



India Meteorological Department **FDP STORM Bulletin No.86 (30-05-2017)**

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

Today, Southwest monsoon has further advanced into some more parts of south Arabian Sea, remaining parts of Maldives - Comorin area, southern parts of Lakshadweep area, Kerala and Tamilnadu, some more parts of southwest Bay of Bengal, remaining parts of southeast Bay of Bengal, some parts of west-central Bay of Bengal most parts of east-central and northeast Bay of Bengal and some parts of Nagaland -Manipur - Mizoram and Arunachal Pradesh.

The Northern Limit of Monsoon (NLM) passes through 10.0°N/60.0°E, 10.0°N/70.0°E, Kochi, Tondi, 14.0°N/ 87.0°E, 17°N/ 90.0°E, 20.0°N/ 91.0°E, Aizwal, Kohima & Deomali.

The severe cyclone storm MORA over northeast Bay of Bengal moved further north - north eastward during past 06 hours with a speed of 28 kmph, and lay centred at 0830 hrs IST of today , 30th May, 2017 over Bangladesh Coast near Lat. 21.8° N and Long 91.9°E, about 50 Km south of Chittagong and close to Kutubdia Island. Latest observations indicate that it crossed Bangladesh coast near Lat. 21.95° N and Long. 91.9°E, about 30 Km south of Chittagong between 0730 and 0930 hours IST, and lay centred at 0930 hours IST of today, the 30th May 2017 over coastal Bangladesh near Lat. 22.0° N and Long 91.9°E, as a severe cyclonic storm. It is very likely to continue to move north- northeast wards towards north-eastern states and weaken into a cyclonic storm during next 6 hours and into a deep depression in subsequent 6 hours.

The trough at mean sea level now runs from West Rajasthan to centre of severe cyclonic storm over northeast Bay of Bengal and adjoining Bangladesh across Madhya Pradesh, Jharkhand and Gangetic West Bengal and extends upto 0.9 km above mean sea level.

The trough roughly along Long 87.0°E to the north of Lat. 22.0°N, now runs along Long 87.0°E to the north of Lat. 25.0°N at 5.8 km above mean sea level.

An upper air cyclonic circulation lies over East Uttar Pradesh & neighbourhood between 1.5 Km & 3.1 Km above mean sea level.

An off-shore trough at mean sea level runs from north Marathwada to north Kerala coast.

The upper air cyclonic circulation over central Pakistan & neighbourhood extending upto 0.9 km above mean sea level persists.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

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

Vortex over Bay of Bengal (Bob):

Vortex(MORA) seen over NE Bay & neighbourhood has crossed Bangladesh coast near **21.4N/92.1E**, overland, associated Broken low/medium clouds with embedded intense to very intense convection were seen over Bay between Lat 18.0N to 24.0N o 89.0E to 95.5E with minimum CTT minus 93 DEG C.

Cloud Description:

Scattered low/medium clouds were seen over Himachal Pradesh, Uttarakhand, rest Uttar Pradesh, South Bihar, Jharkhand, North Odisha, North Chhattisgarh, Maharashtra,

Broken low/medium clouds with embedded moderate to intense convection were seen over NMMT, Southeast Assam,

Scattered low/medium clouds with embedded moderate to intense convection were seen over Coastal Kerala, Lakshadweep and Andaman Islands

Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over North Uttar Pradesh, South Madhya Pradesh, East Vidarbha and rest Kerala,

Arabian Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over Southeast Arabian Sea.

Bay of Bengal & Andaman Sea:

Broken low/medium clouds with embedded intense to very intense convection were seen over North Andaman Sea gulf of MARTABAN TENNASERIM coast East Central Bay. Scattered low/medium clouds with embedded moderate to intense convection were seen over rest Bay and rest Andaman.

Past Weather:

Convection:- Moderate to Intense convection was observed over J&K Himachal Pradesh Uttarakhand Punjab Haryana Delhi Uttar Pradesh Madhya Pradesh Vidarbha Chhattisgarh Bihar Jharkhand Odisha West Bengal Meghalaya North East States Karnataka Telangana Andhra Pradesh Kerala Tamilnadu .

OLR:-

Upto **200** wm^{-2} was observed over Arunachal Pradesh South East West Bengal East Assam Nagaland Manipur Mizoram Tripura .

Upto **230** wm^{-2} was observed over East J&K Himachal Pradesh Uttarakhand Meghalay North East Odisha Kerala South Tamilnadu.

Upto **250** wm^{-2} was observed over North West Uttar Pradesh South East Jharkhand Rest West Bengal Sikkim.

Westerly Trough & Jet-Stream: Trough in westerlies runs roughly along 84.0E north of lat 22.0N & No Jet Stream observed over India.

Dynamic Features:

Low to Medium wind shear is observed over India.

Positive shear tendency is observed over India

A positive Vorticity field is observed over Saurashtra South Chhattisgarh South East West Bengal North Coastal Andhra Pradesh.

Negative low level convergence is observed over Gujarat Odisha Kerala and Positive low level convergence observed over rest parts of India,

Precipitation:**IMR:**

Rainfall Up to **30** mm was observed over South Tamilnadu South East West Bengal Mizoram.. Rainfall Up to **20** mm was observed over East Arunachal Pradesh Manipur Tripura. Rainfall Up to **10** mm was observed over East J&K Uttarakhand Central Rajasthan North Madhya Pradesh Sikkim Meghalaya Assam Rest Arunachal Pradesh Nagaland South East Jharkhand North East Odisha North Coastal Andhra Pradesh Kerala .

HEM:

Rainfall Up to **14** mm was observed over South West J&K South Himachal Pradesh Uttarakhand .

Rainfall Up to **07** mm was observed over Punjab Haryana Delhi Uttar Pradesh North East Rajasthan East Madhya Pradesh Vidarbha Chhattisgarh North East Odisha East Bihar East Jharkhand North West Bengal North East States South Interior Karnataka Kerala North Coastal Andhra Pradesh South Tamilnadu.

RADAR and RAPID Observation:

DWR Composite at 1300hrs IST indicated scattered convection over East Uttar Pradesh, South Bihar, Northeast Jharkhand, Gangetic west Bengal, East Madhya Pradesh and also in RAPID RGB Satellite imagery at 1200hrs IST including Assam, Meghalaya, NMMT, Kerala, Lakshadweep, Minicoy, Andaman and Nicobar Islands.

