India Meteorological Department

FDP STORM Bulletin No.84 (28-05-2017)

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

The northern limit of monsoon (NLM) continues to pass through 5.0°N/ 76.0° E, 8.0°N/83.0°E, 10.0°N/ 86.0°E, 14.0°N/ 92.0°E and 16.0°N/ 95.0°E.

Under the influence of the depression over eastcentral Bay of Bengal, which is likely to intensify further into a deep depression during next 12 hours and then into a cyclonic storm during subsequent 24 hours. Conditions are favourable for further advance of southwest monsoon into some parts of southeast Arabian Sea, Maldives area, some more parts of Comorin area, southwest Bay of Bengal and east central Bay of Bengal, remaining parts of southeast Bay of Bengal and some parts of west central and northeast Bay of Bengal during next 24 hours. With the strengthening of westerlies and likely northward shift of the shear zone, conditions are also becoming favourable for furt her advance of southwest monsoon and its setting in over Kerala and parts of northeastern states around 30th - 31st May 2017.

The depression over central Bay of Bengal moved east-northeastwards with a speed of 40 kmph during past 03 hours and lay centred at 0830 hours IST of today, the 28th May, 2017 over eastcentral Bay of Bengal near Latitude 14.5º N and Longitude 89.5ºE, about 900 km nearly south-southeast of Kolkata and 890 km south-southwest of Chittagong. The system is very likely to move northnortheastwards and cross Bangladesh coast between longitude 91.0ºE and 92.0ºE around 30th May 2017 noon. It is very likely to intensify into a deep depression during next 12 hours and into a cyclonic storm during subsequent 24 hours.

Yesterday's trough at mean sea level from West Rajasthan to the centre of the well marked low pressure area now lies extending from West Rajasthan to centre of depression over eastcentral Bay of Bengal across Madhya Pradesh, Chhattisgarh & Odisha and extends upto 0.9 km above mean sea level.

The upper air cyclonic circulation over Bihar & adjoining Sub-Himalayan West Bengal persists and now seen between 1.5 & 3.1Km above mean sea level.

The trough roughly along Longitude 85.0°E to the north of Latitude 22.0°N persists and now seen at 5.8 km above mean sea level.

The upper air cyclonic circulation over central Pakistan & neighbourhood persists and now extends upto1.5 km above mean sea level.

The trough from south Madhya Maharashtra to South Interior Karnataka at 0.9 km above mean sea level has become less marked.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

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

Convective Activity:

Cell No	Date/time (UTC)	Location/Area	MIN CTT (- DEG C)	Movement	Remarks
1	28/0100 0200 0300	Central Coastal Andhra Pradesh -DO- -DO-	90 81 77	-	Developing

Vortex over Bay of Bengal (Bob):

Vortex seen over EC Bay & neighbourhood centred near **14.2N/89.9E,** intensity **T1.5**, associated Broken low/medium clouds with embedded intense to very intense convection were seen over Bay between Lat 11.0N to 19.0N o 84.0E to 91.0E with minimum CTT minus 93 DEG C.

Cloud Description:

Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over West Uttar Pradesh adjoining East Uttar Pradesh, South Chhattisgarh, exterior East Vidarbha, Northeast Madhya Pradesh, Telangana, Tamilnadu and Lakshadweep.

Scattered low/medium clouds were seen over J & K, Himachal Pradesh, rest Uttar Pradesh, Uttarakhand, rest Madhya Pradesh, Maharashtra, East Gujarat, exterior Southeast Rajasthan.

Scattered low/medium clouds with embedded moderate to intense convection were seen over Northwest Bihar.

Scattered low/medium clouds with embedded intense to very intense convection were seen over Central Coastal Andhra Pradesh and Bay Islands.

Arabian Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over Southeast Arabian Sea & South of Lat 10.0N.

Bay of Bengal & Andaman Sea:

Broken low/medium clouds with embedded intense to very intense convection were seen over Andaman Sea. Scattered low/medium clouds with embedded moderate to intense convection were seen over rest Bay.

Past Weather:

Convection:- Moderate to Intense convection was observed over J&K Uttarakhand Uttar 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 North Coastal Andhra Pradesh.

