



## India Meteorological Department

### FDP STORM Bulletin No. 11 (17-03-2018)

#### 1. CURRENT SYNOPTIC SITUATION:

##### NWFC INFERENCE (0300UTC of the Day):

- ♦ The trough in mid tropospheric westerlies with its axis at 5.8 km above mean sea level roughly along Long. 80°E to the north of Lat. 32°N has moved away northeastwards.
- ♦ The western disturbance as a trough in mid tropospheric westerlies with its axis at 5.8 km above mean sea level now runs roughly along Long 48°E to the north of Lat 30°N.
- ♦ A cyclonic circulation extending upto 0.9 km above mean sea level lies over southeast Rajasthan & adjoining west Madhya Pradesh.
- ♦ A cyclonic circulation extending upto 1.5 km above mean sea level lies over east central Arabian sea off Karnataka coast.
- ♦ The trough of low at mean sea level over Equatorial India Ocean and adjoining south Andaman sea now lies over Equatorial India Ocean and adjoining southeast Bay of Bengal.

##### SATELLITE OBSERVATIONS during past 24hrs and current observation:

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

##### WESTERN DISTURBANCE (WD):

Broken multi layered clouds observed over Caspian Sea Persian Gulf Iran & neighbourhood in association with WD over the area.

##### Clouds description within India:

Broken low medium clouds with embedded intense to very intense convection seen over North Tamilnadu (**Minimum CTT Minus 71 DEG C**)  
Scattered low/medium clouds with embedded isolated weak to moderate convection seen over Coastal Odisha, Southeast Gangetic West Bengal, Bihar, Sikkim, Northeast states, Andhra Pradesh, Telangana, South Interior Karnataka, North Kerala, rest Tamilnadu and Gulf of Mannar  
Scattered low/medium clouds seen over Jammu & Kashmir, North Himachal Pradesh, North Uttarakhand, East Madhya Pradesh, Maharashtra, Goa, rest Kerala and Lakshadweep Islands.

##### Arabian Sea:

Isolated low medium clouds with embedded weak to moderate convection seen over East-Central Arabian Sea and off Goa Coast.

##### Bay of Bengal & Andaman Sea:

Broken low/medium clouds with embedded moderate to intense convection seen over West-Central Bay and off South Andhra Pradesh-North Tamilnadu Coasts and isolated weak to moderate convection seen over North Bay adjoining Central Bay.

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

Moderate to intense convection was observed over Rayalaseema Andhra Pradesh south Karnataka Kerala Tamilnadu and weak to moderate convection over Maharashtra East MP Telangana Chhattisgarh Jharkhand West Bengal NE states.

**OLR:**

Upto 230-250  $\text{wm}^{-2}$  was observed over J&K North Himachal Pradesh North Uttarakhand Sikkim Arunachal Pradesh NMMT Kerala Tamilnadu SIK E Telangana Andhra Pradesh south Odisha.

**Synoptic features:**

**Westerly Trough:** Trough in westerly roughly along Long. 52°E to the north of Lat. 30°N

**Dynamic Features:**

Positive shear tendency is observed over the country except north Maharashtra.

Medium to high wind shear is observed over North & Central India.

**Precipitation:****IMR:**

Rainfall upto 50-70 mm observed over some parts of north Tamilnadu adjoining Rayalaseema.

Rainfall upto 30-50 mm observed over some parts of north Tamilnadu, Rayalaseema adjoining SIK.

Rainfall upto 10-30 mm observed over NE J&K, south CAP, some parts of TN & south Kerala.

Rainfall upto 1-10 mm observed over Rest J&K, North Himachal Pradesh, Sikkim, Odisha, Chhattisgarh, Jharkhand, West Bengal Nagaland, Manipur, Tripura, Mizoram, rest AP, north Kerala & rest Tamilnadu, some parts of Arunachal Pradesh, Meghalaya, Assam TLNGN, SIK & south coastal Karnataka.

**HEM:**

Rainfall upto 14 mm observed over north Chhattisgarh, Jharkhand, West Bengal, east Arunachal Pradesh, Assam, Meghalaya, NMMT Kerala & Tamilnadu, Karnataka, Rayalaseema, Andhra Pradesh and East Telangana.

**RADAR and RAPID RGB Observation:**

Moderate isolated convection was seen in domain of DWR Agartala at around 1242IST.

Light to moderate convection is seen over extreme East Arunachal Pradesh, Mizoram and Central parts of Tamilnadu in RAPID RGB Satellite imagery at 1200IST.

## 2. NWP MODEL GUIDANCE:

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

#### 1. Weather Systems:

##### Low level CYCIRs, Troughs:

**12 UTC of Day 0-1:** CYCIR over Arabian Sea- remnant of depression off Maharashtra coast

**12 UTC of Day 2-5:** 850 hPa Trough over Bangladesh and adjoining parts of NE India

**12 UTC of Day 0-2:** Trough at 850 hPa over East and NE India & adjoining Bangladesh

**00 UTC of Day 0-1:** Trough at 850 hPa over Central India

##### Confluence & wind Discontinuity regions:

**12 UTC of Day 0-4:** NE–SW wind discontinuity over central India extending from Maharashtra-MP-Chhattisgarh-Odisha to parts of Karnataka and Tamil Nadu