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

Higher Dust concentration was observed over north-west Africa and Arab countries. Dust concentration is expected to decrease over north India for next five days. High PM10 concentration was observed over Rajasthan and is expected to increase over north India in next five days.

2. NWP MODEL GUIDANCE:

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

1. Weather Systems: 12UTC Charts of Day 0-4 except Day 2, show evolution of heat low over NW India and adjoining Pakistan with MSLP values lower than 990hPa on Day-0 to Day-1.

12UTC charts on days from Day 2 to Day 3: show a zone of wind discontinuity at 925 hPa; E-W extending from Maharashtra to Jharkhand

SCS 'MORA' in Bay of Bengal from Day-0 onwards and is seen **to cross the coast between 00 and 06 UTC on 30th May 2017 near Cox's Bazar in Bangladesh**

2. Location of jet and jet core at 500hPa:-500hPa Jet core (>60kt): Weaker core winds at 12 UTC on all days over India.

3. Convergence at 850 hPa:

(Day/Index: Subdivisions with Lower Level Convergence > 15 x 10⁻⁵ /s): Day0: Assam Meghalaya, East RJ, West MP, East MP,

Day0: Assam Meghalaya, NE NMMT, Jharkhand, West UP, Odisha, West MP, East MP,

Day1: Arunachal Pradesh, Punjab, West RJ, East MP, Madhya Maharashtra,

Day2: Assam Meghalaya, Madhya Maharashtra,

Day3: Assam Meghalaya, Jharkhand, Madhya Maharashtra, Chhattisgarh,

Day4: Arunachal Pradesh, Assam Meghalaya, Gangetic WB, Jharkhand, West MP, East MP, Chhattisgarh

4. Low level Vorticity:-Positive Vorticity (>15 x 10⁻⁵/s):

(Day/Index: Subdivisions with Lower Level Vortex > 15 x 10⁻⁵ /s):

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Odisha, TN Puducherry,

Day1: Arunachal Pradesh, Assam Meghalaya, West RJ, TN Puducherry,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Haryana, Chandigarh, Delhi, TN Puducherry, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Bihar, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, TN Puducherry,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Himachal Pradesh, West MP, TN Puducherry

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

(Day/Index: Subdivisions with Showalter Index < -4):

Day0: Arunachal Pradesh, Sub Himalayan WB, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West MP, East MP, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Coastal AP, Telangana, TN Puducherry, NI Karnataka, SI Karnataka,

Day1: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, Gujarat Region,, Vidarbha, Chhattisgarh, TN Puducherry,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, West MP, Gujarat Region,, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Gujarat Region,, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Uttarakhand, Himachal Pradesh, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, TN Puducherry

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, West RJ, Saurashtra Kutch,

Day1: Arunachal Pradesh, Sub Himalayan WB, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, West MP,

Day2: Arunachal Pradesh, Sub Himalayan WB, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, West MP,

Day3: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir,

Day4: Arunachal Pradesh, Sub Himalayan WB, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha

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

(Day/Index: Subdivisions with K Index > 40):

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, East RJ, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, NI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Uttarakhand, Himachal Pradesh, East RJ, Odisha, West MP, East MP, Gujarat Region,, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka

8. Rainfall and thunder storm activity:

(Day/Index: Subdivisions with Precipitation > 2 cm):

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Bihar, East UP, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, Andaman Nicobar, Coastal AP, Coastal Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Konkan Goa, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Konkan Goa, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Konkan Goa, Madhya Maharashtra, Andaman Nicobar, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Konkan Goa, Madhya Maharashtra, Andaman Nicobar, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala

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

1. Weather Systems: 00 UTC analysis shows the trough from Rajasthan to centre of cyclonic storm over east-central BOB across Madhya Pradesh, Odisha and Chhattisgarh and the forecasting shows this trough will persist up to day 4 to day 5 over said region.

2. Location of jet and jet core at 500 hPa:-500 hPa Jet core (>60kt): No presence of jet core over the Indian region for the next 5 days except on day 1 to day 5 over J & K region.

3. Low level Vorticity:-Positive Vorticity 850hPa (>12 x 10⁻¹/s): Analysis shows low level positive vorticity (>-12 x 10⁻⁵/s) mainly over isolated pockets in Punjab, Haryana, some pocket over central part of country and west coastal region and over the north eastern region. The high vorticity belts are mainly confined over regions of UP, Haryana, Delhi, Bihar, MP, AP and south peninsular region during next 3 to 4 days.

4. Spatial distribution of T-Storm Initiation Index, Lifted Index, Total Total Index, CAPE, CINE and Sweat Index (High potential for thunderstorm):

T-Storm Initiation Index (> 4): Significant threshold values are noticed over Gujarat and Rajasthan in the analysis. Forecast shows high threshold values over Gujarat, Rajasthan along with few pockets in Odisha and WB for the next 2 to 3 days.

Lifted Index (< -2): The areas with index less than -2 lies along Delhi, UP, Bihar, Chhattisgarh, GWB and major regions of AP along with Gujarat Rajasthan for the next 2 to 3 days.

Sweat Index (> 400): 00UTC shows significant values over major parts over some pockets over Haryana and adjoining area, UP, Bihar, GWB, Odisha and AP and is expected to persist for the next 3 days.

CAPE (> 1000): Mostly over Bihar, GWB, Odisha, and AP and other regions over the east coast, Gujarat, Rajasthan and along with major regions bordering the west coast during the next 3 days.

CINE (50-150): Maximum CIN values are found in areas over some packets over Punjab and Delhi UP, Bihar, GWB, Odisha, AP and TN and along with major pockets in the Maharashtra, Gujarat and Rajasthan region for the next 2-3 days.

5. Rainfall and thunderstorm activity: 00 analysis shows 40-70 mm rain fall over northeast region and 10-40 mm rainfall over west coast of country. 10-40 mm is forecasted over major pockets over west coast and NE region is expected to persist for the next 2-3 days. On day 2 some pocket of Punjab and J&K and on day 3 over southwest Haryana and adjoining area.

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

1. Model Reflectivity (Max. dBz): 15-40 dBZ over regions of the North-East region of country and isolated pockets of the southern coast region during next 3 days on day 2 and day 3 over Punjab, HP J & K and Delhi.

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

CAPE (> 1000): Mostly along WB, Odisha, AP and TN and along major regions bordering the west coast during next 2 to 3 days.

CINE (50-150): Higher values over most regions of India except over J & K region and NE states and south peninsula of the country during next three days.