Upto **230** wm^{-2} was observed over East J&K Himachal Pradesh Uttarakhand Sikkim East Arunachal Pradesh, Nagaland, Manipur, Mizoram Telangana South Interior Karnataka North Kerala North Tamilnadu.

Upto **250** wm^{-2} was observed over Vidarbha Chhattisgarh East Bihar Jharkhand Meghalaya Rest Arunachal Pradesh Rest Andhra Pradesh.

Westerly Trough & Jet-Stream:

No Trough in Westerlies & 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 East Madhya Pradesh Chhattisgarh Uttar Pradesh.

Negative low level convergence is observed over Maharashtra and Positive low level convergence observed over rest parts of India.

Precipitation:

IMR:

Rainfall Up to **50** mm was observed over South Mizoram. Rainfall Up to **30** mm was observed over Chhattisgarh Telangana. Rainfall Up to **20** mm was observed over South Interior Karnataka. Rainfall Up to **10** mm was observed over East J&K Uttarakhand North West Uttar Pradesh Vidarbha Odisha Raylseema North Coastal Andhra Pradesh Central Tamilnadu Nagaland Manipur Rest Mizoram.

HEM:
Rainfall Up to **70** mm was observed over South Interior Karnataka South Chhattisgarh South Mizoram Telangana. Rainfall Up to **14** mm was observed over Uttarakhand West Jharkhand North East Chhattisgarh West Arunachal Pradesh. Rainfall Up to **07** mm was observed over Uttar Pradesh Bihar Odisha Assam East Meghalaya Nagaland Manipur Rest Mizoram West Bengal Chhattisgarh South East Madhya Pradesh Vidarbha Andhra Pradesh Tamilnadu Kerala.

RADAR and RAPID Observation:

DWR Composite is not available and in RAPID RGB Satellite imagery at 1230hrs IST indicated convective clouds over Central Uttar Pradesh, Bihar, Jharkhand, East Madhya Pradesh, Lakshadweep, Minicoy, Andaman and Nicobar Islands.

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

Not available

2. NWP MODEL GUIDANCE:

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

1. Weather Systems: 12UTC Charts of Day 0-4 show evolution of heat low over NW India and adjoining Pakistan with MSLP values lower than 990hPa on Day-0 to Day-3.
12UTC charts on days from Day0: show a zone of wind discontinuity at 925 hPa; SW-NE extending from Telangana to Jharkhand.
12UTC charts on days from Day1 to Day4: show a zone of wind discontinuity at 925 hPa; NW-SE extending from Rajasthan to Odisha
Depression over Bay of Bengal from Day-0 onwards and is seen to intensify on Day-2, tracking towards Myanmar and **is likely to cross the coast at around 00UTC on 30th May 2017 near 19N/93E.**

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: NE NMMT, Odisha, TN Puducherry,
Day1: NE NMMT, East UP, West UP, Jammu Kashmir, West MP, East MP, Chhattisgarh,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, TN Puducherry,
Day3: NE NMMT, West UP, Uttarakhand, Haryana, Chandigarh, Delhi, Punjab, West RJ, East RJ, TN Puducherry,
Day4: Assam Meghalaya, Gangetic WB, West UP, Punjab,
4. Low level Vorticity:-Positive Vorticity (>15 x 10^{-5}/s):
(Day/Index: Subdivisions with Lower Level Vortex > 15 x 10^-5 /s):
Day0: Assam Meghalaya, Jammu Kashmir, TN Puducherry, Kerala,
Day1: Assam Meghalaya, East UP, West UP, Haryana Chandigarh Delhi, East MP, Saurashtra Kutch, TN Puducherry, Kerala,
Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, TN Puducherry,
Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Haryana, Chandigarh, Delhi, Punjab, TN Puducherry,
Day4: Arunachal Pradesh, Assam Meghalaya, Punjab, Saurashtra Kutch, TN Puducherry,

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

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

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, 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, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day1: Arunachal Pradesh, Assam Meghalaya, 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, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, TN Puducherry, NI Karnataka, SI Karnataka,