##### Synoptic Systems:

**12 UTC of Day 0-3:** Anticyclone at 925 hPa over Bay of Bengal leading to moisture incursion over Indian land.

**2. Location of jet and jet core (>60kt) at 500hPa:** over western Pakistan (Day-3) Western India (Day-4) associated with WD

#### 3. Convergence at 850 hPa:

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

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, West MP, East MP, Madhya Maharashtra,

Day1: Arunachal Pradesh, Odisha, East MP,

Day2: Jharkhand, Odisha, West MP, East MP, Chhattisgarh,

Day3: NE NMMT, Jharkhand, West RJ, Odisha, West MP, East MP, Madhya Maharashtra, Coastal Andhra Pradesh, , SI Karnataka,

Day4: West UP, Himachal Pradesh, Jammu Kashmir, Odisha, East MP, Coastal Andhra Pradesh, , SI Karnataka,

#### 4. Spatial distribution of Low level Vorticity:

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

Day0: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Uttarakhand, Himachal Pradesh,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Uttarakhand, Himachal Pradesh,

Day2: Assam Meghalaya, NE NMMT, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Coastal Andhra Pradesh, ,

Day3: Bihar, Uttarakhand, Himachal Pradesh, Odisha, Coastal Andhra Pradesh, ,

Day4: Assam Meghalaya, Bihar, West UP, Uttarakhand, Punjab, Jammu Kashmir, Guj Reg,

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

### **Day/Index: Subdivisions with Showalter Index < -4**

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day1: NE NMMT, Coastal Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day3: Arunachal Pradesh, Sub Himalayan WB, SI Karnataka, Kerala,

Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, SI Karnataka, Kerala,

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

### **Day/Index: Subdivisions with K Index > 40**

Day0: TN Puducherry, SI Karnataka, Kerala,

Day1: NE NMMT, Marathwada, Telangana, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Sub Himalayan WB, Madhya Maharashtra, Coastal Karnataka, NI Karnataka,

Day3: Arunachal Pradesh, Sub Himalayan WB, Madhya Maharashtra, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, Sub Himalayan WB, Madhya Maharashtra, Chhattisgarh, Coastal Karnataka, NI Karnataka, SI Karnataka,

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

### **Day/Index: Subdivision with Total Totals Index > 52**

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Jammu Kashmir,

Day2: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day3: Arunachal Pradesh, Sub Himalayan WB, Himachal Pradesh, Jammu Kashmir, West RJ,

Day4: Arunachal Pradesh, Sub Himalayan WB, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East MP,

## **8. Rainfall and thunder storm activity:**

### **Day/Index: Subdivisions with Precipitation > 2 cm**

Day1: Arunachal Pradesh, Assam Meghalaya, TN Puducherry, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, TN Puducherry, Kerala,

Day3: Himachal Pradesh, Jammu Kashmir,

Day4, Day5:NIL

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

**1. Synoptic Systems:** The analysis based on 00 UTC shows a cyclonic circulation is seen over West Rajasthan and adjoining west Madhya Pradesh. In forecasts, the cyclonic circulation weakens further with shift over Madhya Maharashtra in next 2 days. The cyclonic circulation over southeast Arabian Sea associated with the low pressure system now lies off Coastal Karnataka region which is dissipating in next 2 days. A north-south oriented trough extending from SHWB and adjoining areas to GWB persists for next 3 days.

**2. Location of Jet and Jet Core (>60kt) at 500hPa:** Although the presence of strong westerlies is found but no jet core over the Indian region for the next 3 days.

**3. Low Level Vorticity {850hPa Positive Vorticity ( $>12 \times 10^{-1}/s$ )}**: Mostly associated with the cyclonic circulation and along the trough over parts of central India and along foothills of Himalayas during next 3 days.

## **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):** Higher than a value 3 over parts of Gangetic West Bengal, coastal Orissa, coastal Karnataka and Konkan & Goa on day 1. The area extends over many parts of peninsular India including Interior Karnataka, Kerala and Tamilnadu during next 2 days.

**Lifted Index (< -2):** The spatial coverage of the index exceeding threshold value is nearly similar to T-storm Initiation index.

**Total Total Index (> 50) :** Above threshold value over NW and central India on day 1 and day 2 which gradually shifts eastward over east India region on day 2 and 3. Parts of coastal Tamilnadu also show a prominent area on day 3.

**Sweat Index (> 300):** Parts of NE states for next 3 days. Along the east coast of India during next 2 days. Parts of Saurashtra and Kutch on day 1 and 2. Over southern parts of peninsular India and west coast on day 1 and 2.

**CAPE (> 1000):** Mostly along southern parts peninsular India and along west coast and east coast during next 2 days and along southern parts of west coast on day 3. Over coastal areas of GWB and Orissa during all 3 days.

**CIN (50-150):** Mostly along east coast over Coastal Andhra Pradesh, Orissa, GWB and over parts of north eastern states, parts of Konkan & Goa and coastal Karnataka during next 3 days.. Over parts of Jharkhand and adjoining Chhattisgarh on day 1.

## **5. Rainfall Activity:**

40-70 mm rainfall: On day 1 over parts of Arunachal Pradesh and Interior Karnataka and adjoining Kerala, Tamilnadu and Rayalaseema.

10- 40 mm rainfall: On day 1, over parts of Arunachal Pradesh and NMMT, parts of Karnataka, Coastal Andhra Pradesh, Rayalaseema, Interior Tamilnadu and Kerala on day 2. Over parts of Kerala and adjoining Tamil Nadu on day 3.

