttar Pradesh and Gujarat on day 3.

IMD WRF (9km based on 00UTC of the day):

1. Model Reflectivity (Max. dBz):

>25 dBZ Model Reflectivity: On day 1, over parts of J&K, Kerala, Karnataka, Tamil Nadu, NE states, Telangana, Orissa, South Chhattisgarh, GWB, SHWB, Sikkim, East Bihar, Andhra Pradesh, South Madhya Maharashtra, Marathwada and Rayalaseema; On day 2 over parts of J&K, Himachal Pradesh, Uttarakhand, Kerala, Tamil Nadu, Karnataka, GWB, SHWB, Orissa, Jharkhand, Andhra Pradesh, Sikkim and NE states; On day 3 mostly over parts of J&K, Kerala, Tamil Nadu adjoining Karnataka, GWB, SHWB, East Uttar Pradesh and Jharkhand.

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

Total Index (> 50): Above threshold value is observed over most parts of the country except extreme south peninsular India, southern parts of west coast and the east coast, parts of Kerala, Karnataka, south coastal Maharashtra, South Madhya Maharashtra, Konkan and Goa, Kerala, Andhra Pradesh, Telangana, Tamil Nadu, GWB, SHWB, Bihar, Jharkhand, Chhattisgarh, Orissa, Sikkim and NE states during next 3 days; over some parts of East Uttar Pradesh on day 3.

K-Index (> 35): Less than threshold value is observed over most of the part of the country during the next 3 days. Prominent values are found over parts of Interior Karnataka, Telangana, Chhattisgarh, Kerala, Tamil Nadu, Andhra Pradesh, Orissa, Bihar, Jharkhand, GWB, SHWB, South Madhya Maharashtra, Vidharbha, Konkan and Goa, South coastal Maharashtra, Foothills of Himalaya, Sikkim and NE states.

CAPE (> 1500): Greater than threshold value over parts of Gujarat, East and West Uttar Pradesh, coastal areas of west coast, coastal Maharashtra, Konkan & Goa, coastal areas along the east coast, SHWB, GWB, Orissa, Andhra Pradesh, Tamil Nadu, Kerala, Karnataka, Bihar, Jharkhand, Telangana, Rayalaseema, Madhya Maharashtra, coastal Maharashtra, Chhattisgarh, Vidharbha and NE states during next 3 days; over parts of South West Rajasthan on day 1; over parts of West Uttar Pradesh and adjoining Uttarakhand on day 2 and 3; Maximum value of the index is seen over the parts of Orissa, GWB, SHWB, coastal and Interior Andhra Pradesh, Karnataka, coastal Tamil Nadu, Kerala, Bihar, Jharkhand, East Uttar Pradesh, coastal Maharashtra including Mumbai, South Madhya Maharashtra, Konkan and Goa, Telangana, Chhattisgarh and Gujarat.

CIN (50-150): It covers most of the parts of the country except J&K, North west Rajasthan, Punjab, Haryana, Himachal Pradesh and Uttarakhand on day 1; on day 2 it remains over the same region but also appear over J&K, Punjab and Uttarakhand on; on day 3 the value of index is above threshold over most of the parts of Country except North West Rajasthan and central Parts of West Rajasthan; it has significant larger values over parts of Eastern and Western parts of the country including Gujarat, coastal Maharashtra, Madhya Maharashtra, Marathwada, East and West Uttar

Pradesh, Uttarakhand, Vidharbha, Madhya Pradesh, Bihar, Jharkhand, Chhattisgarh, Orissa, GWB, Telangana, North Interior Karnataka and Andhra Pradesh during next 3 days; on day 3 the value of index is also above threshold over parts Punjab, Haryana, Delhi , East Rajasthan and West Uttar Pradesh..

3. Rainfall and thunderstorm activity:

Above 200 mm Rainfall: over parts of Assam and Meghalaya on day 1; over parts of Kerala on day 3.

130- 200 mm Rainfall: over parts of Assam and adjoining areas during next 3 days; over some parts of Arunachal Pradesh on day 1; over parts of Meghalaya on day 1 and 3; over parts of Kerala and adjoining Tamil Nadu on day 2 and 3; over parts of SHWB on day 3.

70- 130 mm Rainfall: over parts of Sikkim, Assam, Meghalaya and Arunachal Pradesh during next 2 days; over parts of SHWB, East Bihar Assam, Meghalaya and South Interior Karnataka on day 3; over parts of Kerala and adjoining Tamil Nadu on day 2 and 3.

40- 70 mm Rainfall: over parts of Sikkim, Kerala, Tamil Nadu and NE states during next 3 days; over parts of SHWB on day 2; over parts of South Interior Karnataka, East Bihar, SHWB and adjoining areas on day 3.

10- 40 mm Rainfall: Over parts of J&K, Konkan and Goa, Kerala, Tamil Nadu, Karnataka, Sikkim, GWB, SHWB, Foothills of Himalaya, Bihar and NE states during next 3 days; over parts of Orissa, Chhattisgarh and Andhra Pradesh on day 1; over parts of Jharkhand on day2 and 3; over parts of North Chhattisgarh on day 3.

Up to 10 mm Rainfall: Over parts of J&K, Himachal Pradesh, Uttarakhand, Foothills of Himalaya, Kerala, Tamil Nadu, Karnataka, Konkan and Goa, Chhattisgarh, Vidharbha, Sikkim, GWB, SHWB, Bihar, Jharkhand, Orissa, Telangana, Rayalaseema, Madhya Maharashtra, Marathwada, East Madhya Pradesh, Andhra Pradesh and NE states during next 3 days..