3. Rainfall and thunderstorm activity:

10-40 mm over isolated pockets in UP, Bihar and WB region adjoining the Himalayas, and over west coast of country and it is expected to persist for the next 3 days and over Delhi and adjoining on day 2 and day 3.

>40 mm shows over Northeast region based on 00 analysis.

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, the trough at mean sea level now runs from West Rajasthan to centre of severe cyclonic storm over northeast Bay of Bengal and adjoining Bangladesh across Madhya Pradesh, Jharkhand and Gangetic West Bengal and extends upto 0.9 km above mean sea level. The entire central and north eastern parts of the country will experience the thunder storm with gusty wind on Day-1.

Due to the severe cyclone storm MORA and its movement to north northeast wards, the Assam, Meghalaya, Manipur and Tripura will experience very heavy rainfall for Day-1 and Day-2.

An offshore trough at mean sea level runs from north Marathwada to north Kerala coast, this will give rise to extreme rainfall over Kerala and Coastal Karnataka on Day-1 and Day-2.

The upper air cyclonic circulation over central Pakistan & neighbourhood, this will give rise to thunderstorm with hail over Himachal Pradesh and Uttrakhand on Day-1.

24 hour Advisory for IOP:

Kerala, Lakshadweep, South Interior Karnataka, Interior Tamilnadu, Coastal Karnataka
Arunachal Pradesh Assam Meghalaya Tripura, Nagaland, Manipur, Mizoram
Sub Himalayan West Bengal, Gangetic West Bengal
Orissa, Bihar and Jharkhand, Chhattisgarh, West and East MP, Vidarbha
Himachal Pradesh, Uttrakhand, East UP

48 hour Advisory for IOP:

Kerala, Lakshadweep, South Interior Karnataka, Interior Tamilnadu, Coastal Karnataka
Tripura, Nagaland, Manipur, Mizoram Assam Meghalaya, Arunachal Pradesh
Sub Himalayan West Bengal, Gangetic West Bengal
Orissa, Bihar and Jharkhand,
Himachal Pradesh, Uttrakhand, Punjab, Haryana, West and East Uttar Pradesh,
West and East Rajasthan

For NCMRWF NWP products:(<http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php>)

For IMD NWP products:(http://nwp.imd.gov.in/diagpro_new.php)

For Synoptic plotted data and charts

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

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

For RAPID tool:

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

Low Level Winds

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

Upper level winds

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

Past24hourHEMandIMRrainfall(upto03UTCoftoday)

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

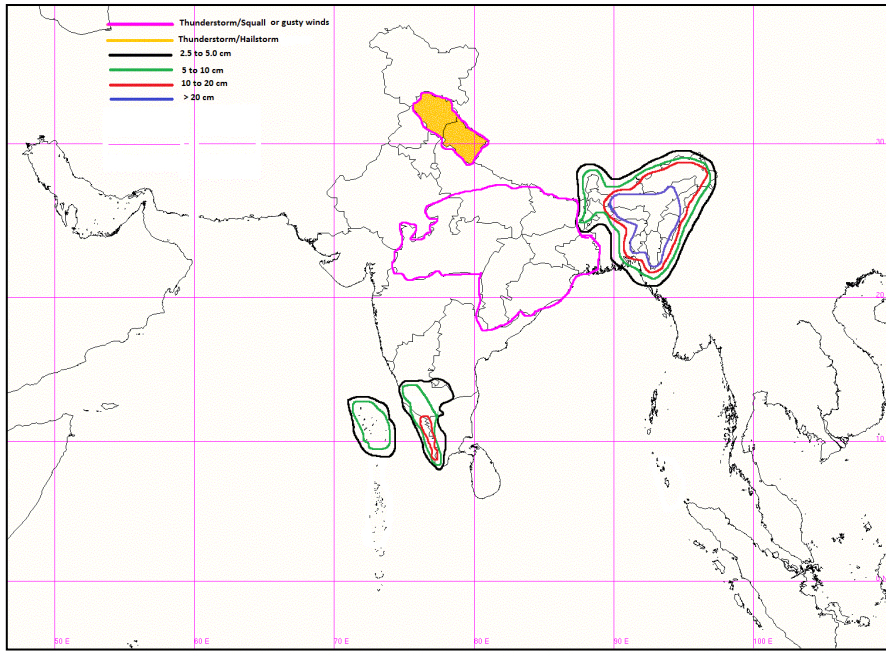
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ForRadarimagesofthepast24hoursincludingmosaicofimages:

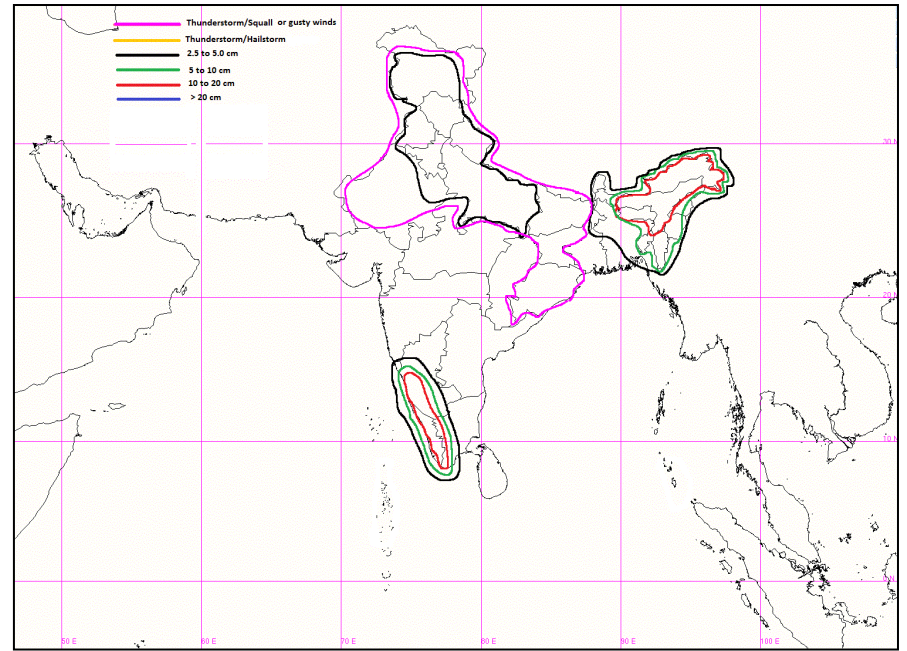
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Satellite sounder based T- Phigram