Up to 10 mm rainfall: On day 1, over parts of J&K parts of north eastern states, Orissa, Coastal Andhra Pradesh, Rayalaseema, and Konkan and Goa. On day 2 Coastal Karnataka, Tamilnadu and Kerala, Madhya Maharashtra, Marathwada. During all 3 days, coastal Karnataka, Kerala and adjoining Konkan and Goa and Tamilnadu.

### 3. IOP ADVISORY FOR 24 and 48Hrs:

#### Summary and Conclusions:

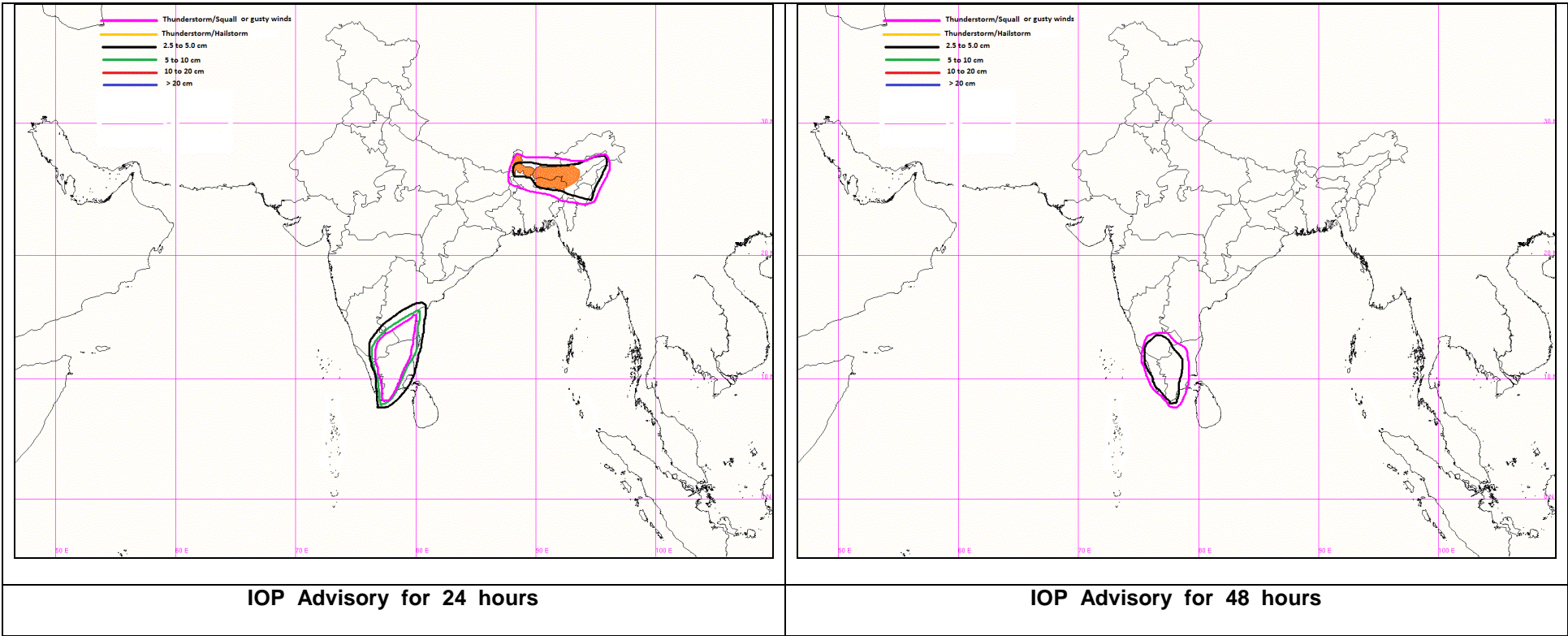
o A region of strong winds are developing over Bihar and adjoining Eastern Uttar Pradesh. These winds are decelerating over Sub Himalayan West Bengal and Assam, leading to wind convergence over the region. This is also supported by the left exit sector jet core in the upper levels over this region. The anti-cyclone over the Bay region is also in a southward location and this is pumping some moisture into Assam and Meghalaya region. This is likely to result in thunderstorms with isolated hailstorms over Sub Himalayan West Bengal and Assam and thunderstorms with less intensity over Arunachal Pradesh, Nagaland and Manipur. On day 2, the wind convergence is decreasing and severe weather is unlikely over the north-east India.

o A region of wind maximum in the lower levels is also developing over central Bay of Bengal on the southern periphery of the anticyclone over Bay of Bengal. These winds are decelerating as they approach the east coast of India. There is also a cyclonic circulation extending upto 1.5 km above mean sea level over east central Arabian sea off Karnataka coast. Associated weather in the form of heavy rains and thunderstorms are likely to affect the entire southern peninsula on day 1. On day 2, the cyclonic circulation is likely to move slightly northwestwards, However, the region of wind convergence is moving westwards, and coming closer and then into the east coast of India. Hence rainfall and thunderstorm weather is not likely to cease completely. It will continue, with less intensity over south-western peninsular India.