3. IOP ADVISORY FOR 24 and 48Hrs:

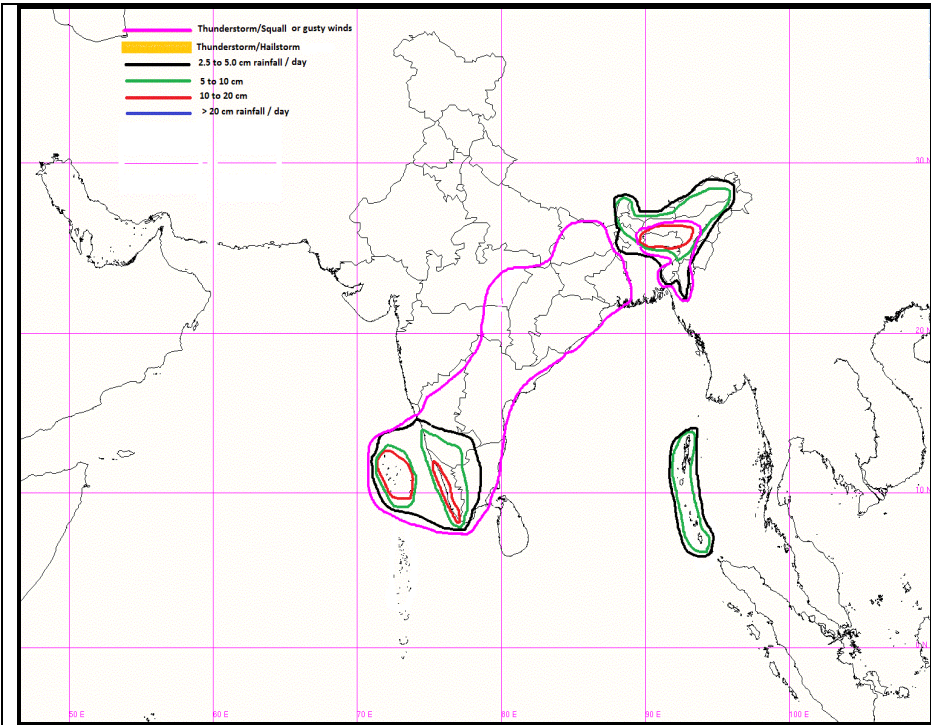
Summary and Conclusions:

- Most thermodynamic indices (T-STORM Initiation Index, K-Index, Lifted Index, CAPE) from IMD GFS deterministic model indicate high probability of thunderstorm occurrence over the peninsular India and east and northeast India, with highest values over the north peninsular coast (east as well as west coast) on day 1. On day 2, the probability of convection increase over east and north east India and the maxima penetrate up to Uttar Pradesh. SWEAT index, which accounts for the wind shear between 850 and 500 hPa levels in addition to thermodynamic parameters, also indicates high values over north peninsular Indian region, with probability increasing over the Uttar Pradesh on day 2. The 850-200 hPa wind shear is very high over North and northwest India on day 1 and day 2. The increasing value of SWEAT index on day 2 may be due to the penetration of the high shear zone into Uttar Pradesh.
- Synoptic analysis indicates that a northsouth trough in the lower levels, runs from east Madhya Pradesh to the cyclonic circulation to south Tamilnadu neighbourhood across Vidarbha and interior Karnataka. Also, although the cyclonic circulation over Bihar & neighbourhood in the lower levels has become less marked in the morning charts, the IMD GFS deterministic model indicates that it is likely to intensify in the afternoon and a the north-south trough discussed above is likely to shift eastwards, parallel to the east coast . Associated thunderstorm activity is expected all along the east coast of India on day 1 and heavy rainfall over north-east India.
- Associated with the two cyclonic circulations (a) south Tamilnadu & neighbourhood and extending upto 7.6 km and (b) over southeast Arabian Sea off Kerala coast, heavy to very heavy rainfall is also expected over the extreme south peninsular India on day 1 and 2.

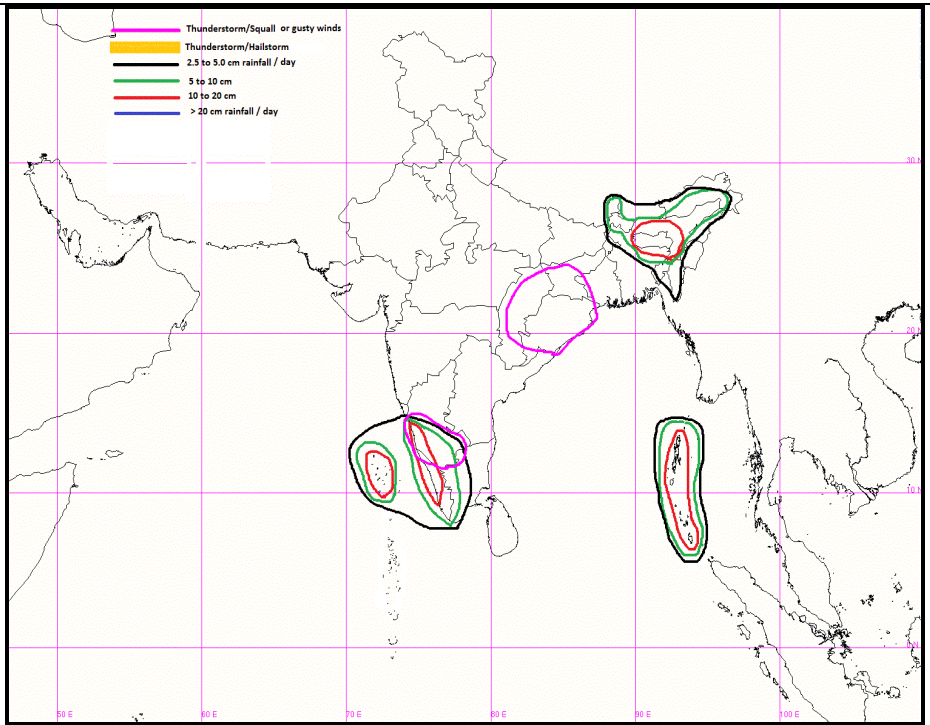
IOP Area for Day-1 & Day-2:

24 hour Advisory for IOP:	48 hour Advisory for IOP:
<p>Significant Rainfall: Assam and Meghalaya, Mizoram, Tripura, Arunachal Pradesh, Sub Himalayan West Bengal and Sikkim Interior Tamil Nadu, South Interior Karnataka, Coastal Karnataka, Kerala, Lakshadweep Andaman and Nicobar Islands</p> <p>Thunderstorm with squall or gusty winds: Tamil Nadu, Kerala, Lakshadweep, Karnataka, Rayalaseema, Telengana, Coastal Andhra Pradesh, Chhattisgarh, East Madhya Pradesh, Vidarbha Gangetic West Bengal, Jharkhand, Bihar, Odisha South Assam and Meghalaya, Tripura, Mizoram</p> <p>Thunderstorm with squall and hail Nil</p> <p>Thunderstorm/Duststorm: Nil</p>	<p>Significant Rainfall: Assam and Meghalaya, Mizoram, Tripura, Arunachal Pradesh, Coastal Karnataka, South Interior Karnataka, Kerala, Lakshadweep, Interior Tamil Nadu, Andaman and Nicobar Islands</p> <p>Thunderstorm with squall or gusty winds: South Interior Karnataka, Coastal Karnataka Chhattisgarh, Jharkhand, Odisha</p> <p>Thunderstorm with squall and hail Nil</p> <p>Duststorm: East Uttar Pradesh</p>