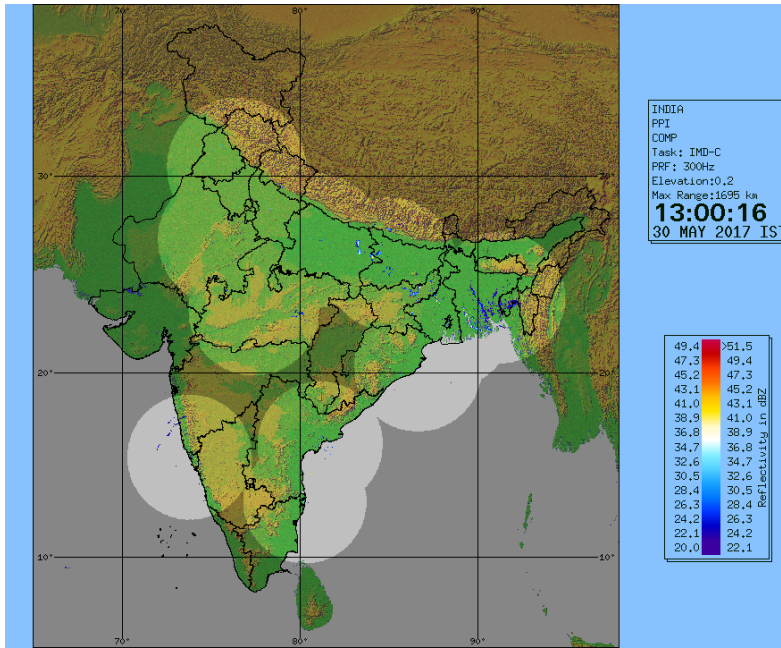
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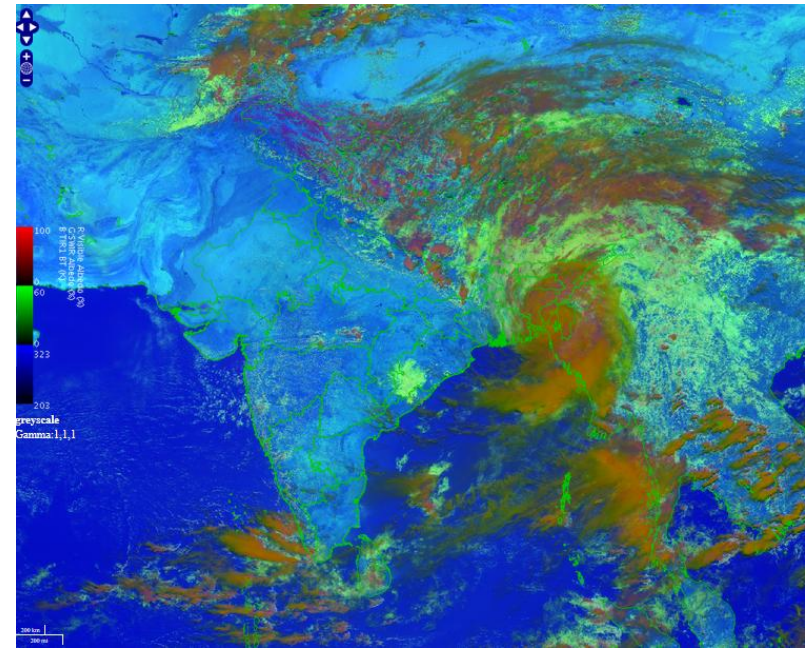
IOP Advisory for 24 hours



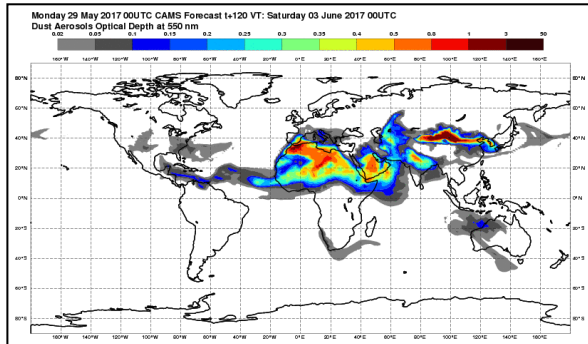
IOP Advisory for 48 hours



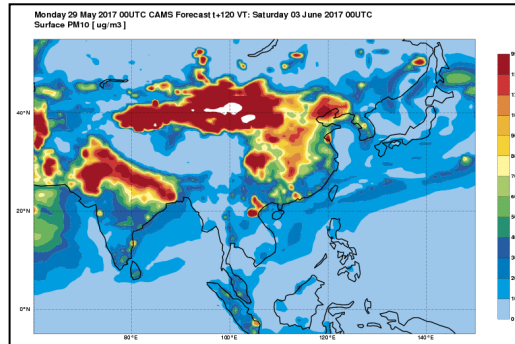
DWR Composite at 1300 hrs IST of today



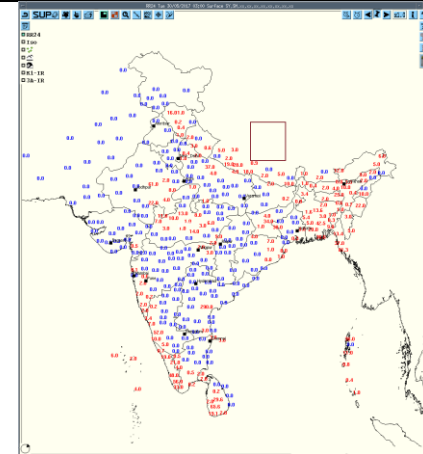
RAPID RGB Satellite Imagery at 1200 hrs IST of today



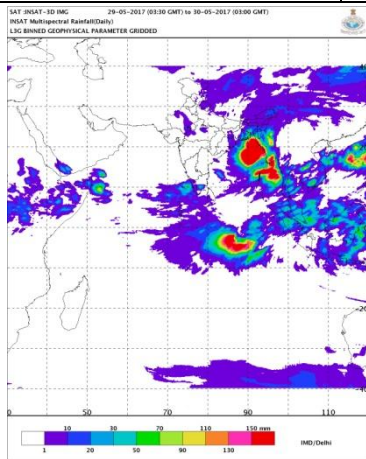
Forecast Dust Concentration for 00UTC of 3rd June