Day2: Arunachal Pradesh, Sub Himalayan 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, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day3: 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, West MP, SI Karnataka,

Day4: 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, Gujarat Region, Coastal AP,

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, 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, Vidarbha, Chhattisgarh, Coastal AP, Telangana,

Day1: Arunachal Pradesh, Sub Himalayan 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,

Day2: Arunachal Pradesh, Sub Himalayan 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, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, NI Karnataka, SI Karnataka,

Day3: 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, West MP,

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

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, 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, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka, Kerala,

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, 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, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day4: 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, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

8. Rainfall and thunder storm activity:

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

Day1: Arunachal Pradesh, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, East RJ, West MP, Andaman Nicobar, Rayalseema, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day2: Assam Meghalaya, NE NMMT, Bihar, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, East MP, Andaman Nicobar, TN Puducherry, Coastal Karnataka, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, East UP, Haryana Chandigarh Delhi, Himachal Pradesh, Jammu Kashmir, TN Puducherry, Coastal Karnataka, SI Karnataka, Kerala,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, East UP, West UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, TN Puducherry, Coastal Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, East UP, Uttarakhand, Haryana Chandigarh Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Konkan Goa, 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 well-marked low pressure over east-central and adjoining west-central BOB concentrated into a depression. The system is likely to intensify further into a deep depression during next 24 hours. It is very likely to move north-northeast wards and reach Bangladesh cost by 48 hours.

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 3 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, Delhi, MP, AP, and over the north eastern region. The high vorticity belts are mainly confined over regions of UP, Haryana, 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 GWB and also over few regions in Gujarat and Rajasthan in the analysis. Forecast shows high threshold values over Gujarat, Rajasthan along with few pockets in Odisha and coastal AP for the next 3 days.

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

Sweat Index (> 400): 00UTC shows significant values over major parts over 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 and over some pocket of Punjab and Delhi during the next 1 day.

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:

10-40 mm rainfall is forecasted tomorrow over major pockets over Kerala, Odisha, WB, north eastern states and along with the foothills of the Himalayas, over some pocket of Haryana, Delhi and western UP and is expected to persist for the next 2-3 days.

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

1. Model Reflectivity (Max. dBz): 15-40 dBZ over regions of the Himalayan foothills adjoining Bihar and WB and isolated pockets of the south peninsular region and some packet of Haryana and Delhi today and tomorrow.

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

CAPE (> 1000): Mostly along Haryana, Delhi, Bihar, Jharkhand, 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 during next three days.

3. Rainfall and thunderstorm activity:

10-40 mm over isolated pockets in UP, Bihar and WB region adjoining the Himalayas, along the north east region and over few pockets in the Kerala region and it is expected to persist for the next 3 days and over Delhi and adjoining on day 1.

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, the depression over central Bay of Bengal moved eastnortheastwards with a speed of 40 Kmph during past 03 hours and lay centered at 0830 hours IST of today, the 28th May, 2017 over east central Bay of Bengal near Latitude 14.5º N and Longitude 89.5ºE, about 900 km nearly south-southeast of Kolkata and 890 km south southwest of Chittagong. The system is very likely to move north northeastwards and cross Bangladesh coast between longitude 91.0ºE and 92.0ºE around 30th May 2017 noon. It is very likely to intensify into a deep depression during next 12 hours and into a cyclonic storm during subsequent 24 hours. This will give rise to heavy rainfall activity over Andaman Islands on Day-1.

A trough extending from West Rajasthan to centre of depression over east central Bay of Bengal across Madhya Pradesh, Chhattisgarh & Odisha and extends upto 0.9 km above mean sea level. This will give rise to heavy rainfall activity over Coastal Andhra Pradesh on Day-1.

With the strengthening of westerlies and likely northward shift of the shear zone, conditions are also becoming favourable for further advance of southwest monsoon and its setting in over Kerala, the rainfall activity is very likely for Day-1 and Day-2 including South Interior Karnataka.

Due to the upper air cyclonic circulation over central Pakistan & neighborhood , the entire northern parts of country will experience the thunderstorm with hail in Day-1 and Day-2 including Uttar Pradesh and Rajasthan.