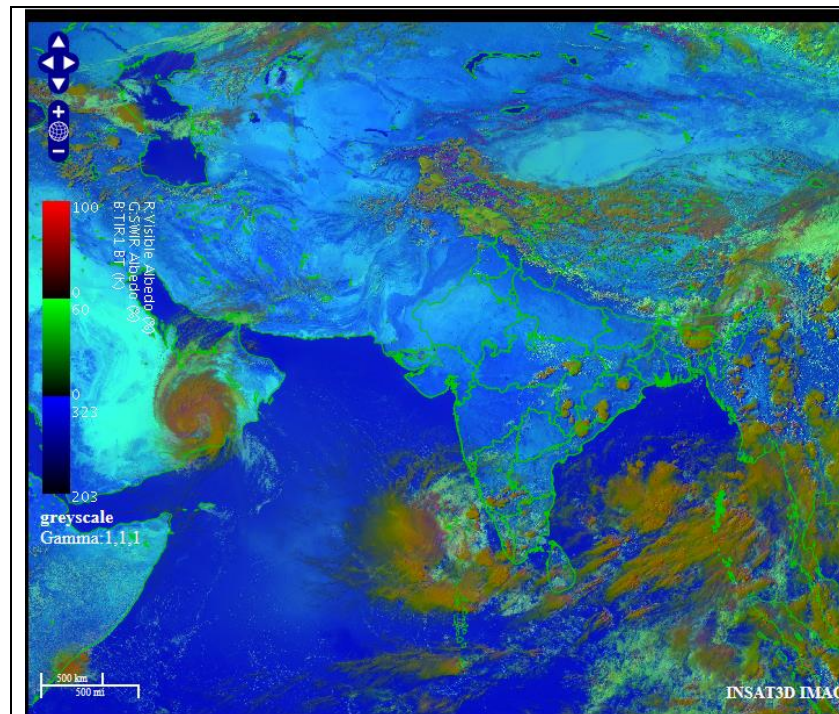
Graphical Presentation of Potential Areas for Severe Weather:



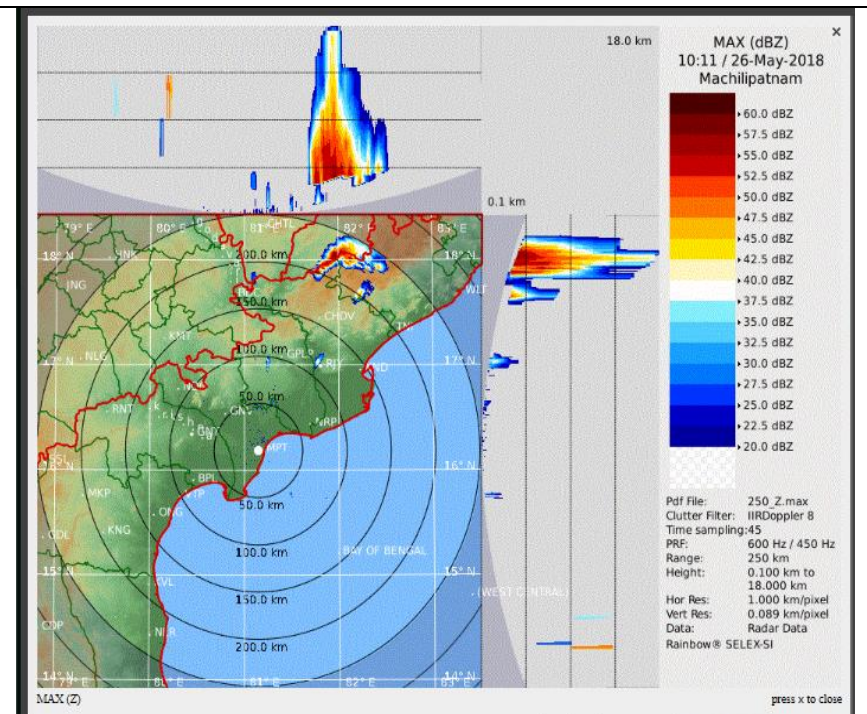
IOP Advisory for 24 hours



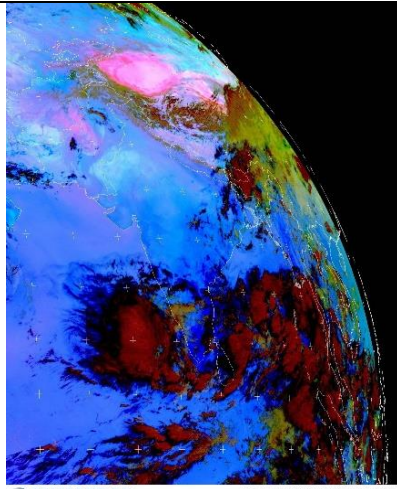
IOP Advisory for 48 hours



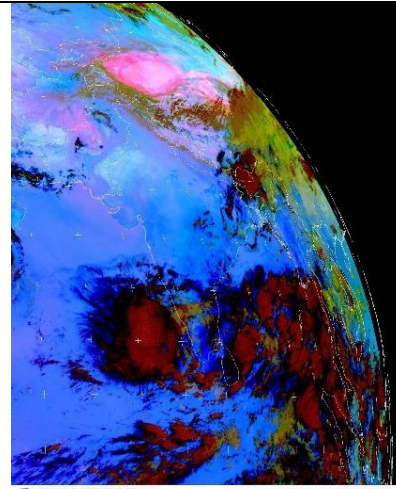
RAPID RGB Imagery at 1500 IST of the Day