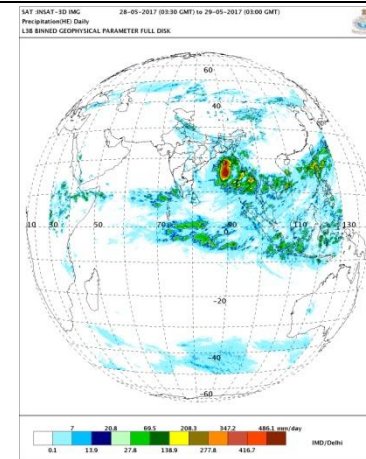
PM10 Forecast for 00UTC of 3rd June



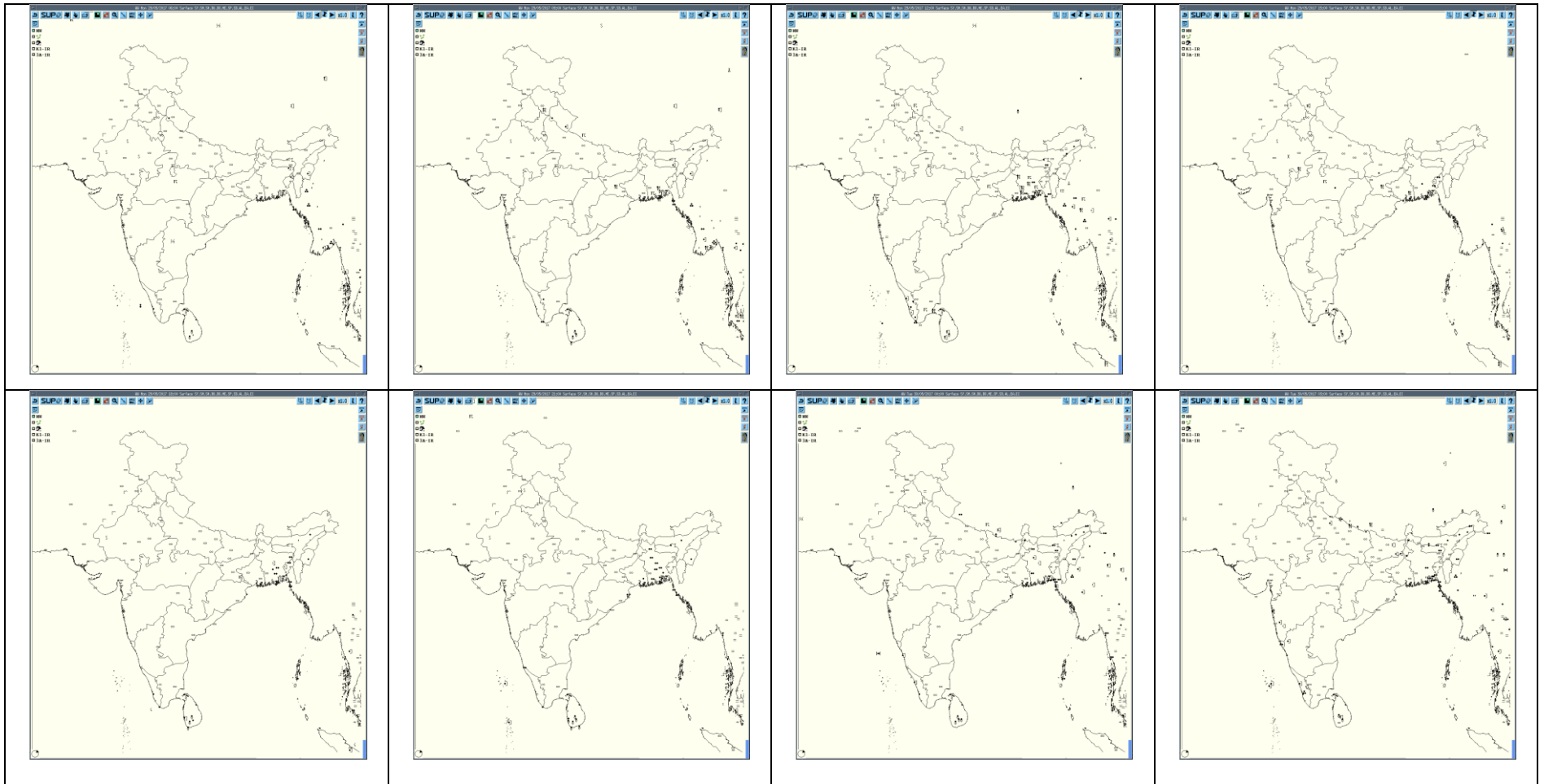
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