24 hour Advisory for IOP:
Andaman Islands
Kerala, South Interior Karnataka, Telangana, Interior Tamilnadu, Coastal Andhra Pradesh
Himachal Pradesh, Uttrakhand, Punjab, Haryana, West and East Uttar Pradesh, West and East Rajasthan
Orissa, Bihar and Jharkhand, Chhattisgarh
Sub Himalayan West Bengal, Gangetic West Bengal

48 hour Advisory for IOP:
South Assam, Meghalaya, Tripura, Mizoram, Manipur
Kerala, South Interior Karnataka
Himachal Pradesh, Uttrakhand, Punjab, Haryana, West and East Uttar Pradesh, West and East Rajasthan
Orissa, Bihar
Sub Himalayan West Bengal, Gangetic West Bengal

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
HEM: http://satellite.imd.gov.in/img/3Ddaily he.jpg
ForRadarimagesofthepast24hoursincludingmosaicofimages:
http://ddgmui.imd.gov.in/dwr img/
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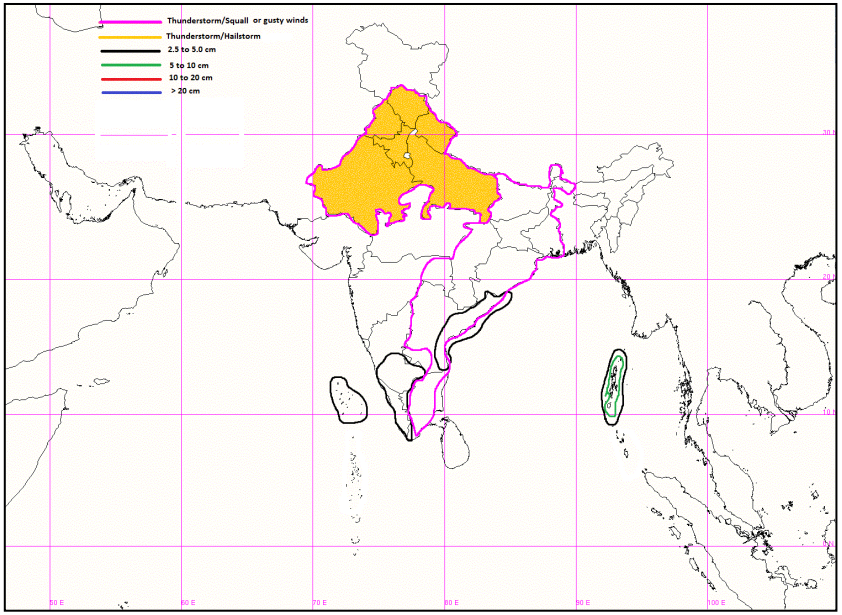
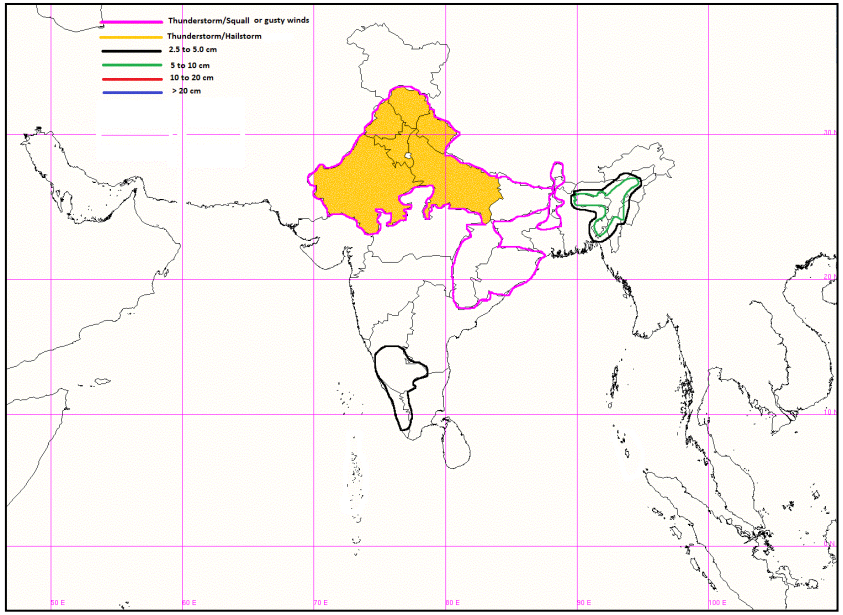
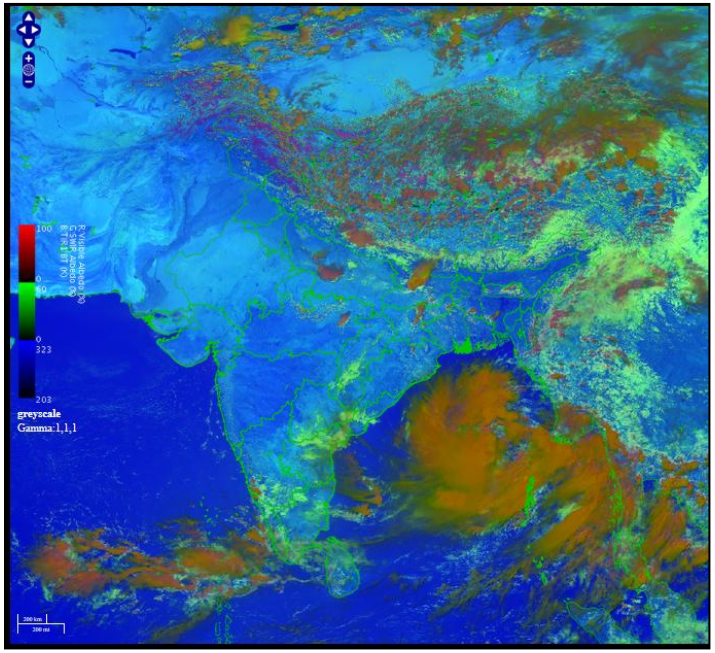
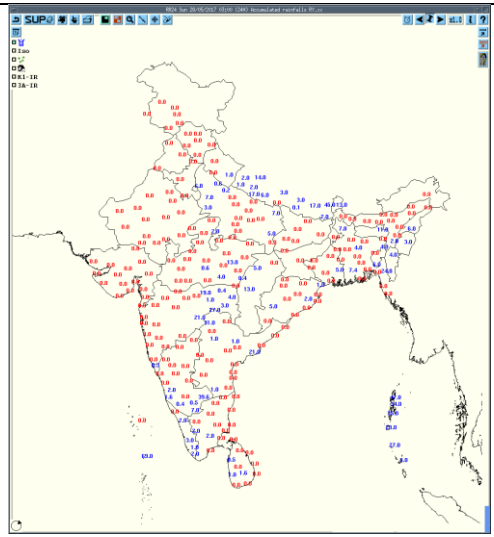
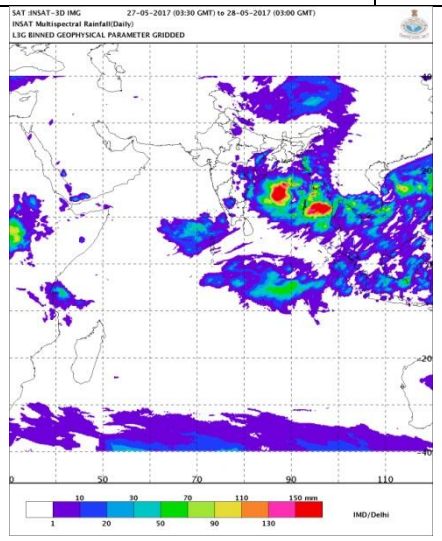
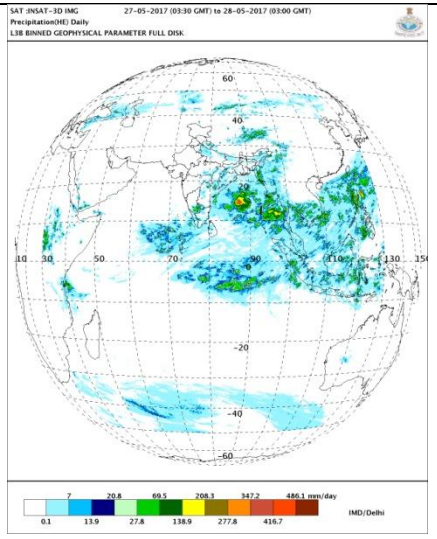