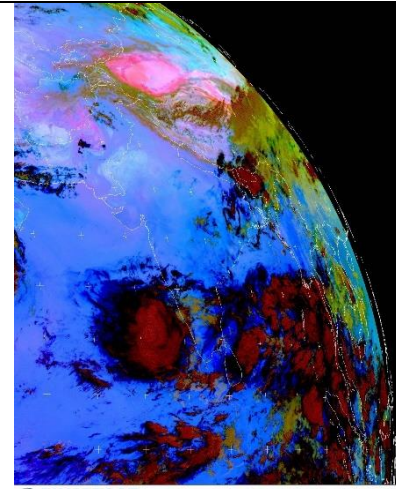
DWR Machilipatnam reflectivity image at 1541 IST



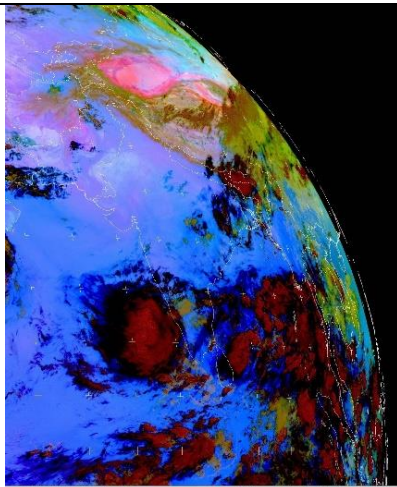
Meteosat IODC Dust, 2018-05-26 05:00:00



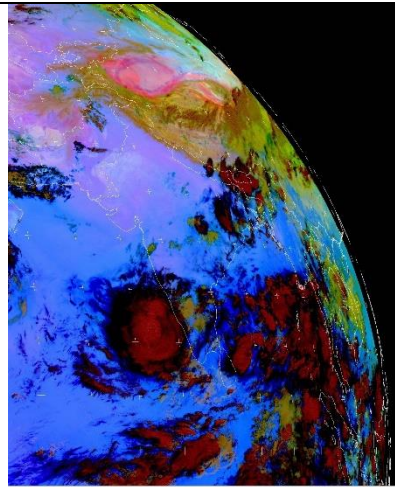
Meteosat IODC Dust, 2018-05-26 04:00:00



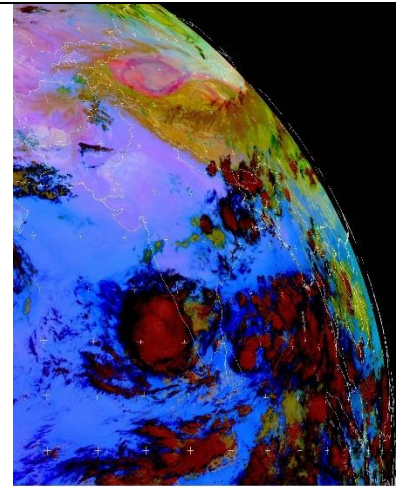
Meteosat IODC Dust, 2018-05-26 03:00:00