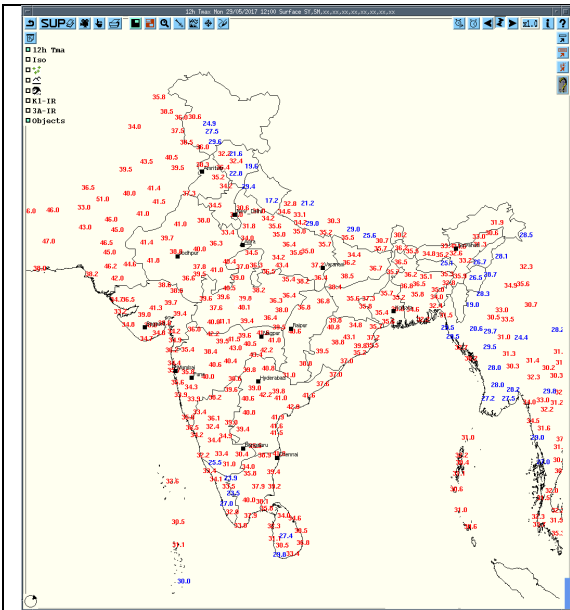
IMR Rainfall



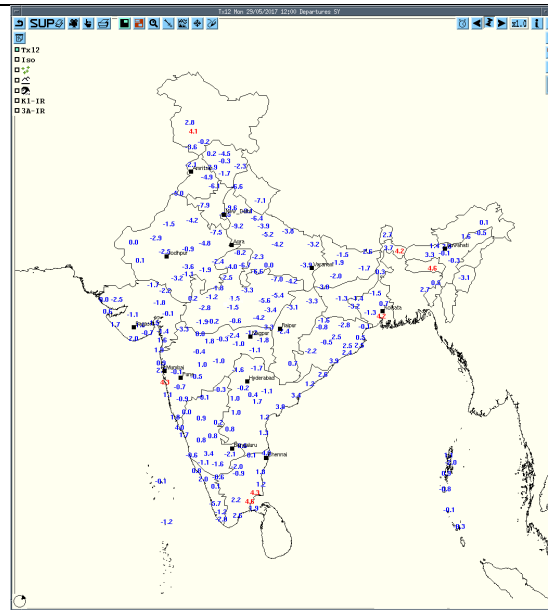
HEM Rainfall



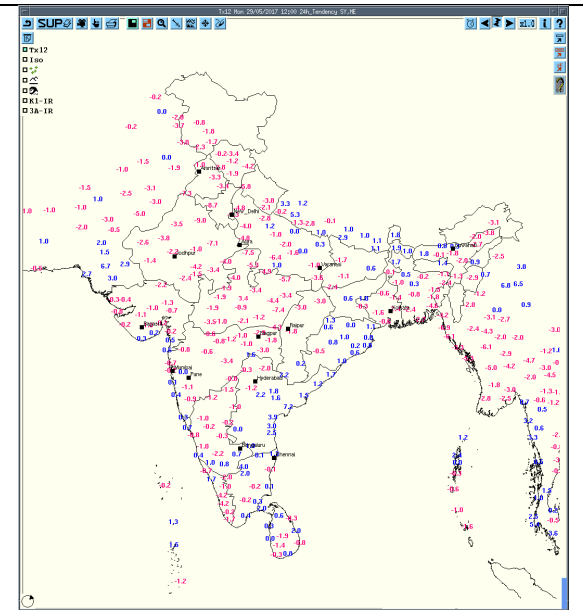
3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today