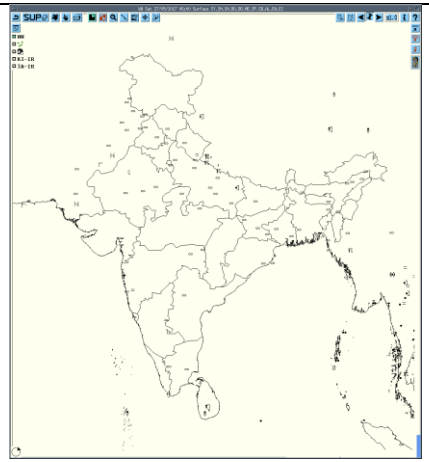
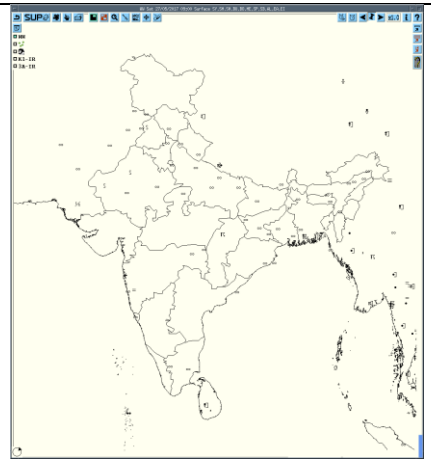
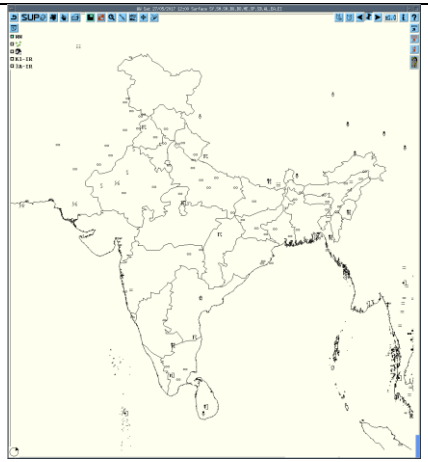
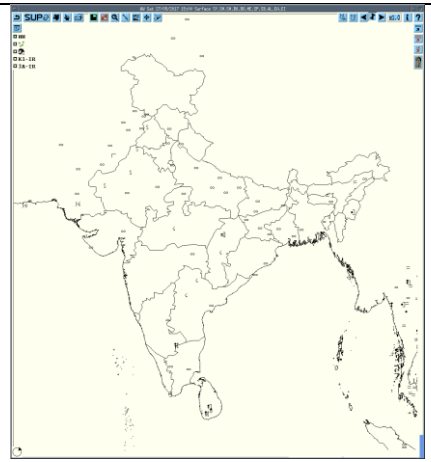
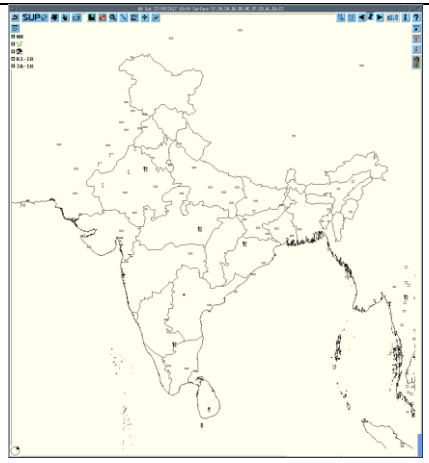
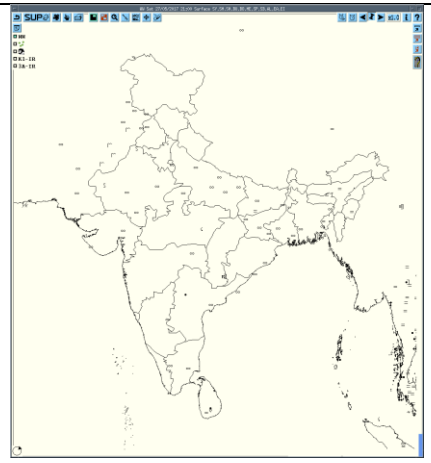
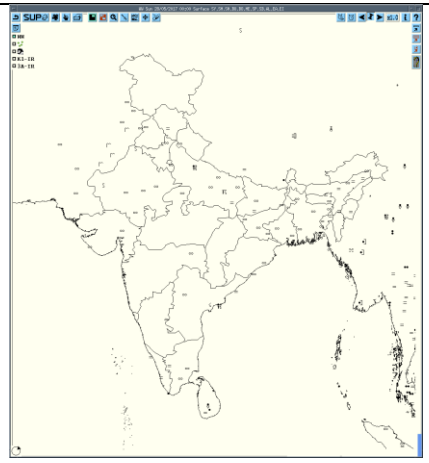
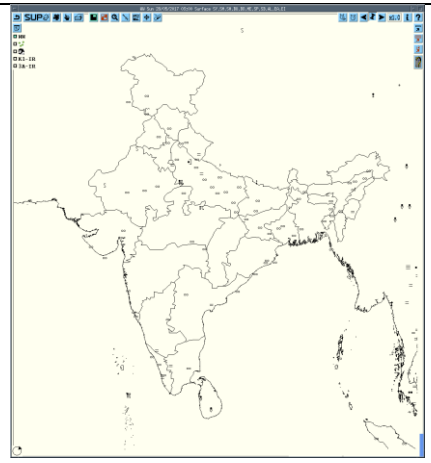
IOP Advisory for 24 hours