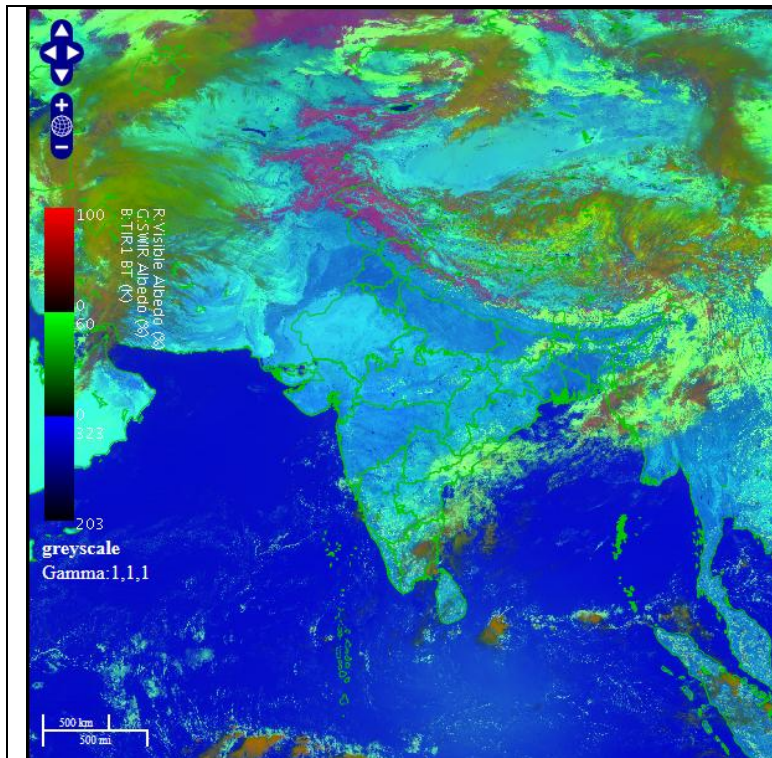
#### Day-1 & Day-2:

|  |   |
|--|---|
| <b>24 hour Advisory for IOP:</b><br><b>Rainfall:</b><br>South Interior Karnataka, South Coastal Andhra Pradesh, Interior Tamil Nadu, Rayalaseema, Kerala,<br>Sub Himalayan West Bengal and Sikkim,<br>Assam and Meghalaya, Nagaland, Manipur<br><b>Thunderstorm with associated phenomenon:</b><br>South Interior Karnataka, South Coastal Andhra Pradesh, Tamil Nadu, Rayalaseema, Kerala,<br>Sub Himalayan West Bengal and Sikkim, Odisha,<br>Assam and Meghalaya, Nagaland, Manipur | <b>48 hour Advisory for IOP:</b><br><b>Rainfall:</b><br>South Interior Karnataka, Kerala<br><b>Thunderstorm with associated phenomenon:</b><br>South Interior Karnataka, Kerala, Interior Tami Nadu |
|--|---|

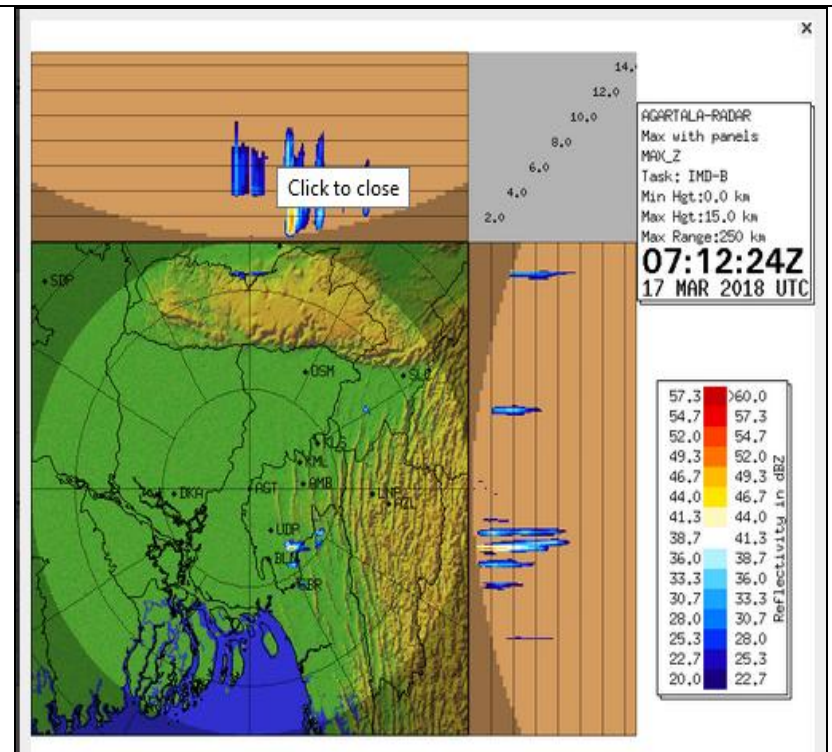
Graphical Presentation of Potential Areas for Severe Weather:







RAPID RGB Imagery at 1200IST of the Day

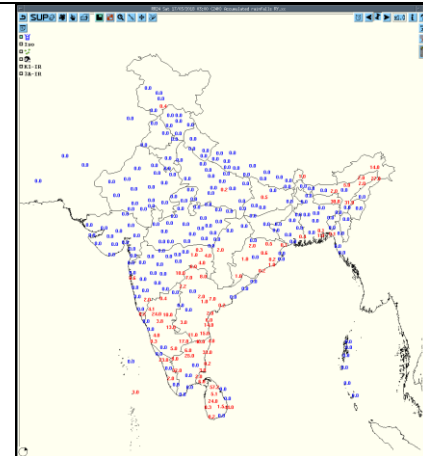


DWR Agartala at 1242 IST of the Day



Not received

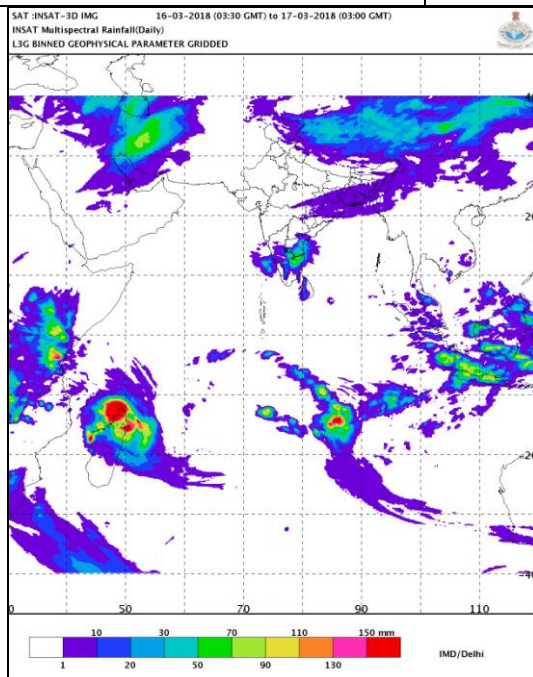
Not received



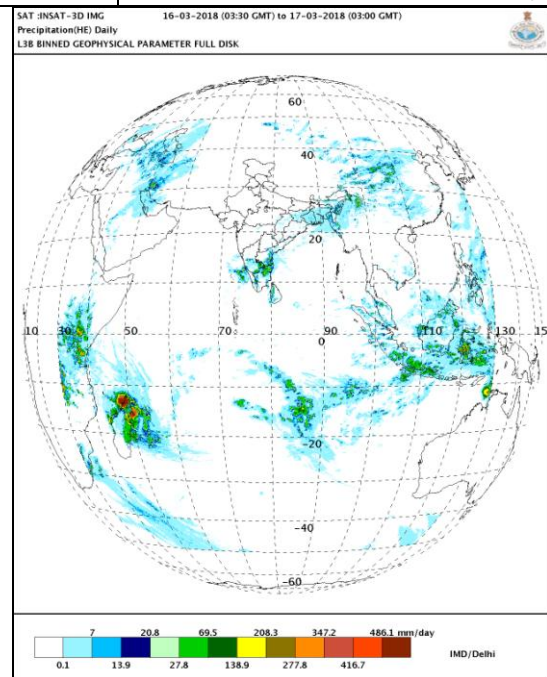
Forecast Dust Concentration

PM10 Forecast

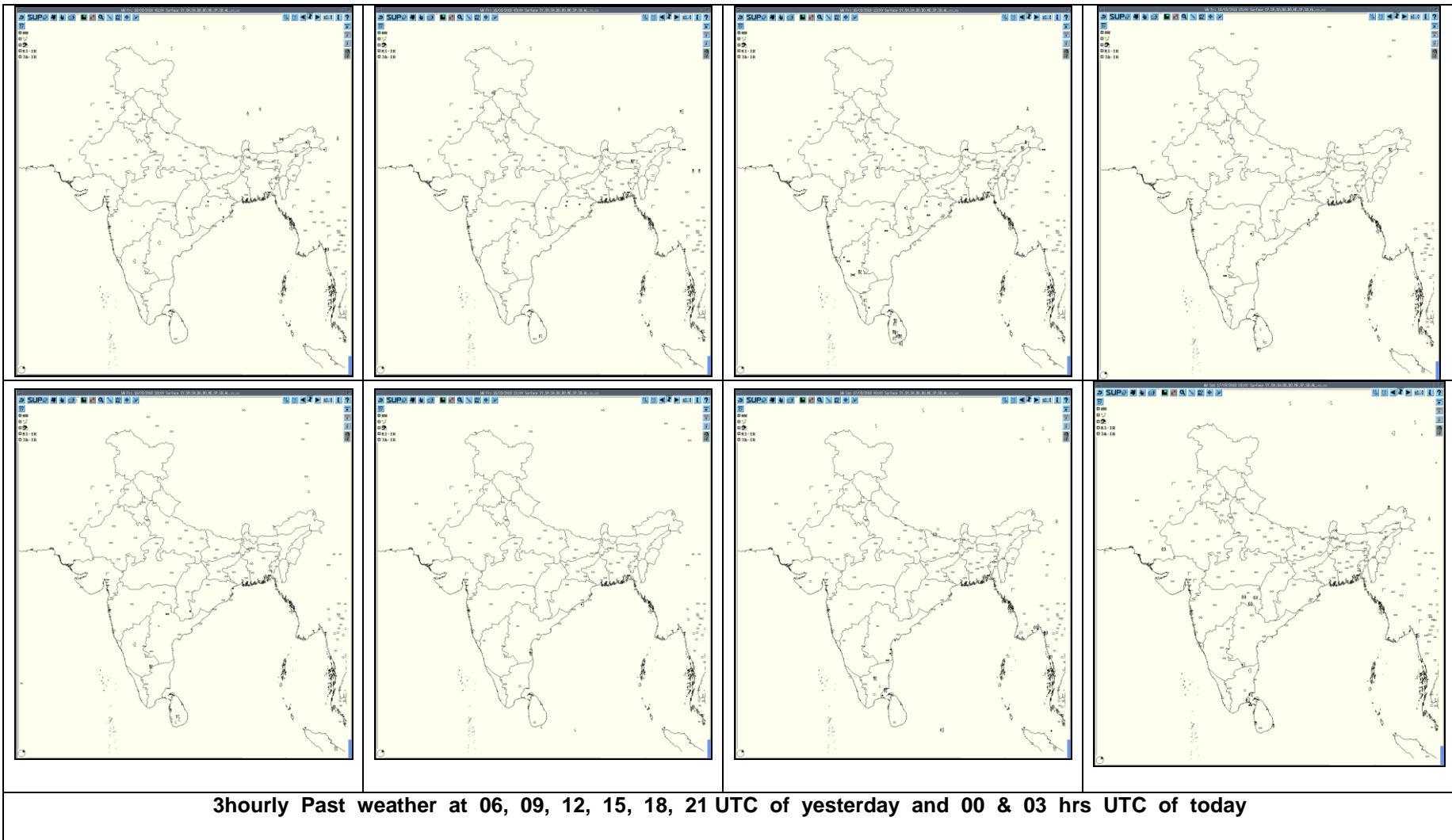
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