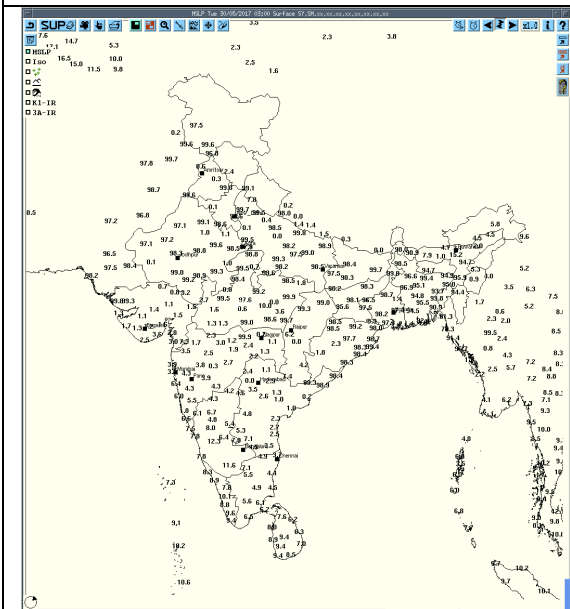
Tmax



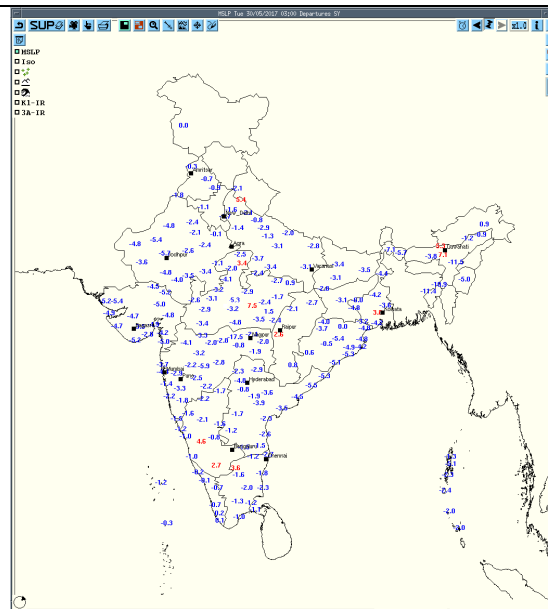
Departure Tmax



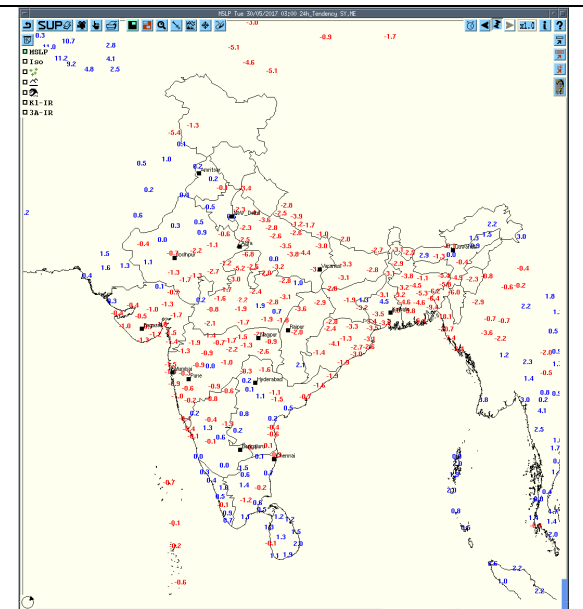
Tendency Tmax



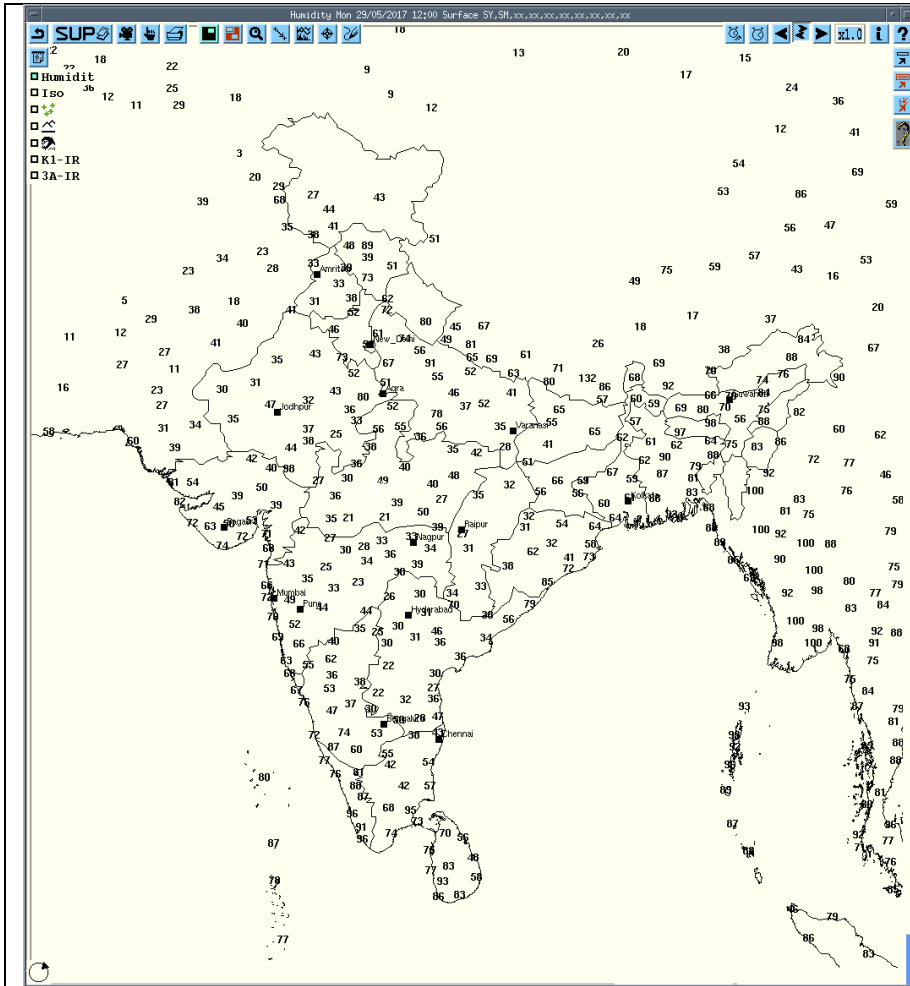
MSLP



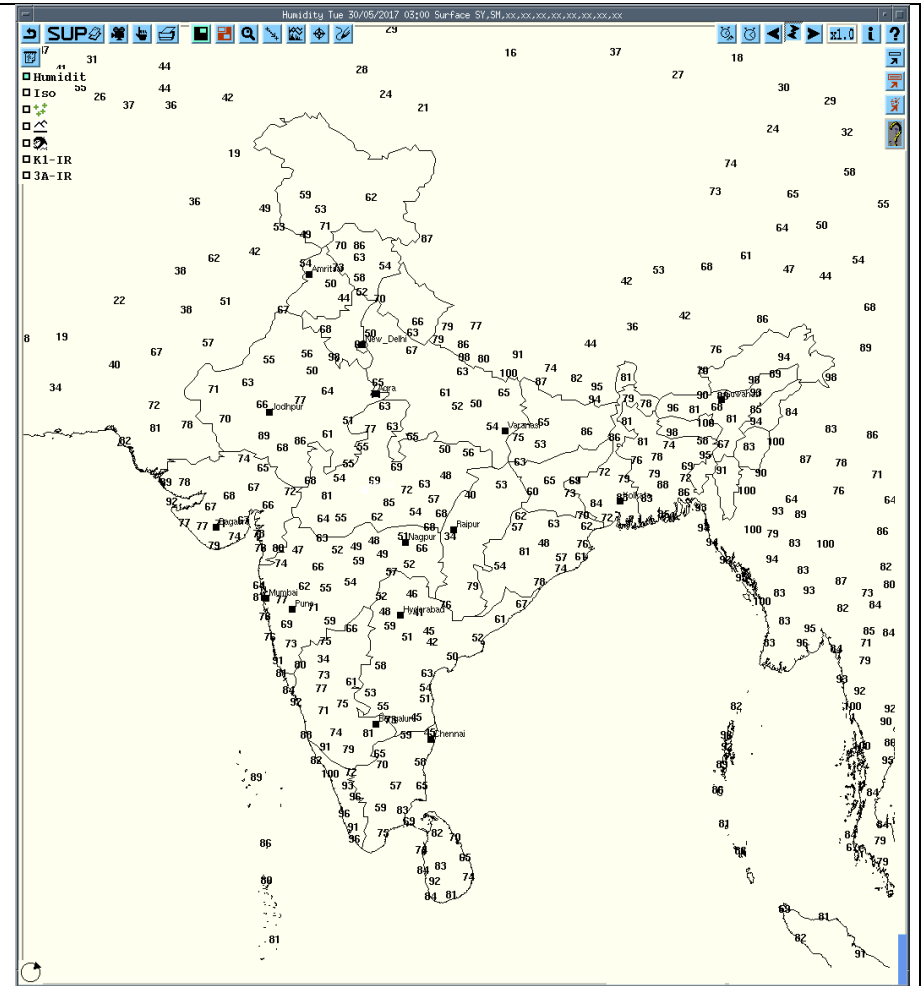
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday



RH at 03UTC today

Realised past 24hrs TS/SQ/HS Data (reported at 0300UTC of the day):

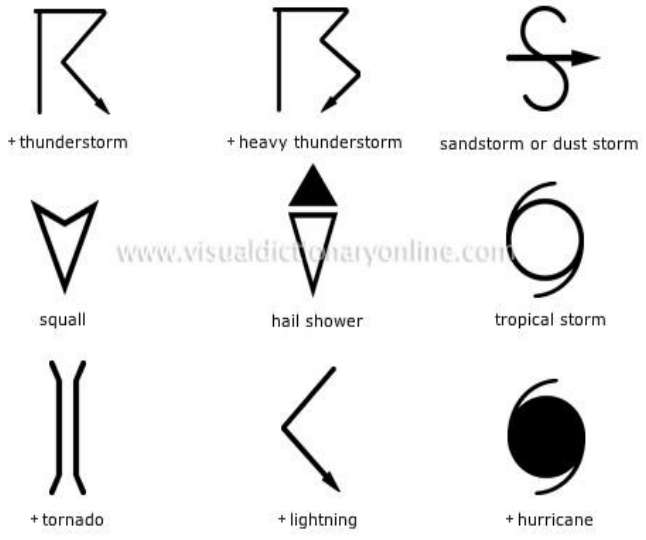
Realized weather past 24hours (Based on SYNERGIE Products)					
Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
29-05-17	0600UTC	Sagar	Central India	Madhya Pradesh	Thunderstorm
29-05-17	0900UTC	Shimla	NW India	Himachal Pradesh	Thunderstorm
		Ranchi	East India	Jharkhand	Thunderstorm
29-05-17	1200UTC	Sundernagar	NW India	Himachal Pradesh	Thunderstorm
		Ranchi	East India	Jharkhand	Thunderstorm
		Madurai, Tondi	South India	Tamilnadu	Thunderstorm
29-05-17	1500UTC	Sundernagar	NW India	Himachal Pradesh	Thunderstorm
		Kota	NW India	Rajasthan	Thunderstorm
		Sagar	Central India	Madhya Pradesh	Thunderstorm
		Ranchi	East India	Jharkhand	Thunderstorm
	1800UTC	Jamshedpur	East India	Jharkhand	Thunderstorm
29-05-17	2100UTC	Chandbali	East India	Odisha	Thunderstorm
30-05-17	0000UTC	Nil	Nil	Nil	Nil
30-05-17	0000UTC	Nil	Nil	Nil	Nil