Meteosat IODC Dust, 2018-05-26 02:00:00



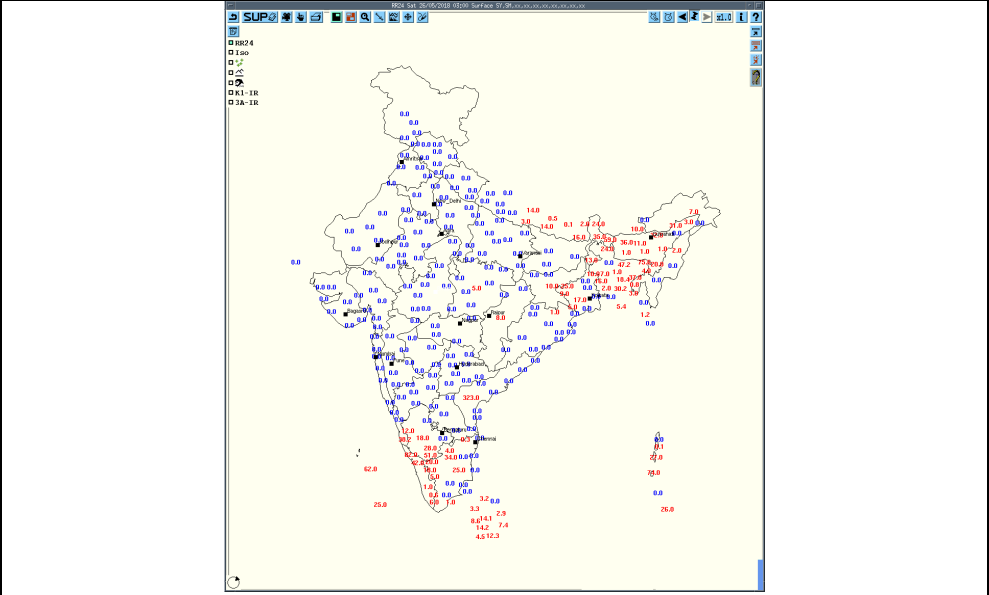
Meteosat IODC Dust, 2018-05-26 01:00:00



Meteosat IODC Dust, 2018-05-26 00:00:00

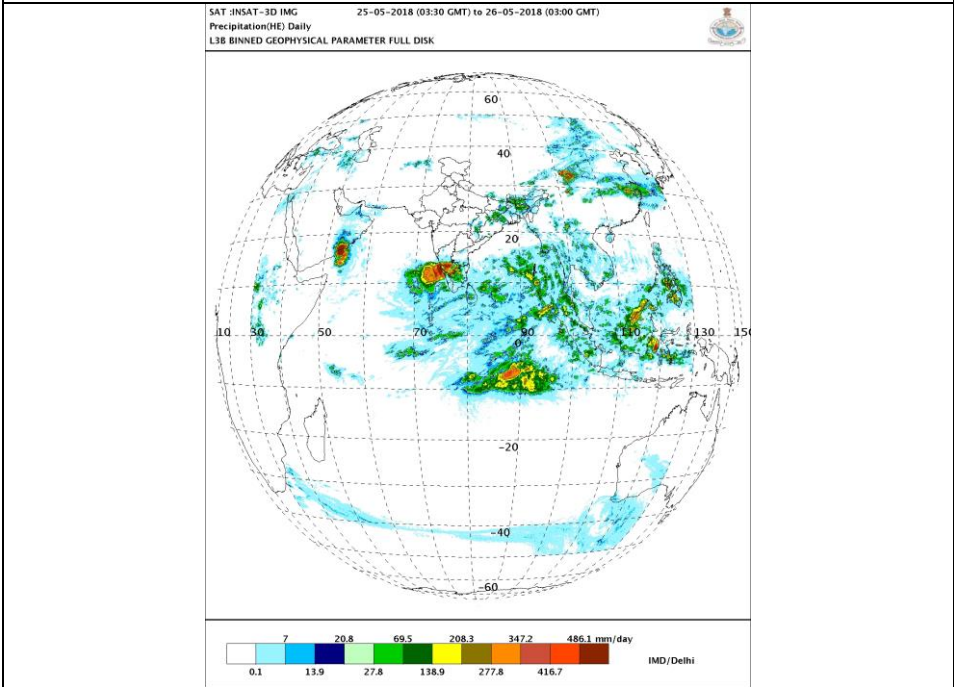
Observed Satellite Dust Images of today

Not Available

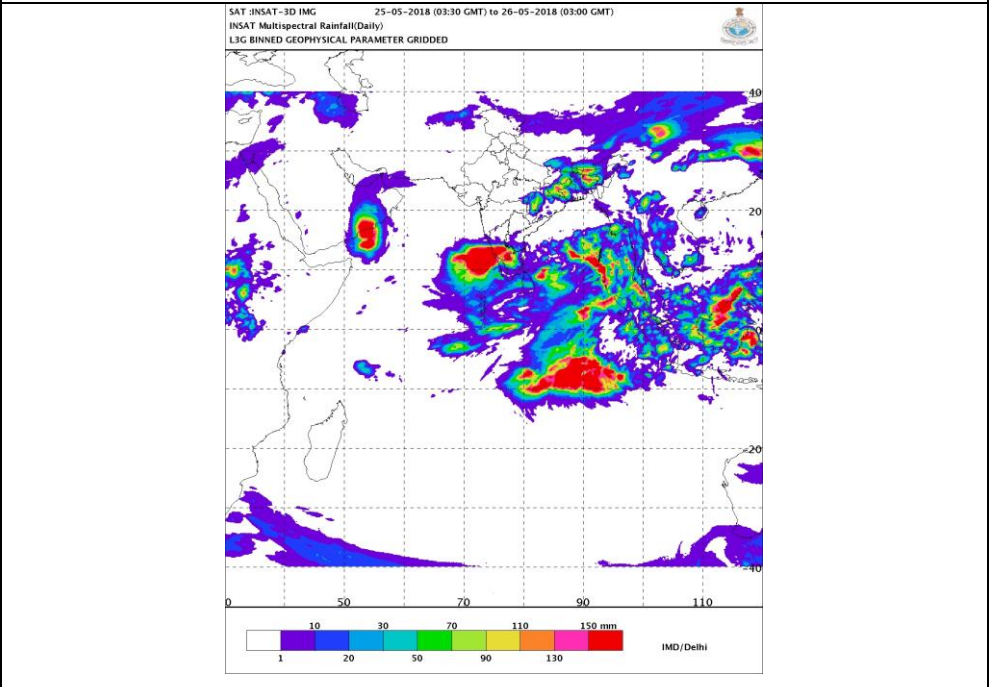


Dust Forecast	