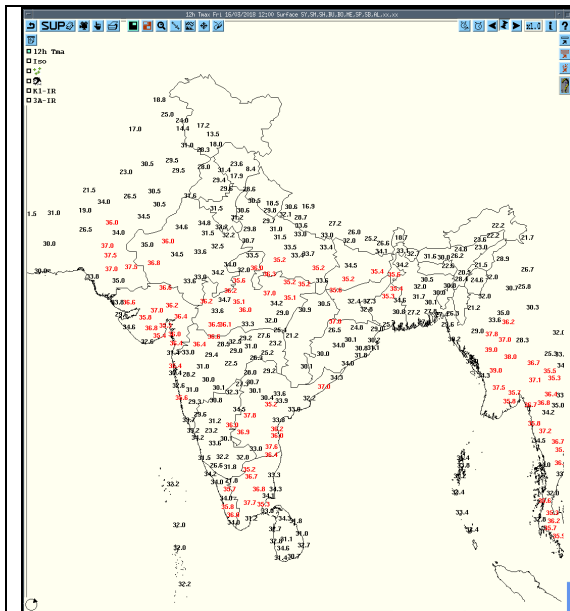
IMR



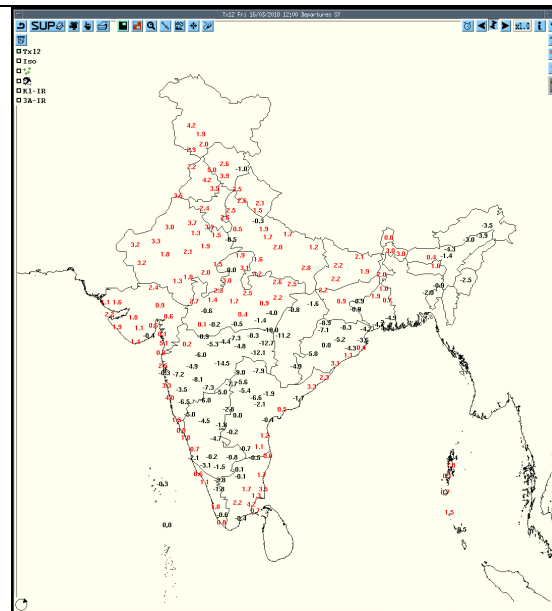
HEM



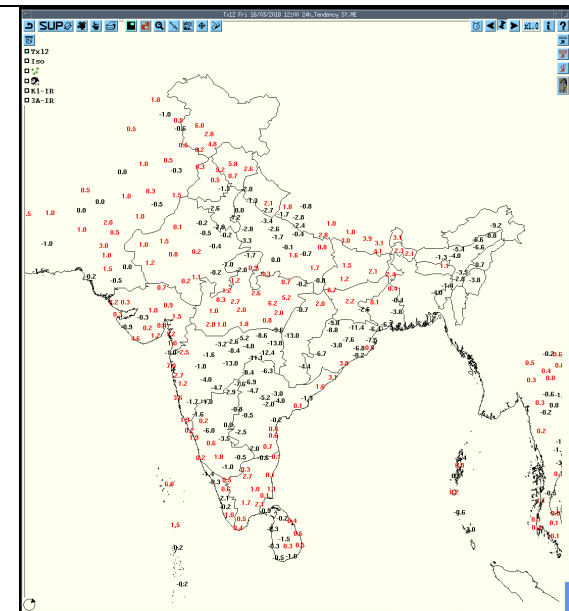
3hourly Past weather at 06, 09, 12, 15, 18, 21 UTC of yesterday and 00 & 03 hrs UTC of today