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 20dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
DWR Machilipatnam	03Z of 29/05/17 to 03Z of 30/05/17	1341 to 1441 UTC	Isolated single cell average height of 6.5Km with maximum reflectivity of 51.5 dBZ	NW (242km) and moving SE ly direction with average speed of 20 kmph	Cell started forming at 1341UTC, at NW (243km) from Radar the maximum reflectivity during 1401 to 1431 UTC and died down at 1441UTC	Possibility of Thunder storm with rain and winds	Yadadri- Bhongir District
	03Z of 29/05/17 to 03Z of 30/05/17	1721 to 1841 UTC	Isolated multiple cells average height of 3.7 km with maximum reflectivity of 52.5 dBZ	NW (99km) and moving S ly direction with average speed of 22 kmph	Cell started forming at 1721UTC, at NW (114km) from Radar the maximum reflectivity during 1731 to 1751 UTC and died down at 1841UTC	Possibility of Thunder storm with and winds	Krishna District
	03Z of 29/05/17 to 03Z of 30/05/17	1951 to 2041 UTC	Multiple cells average height of 4.5 km with maximum reflectivity of 58.0 dBZ	NE (26.6km) and moving SE ly direction with average speed of 15 kmph	Cell started forming at 1951UTC, at N (35.6km) from Radar the maximum reflectivity during 2011 to 2041 UTC and slowly dissipated.	Possibility of Thunder storm with and winds	Krishna Districts
Agartala	26/05/17	250850 - 251320	Multiple cells formed one after another with Maximum Height 16 km and maximum reflectivity 53 dBZ at 1142 UTC	Formed 140 km NW of DWR and moved SE-wards at around 58 kmph	Cells dissipated at 1322 UTC over Bangladesh	N/A	
		251230 - 251502	Multiple cells with Maximum Height 14 km and maximum reflectivity 43 dBZ at 1402 UTC	Formed 80 km SE of DWR and moved NE-wards at around 28 kmph	Cells dissipated at 1502 UTC over East Mizoram.	N/A	
		251410 - 260300	Multiple cells with Maximum Height 16 km and maximum reflectivity 50 dBZ at 2353 UTC	Formed 250 km NNW of DWR and moved S E-wards at around 53 kmph, formed squall line at 2140 UTC.	Cells dissipated at 0300 UTC over East Mizoram.	N/A	

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	Associate d severe weather if any	Districts affected
Patna	30/05/2017	290300 - 290935	NIL	NIL	N/A	N/A	N/A
		290935 - 291510	Multi Cell. Maximum Reflectivity : 51.5 dBZ Echo Top : 10.5 KM	Range: 119.7 KM from DWR Patna in West-South West direction. Movement-North-Westerly	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunder-Storm With Rain	BHABHUA, SASARAM, AURANGABAD, JAHANABAD , GAYA, BUXAR, BHOJPUR, SARAN,SIWAN, GOPALGANJ, WEST CHAMPARAN , EAST CHAMPARAN,
		292210 - 300210	Multi Cell. Maximum Reflectivity : 39.5 dBZ Echo Top : 8.1 KM	Range: 123 KM from DWR Patna in North-North East direction. Movement-North-North Westerly	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunder-Storm With Rain	Saran, Muzaffarpur,Vaishali, Darbhanga East Champaran, West Champaran, Sitamadhi, Samastipur & Sheohar
		300210 - 300300	Multi Cell. Maximum Reflectivity : 41.5 dBZ Echo Top : 10.5 KM	Range : 115 KM from DWR Patna in North-North-West. Movement- North-North Westerly	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	THUNDE R-STORM WITH RAIN	Supaul, Madhepura, Araria, Kishanganj, Saharsa, Purnea, Darbhanga, Madhubani, Muzaffarpur, Samastipur, West Champaran, East Champaran

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	30/05/17	0932-2002 UTC	Multiple cells with average height of 7.5 km & maximum reflectivity 59.5 dBZ	Cell develop 0932 to 2002 UTC of 29/05/17 towards NW, SW AND W of Jaipur and moved to S,SSE WARDS at speed 30-40 km/hr	Cells starts forming from 0932 UTC of 29/05/2017 AT NW, SW & W of Jaipur and reaches maximum reflectivity during 1042-1142 UTC died down 2002 UTC.	Thunderstorm/rain/thundersquall at isolated places and at a few places in Ajmer division	Bikaner, Nagaur, Ajmer, Tonk, Bundi Kota, Jhalawar, Baran, Bhilwara Chittaurgarh Rajsam and, Sawai Madhopur.
	30/05/17	1212-1612 UTC	Multiple cells with average height of 4.5km & maximum reflectivity 54.0 dBZ	Cell develop 1212 to 1612 UTC of 29/05/17 towards SW & S of Jaipur and moved to SE at speed 30-35 km/hr	Cells starts forming from 1212 UTC of 29/05/2017 in SW & S of Jaipur and maximum reflectivity during 1312-1402 UTC died down 1612 UTC.	Thunderstorm/rain at isolated places	Tonk, Sawai Madhopur, Baran
	30-05-17	1642-2002 UTC	Multiple cells with height of 5.8 km & maximum reflectivity 41 dbz	Cell developed 1642 to 2002 UTC of 29/05/17 towards ESE & SE of Jaipur and moved SE at speed 25-30 km/hr	Cell starts forming from 1642 UTC of 29/05/2017 ESE & SE of Jaipur and maximum reflectivity during 1842-1902 UTC and died down 2002 UTC	Thunderstorm /rain at isolated places	Dausa, Karauli and sawaimadhopur



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∞	haze
⌋	smoke
⊘	dust or sand storm
≡	fog
⚡	drizzle
•	rain
✱	snow
▽	showers
△	hail
⊞	thunderstorm

Weather Symbols