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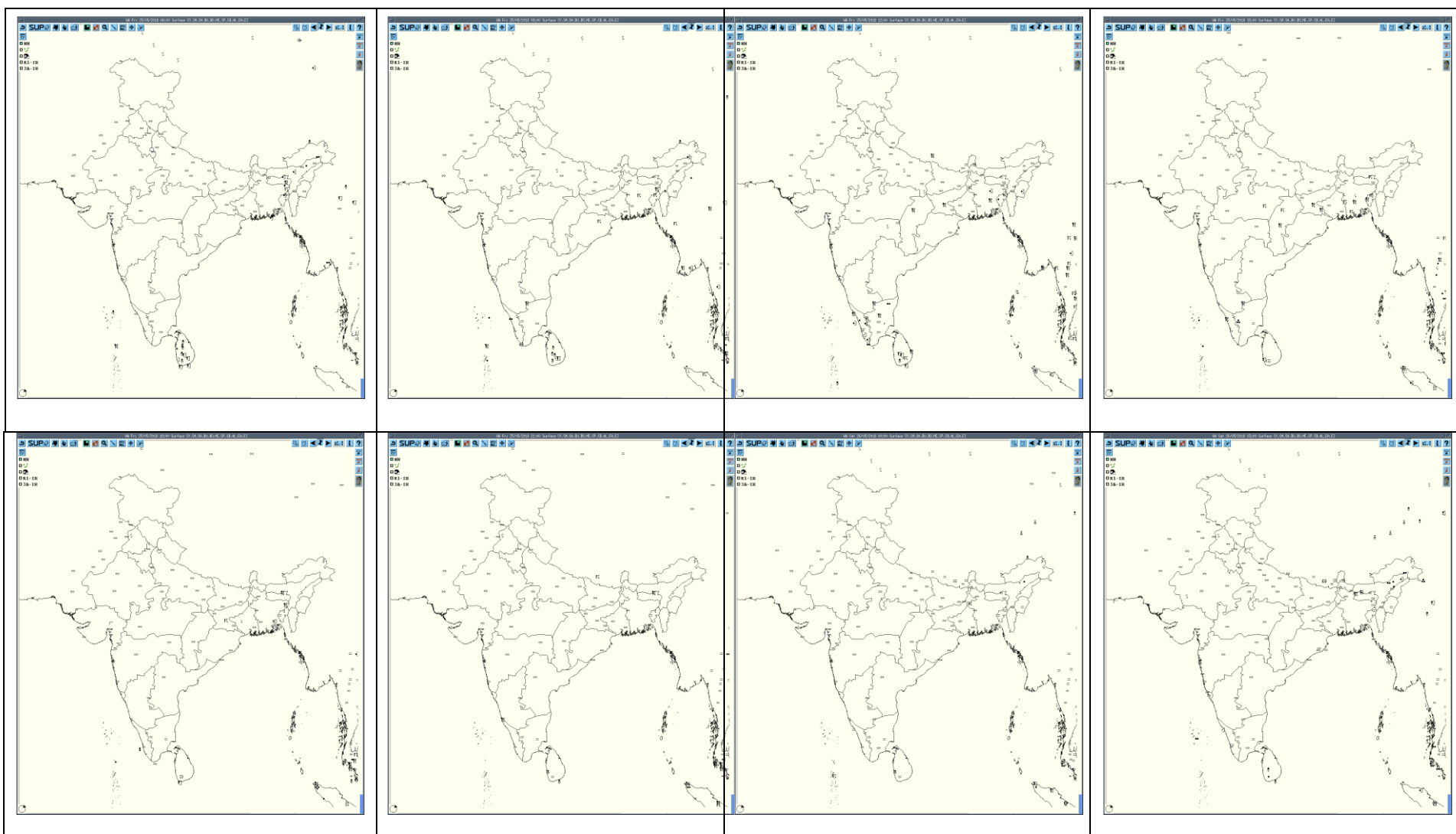
<p>Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today</p>
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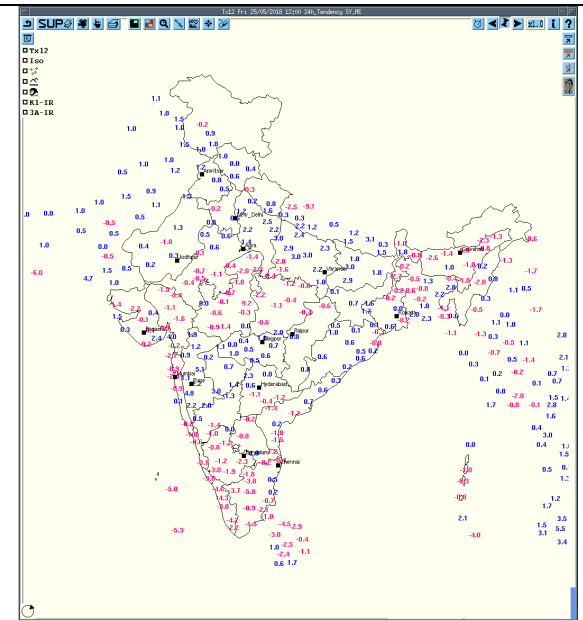
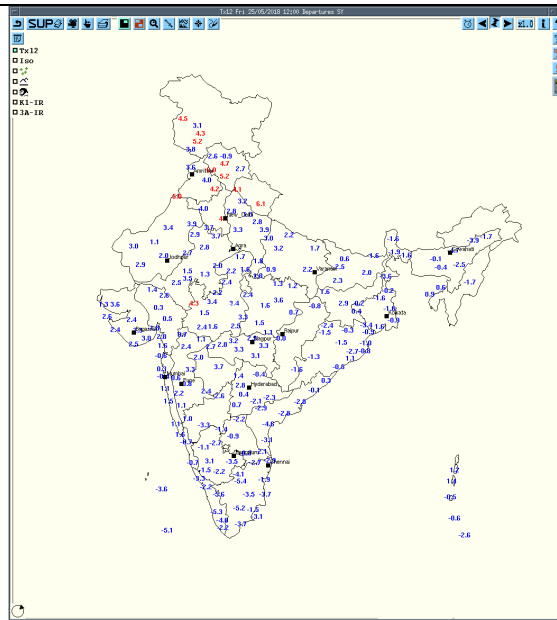
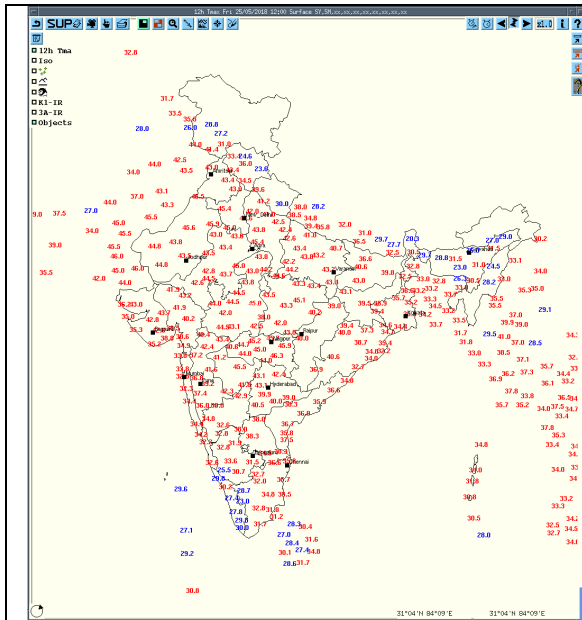
HEM