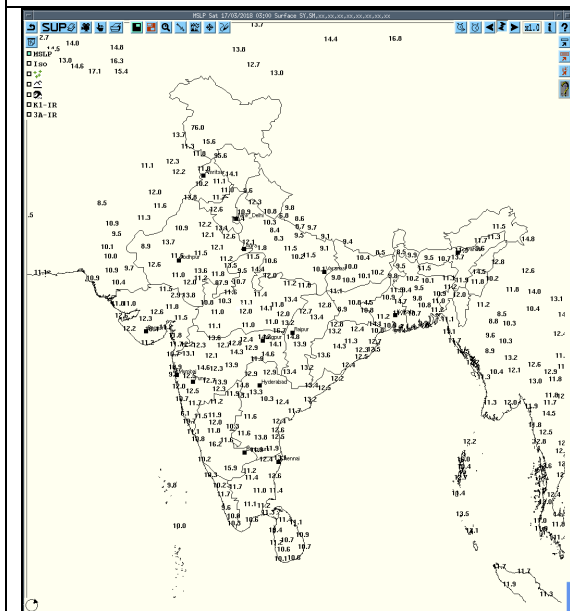
Tmax



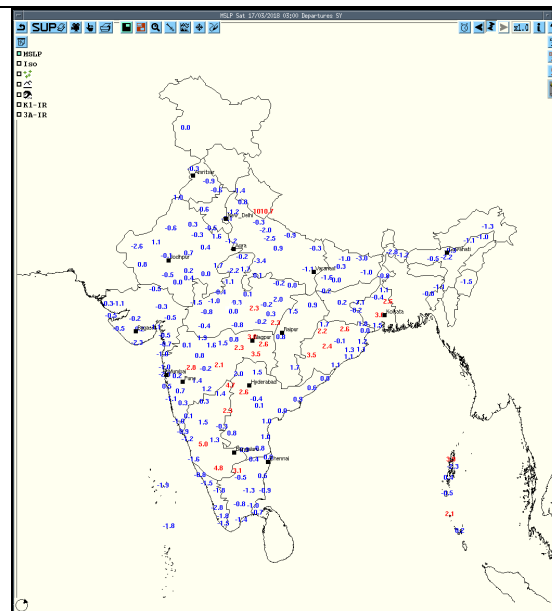
Departure Tmax



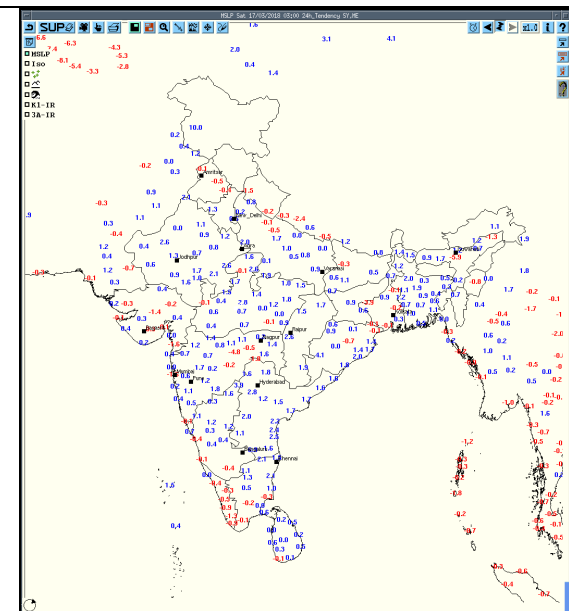
Tendency Tmax



MSLP



Departure MSLP



Tendency MSLP



## Past 24 hours DWR Report:

| DWR Station Name | Date of Report | Time Interval of Observation (UTC) | Organisation of 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                            |
|------------------|----------------|------------------------------------|---|--|---|----------------------------------|---|
| Agartala         | 17-03-18       | 160300-170300                      | DSPTNG ISLTD SINGLE,50Dbz,10 kms  | 220 Kms NE near SLC/30 Kmph E'ly                                   | Dissipated at 160330 UTC  | Not known.                       | Not Known.                                    |
|                  |                |                                    | ISLTD SINGLE CELL,47 dBZ,10 Kms(seen @ 160512 UTC)  | 100 Kms NE(near KLS)/30 Kmph, E'ly                                 | South ASSAM/North MIZORAM at 160800UTC  | Not known.                       | Not Known.                                    |
|                  |                |                                    | SQL LINE formation,57 dBZ,12 Kms(seen @ 160830 UTC)   | 110 Kms NNE/NE near DHARMANAGAR/35-40 Kmph, NE'ly                  | South ASSAM near HAILAKANDI @161200 UTC.  | Not known.                       | Not Known.                                    |
|                  |                |                                    | ISLTD SINGLE CELL,60 dBZ,12 Kms seen @ 161300 UTC   | 160 Kms NE(near HAILAKANDI,ASSAM)/30 Kmph, NE'ly                   | South Assam (near SLC) @161330 UTC  | Not known.                       | Not Known.                                    |
|                  |                |                                    | ISLTD SINGLE CELL,40 dBZ,10 Kms seen @ 170042 UTC   | 225 Kms NE/over MEGHALAYA-ASSAM Hills/30 Kmph, NE'ly               | South ASSAM near HAFLONG @170112 UTC  | Not known.                       | Not Known.                                    |
| Patna            | 17-03-18       | 160300-170100                      | NIL   | NIL  | N/A   | N/A                              | N/A   |
|                  |                | 170100-170300                      | Multiple Cell. Maximum Reflectivity : 35.0 dBZ Echo Top : 7.2 KM  | Range : 20.7 KM from DWR Patna in North-West Movement West to East | NIL   | Thunderstorm with Rain           | Patna, Chhapra, Bhojpur, Vaishali, Samastipur |
| Lucknow          | 17-03-18       | 161352 UTC TO 161422 UTC           | Single cell with average height of 6.0KM with Maximum Reflectivity of 40 dBZ.   | WSW(110KM) moving in E'ly Direction at speed of 36 km/hr.          | Single cell started forming at 13:42 UTC at WSW(120KM) moved in E'ly direction ,did not intensified much and dissipated at 14:22 UTC.   | NIL                              | NIL   |
|                  |                | 161432UTC TO 161602UTC             | Single cell with average height of 5.8KM with Maximum Reflectivity of 44 dBZ.   | SW(50KM) moving in E'ly Direction at speed of 36 km/hr.            | Single cell started forming at 14:32 UTC at SW(60KM) moved in E'ly direction and dissipated at 15:12 UTC.A second cell formed with this dissipated cell and intensified at 15:32 UTC with average height of 5.0KM and dissipated at 16:02 UTC | NIL                              | NIL   |