IMR



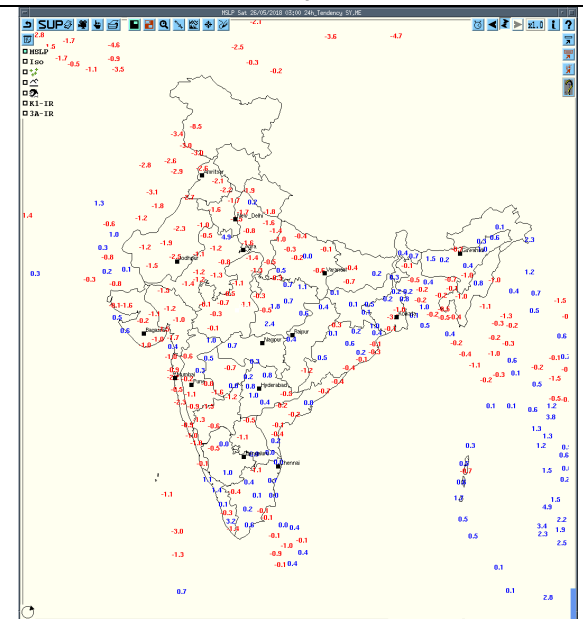
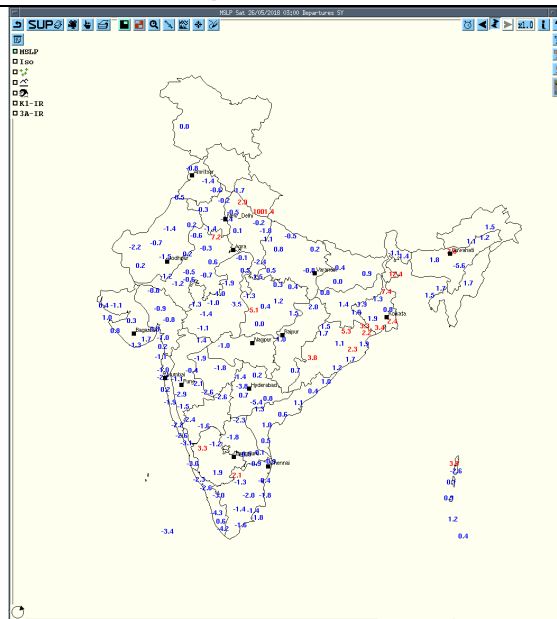
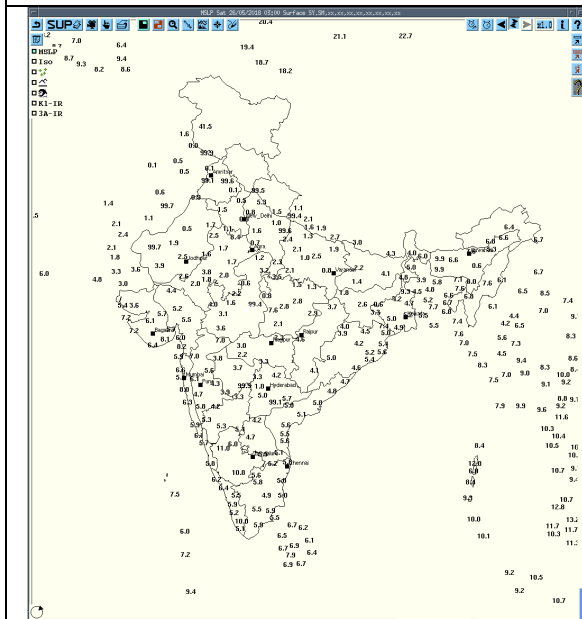
3hourly Past weather at 06, 09, 12, 15, 18, 21 UTC of yesterday and 00 & 03 hrs UTC of today



Tmax

Departure Tmax

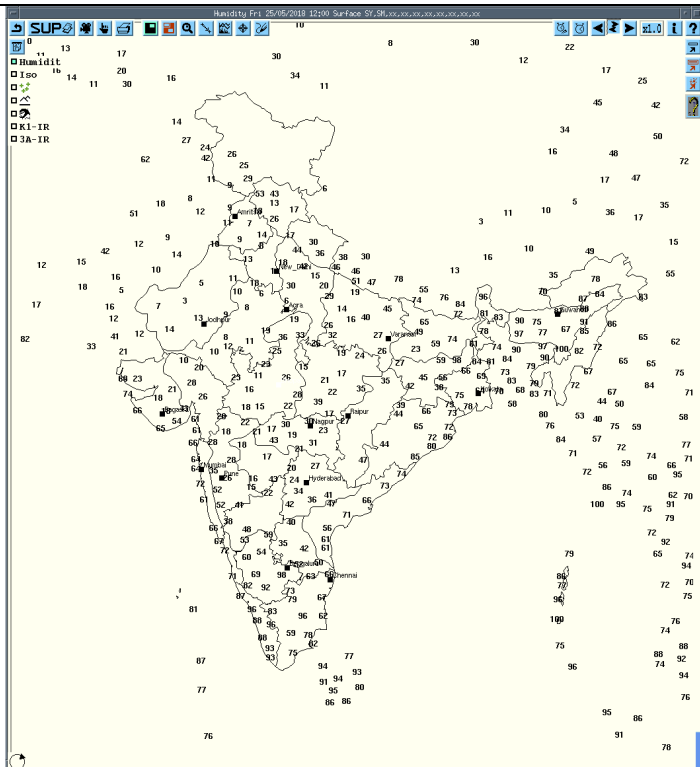
Tendency Tmax



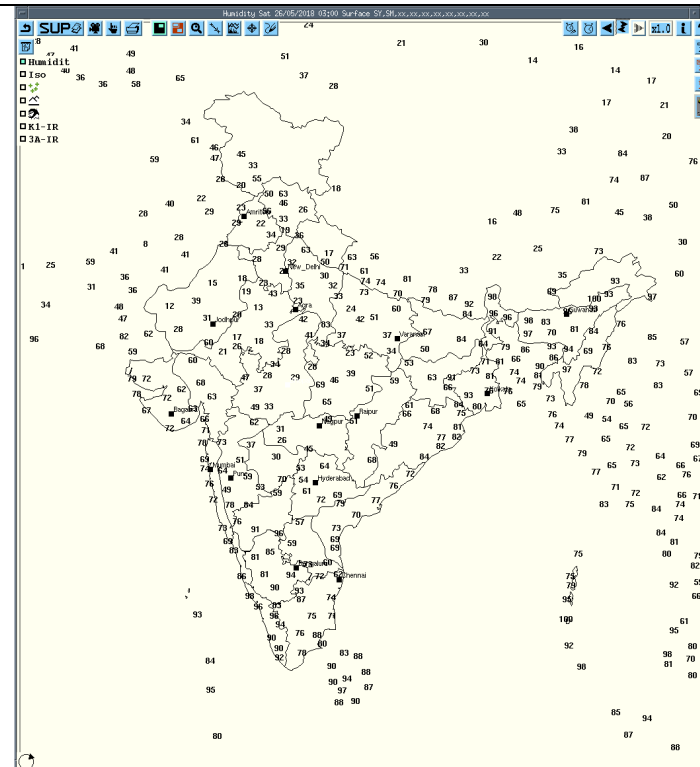
MSLP

Departure MSLP

Tendency MSLP



RH at 1200UTC yesterday



RH at 0300UTC today

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
Jaipur	26-05-18	250300-260300* (*Radar shut-down during 251625-251745 IST & 260608-260652 IST due to power cut)	Nil	Nil	Nil	Nil	Nil
Patiala	26-05-18	250300-260252	No Significant Echo	--	--	--	--
Lucknow	26-05-18	Nil	Nil	Nil	Nil	Nil	Nil
Kolkata	26-05-18	250301-250920	Nil	Nil	NOSIG ECHO	Nil	Nil
		250921-251731	Isolated Single cell with maximum reflectivity of 60.0 dBz at 1041 UTC and maximum height 15.67 Km at 0951 UTC	Coming from NE-moving ENE ward- Direction	Single cell coming from Northeast at 0921 UTC at a distance 248.0 Km from radar. Matured and dissipate at 1731 UTC in NE at a Distance of 215.7 km from Radar.	Thunderstorm / Rain	N/A
		251451-252301	Isolated Single cell with maximum reflectivity of 58.5 dBz at 1851 UTC and maximum height 15.17 Km at 1851 UTC	Coming from WEST- moving SE ward- Direction	Single cell coming from West at 1451 UTC at a distance 247.8 Km from radar. Matured and dissipate at 2301 UTC in SW at a Distance of 108.6 km from Radar.	Thunderstorm /Rain	N/A
		260000-260300	NIL	NIL	NOSIG ECHO	NIL	NIL

Radar Station Name	Date	Time Interval Of Observation (UTC)	Organisation 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
Patna	26-05-18	250300 - 250832	NIL	N/A	N/A	N/A	N/A
		250832 - 251140	Multiple Isolated Cells Maximum Reflectivity: 47.5 dBZ Echo Top: 14.4 KM	Range: 159.3 KM from DWR Patna in ESE direction Movement: towards Easterly	Warning issued	N/A	JAMUI, LAKHISARAI, MUNGER, BANKA, BHAGALPUR
		251022 - 251252	Single Cell Maximum Reflectivity: 45 dBZ Echo Top: 14.4 KM	Range: 101.7 KM from DWR Patna in NW direction Movement: towards SE			GOPALGANJ, SIWAN, SARAN, MUZAFFARPUR
		251252 - 251822	NIL	N/A	N/A	N/A	N/A
		251822 - 260100	Multiple Cells Maximum Reflectivity: 44.5 dBZ Echo Top: 15 KM	Range: 113.2 KM from DWR Patna in NE direction Movement: towards Easterly	Warning issued	N/A	MADHUBANI, DARBHANGA, MADHEPURA, SUPAUL, SAHARSA, ARARIA, KISHANGANJ
		251022 - 251252	Multiple Cells Maximum Reflectivity: 46.5 dBZ Echo Top: 14.5 KM	Range: 206.9 KM from DWR Patna in NNW direction Movement: towards SE			WESTC HAMPARAN, EAST CHAMPARAN, SITAMADHI, SHEOHAR, MADHUBANI
		260100 - 260300	NIL	N/A	N/A	N/A	N/A

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
Visakhapatnam	26-05-18	250900	Isolated single cells of maximum reflectivity of 56dBz with height of 17 kms	NW(106 KMS) N(192 KMS) moving Sly	CB cells formed at 0821UTC and developing.	--	Visakhapatnam Dist.(AP), Ganjam Dist.(Orissa)
		251200	Isolated single cells of maximum reflectivity of 61dBz with height of 17 kms	NW(126 KMS) N(207 KMS) moving Sly	Since last observation CB cells are developing and matured well at 1031 UTC and dissipating at 1121 UTC .	--	Gajapati, Koraput, Ganjam, Malkangiri Dist.(Orissa)
		251500	Multiple cells of maximum reflectivity of 60dBz with height of 17 kms	NW(127 KMS) N(202 KMS) moving Sly	Since last observation CB cells are matured well and dissipated at 1301 UTC .	--	Koraput Dist.(Orissa)

Realised past 24hrs TS/SQ/HS Data:

Realised TS/HS/SQ during past 24hours 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)
Nagpur	Central India	Vidarbha	Thunderstorm	26-05-18	0009	0035
Chhindwada	Central India	East Madhya Pradesh	Thunderstorm	25-05-18	1530	1620
Raipur	Central India	Chhattisgarh	Thunderstorm	25-05-18	1930	2100
Pendra Rd	Central India	Chhattisgarh	Thunderstorm	25-05-18	1655	1900
Bilaspur	Central India	Chhattisgarh	Thunderstorm	25-05-18	1900	2200
Mana	Central India	Chhattisgarh	Thunderstorm	25-05-18	2025	2215
Silchar	Northeast India	Assam	Thunderstorm	25-05-18	1440	1550
Dhubri	Northeast India	Assam	Thunderstorm	26-05-18	0545	0830
Guwahati	Northeast India	Assam	Thunderstorm	25/26-05-18	252005	260045
Cherrapunjee	Northeast India	Meghalaya	Thunderstorm	25-05-18	0830	0900
Shillong	Northeast India	Meghalaya	Thunderstorm	25-05-18	0830	0900
Imphal	Northeast India	Manipur	Thunderstorm	26-05-18	0545	0630
Kailasahar	Northeast India	Tripura	Thunderstorm	25-05-18	1340, 1830	1650, 1930
Agartala	Northeast India	Tripura	Thunderstorm	25-05-18	1730	2130
			Squall from NW with max wind 47Kt	25-05-18	1730	1731
Panambur	South India	Karnataka (CK)	Thunderstorm	25/26-05-18	252315	260300
Mangalore AP	South India	Karnataka (CK)	Thunderstorm	26-05-18	0022	0315
Bengaluru City	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1320	2200
AMS HAL Bengaluru	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1345	2115
KIAL Bengaluru	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1715	1910
Chamarajanagar	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1710 2100	1800 2300
Yelahanka IAF	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1400	2200
Madikeri	South India	Karnataka (SIK)	Thunderstorm	25-05-18	1915	2130

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

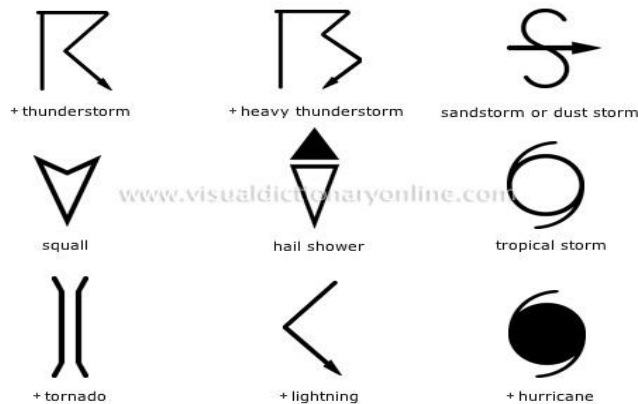
For Radar images of the past 24 hours including mosaic of images:

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	