| DWR Station Name | Date of Report | Time Interval of Observation (UTC) | Organisation of 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 |
|------------------|----------------|------------------------------------|---|--|--|----------------------------------|--------------------|
| Visakhapatnam    | 16-03-18       | 0300-0600                          | Isolated single cells of maximum reflectivity of 35dBz with height of 6kms  | SE(160 KMS) moving NE  | Likely to be dissipated  | NIL                              | NIL                |
|                  |                | 0900-1200                          | Isolated single cells of maximum reflectivity of 51dBz with height of 8kms  | NNE(114 KMS) moving Ely  | Likely to be dissipated  | NIL                              | NIL                |
|                  |                | 1200 -1500                         | Conviction region NE ly with max reflectivity 44dbz and height 7kms at a distance of 166kms.  | Moving NE ly   | dissipating  | NIL                              | NIL                |
|                  |                | 1500-1800                          | Conviction region and CB NE ly with max reflectivity 52dbz and height 7kms at a distance of 175kms.   | Moving ENE ly  | dissipating  | NIL                              | NIL                |
|                  |                | 1800-0000                          | Conviction region NNE ly with max reflectivity 41dbz and height 6 kms at a distance of 194kms.  | Moving NE ly   | dissipating  | NIL                              | NIL                |
|                  | 17-03-18       | 0000-0300                          | Conviction region NE and SSW with max reflectivity 44dbz and height 7 kms at a distance of 205kms.  | Moving E ly  | dissipating  | NIL                              | NIL                |
| Kolkata          | 16-03-18       | 0301 – 0311                        | NIL   | NIL  | NOSIG ECHO   | NIL                              | NIL                |
|                  |                | 0321 - 0641                        | Multi celled system with maximum height of 7.5 km at 0341 UTC and maximum reflectivity 49.0 dBz at 0412 UTC   | WSW/148 km to SSW/73 km moving ENE-ly direction at a speed of 30.0 kmph. | Multi celled system developed in between WSW/148 km to SSW/73 km. Not matured dissipated at 0641 UTC in E at a distance of 148 km from RADAR | Thunderstorm/rain                | N/A                |
|                  |                | 0641 - 2351                        | NIL   | NIL  | NOSIG ECHO   | NIL                              | NIL                |
|                  | 17-03-18       | 0001 - 0301                        | NIL   | NIL  | NOSIG ECHO   | NIL                              | NIL                |



## 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](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/](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](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](http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR_2017/?C=M;O=D)

Past24hourHEMandIMRainfall(upto03UTCof today)

IMR: [http://satellite.imd.gov.in/img/3Ddaily\\_imr.jpg](http://satellite.imd.gov.in/img/3Ddaily_imr.jpg)

HEM: [http://satellite.imd.gov.in/img/3Ddaily\\_he.jpg](http://satellite.imd.gov.in/img/3Ddaily_he.jpg)

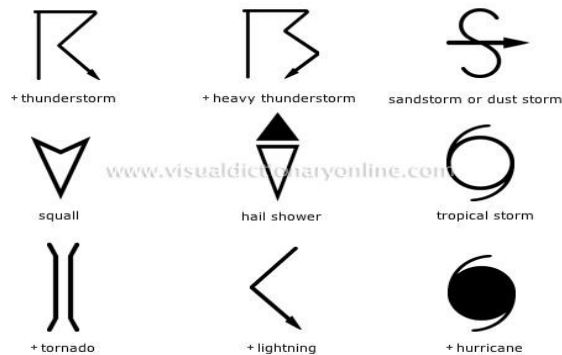
For Radar images of the past 24 hours including mosaic of images:

[http://ddgmui.imd.gov.in/dwr\\_img/](http://ddgmui.imd.gov.in/dwr_img/)

Satellite sounder based T- Phigram

[http://satellite.imd.gov.in/mAndhra\\_Pradesh\\_skm2.html](http://satellite.imd.gov.in/mAndhra_Pradesh_skm2.html)

## WEATHER SYMBOLS:



|                        |                    |
|------------------------|--------------------|
| ∞                      | haze               |
| ☼                      | smoke              |
| ☼                      | dust or sand storm |
| ☼                      | fog                |
| ☼                      | drizzle            |
| •                      | rain               |
| *                      | snow               |
| ▽                      | showers            |
| △                      | hail               |
| ☼                      | thunderstorm       |
| <b>Weather Symbols</b> |                    |