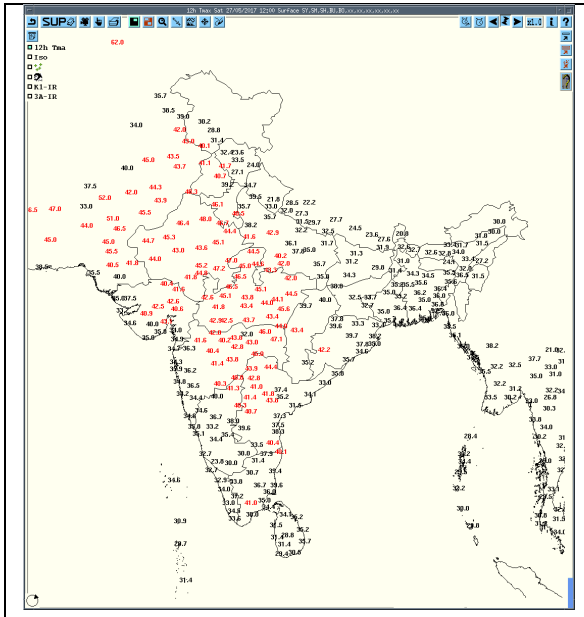
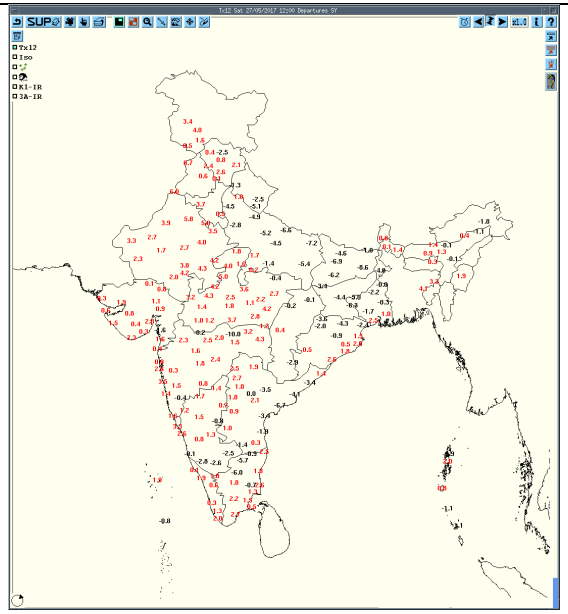
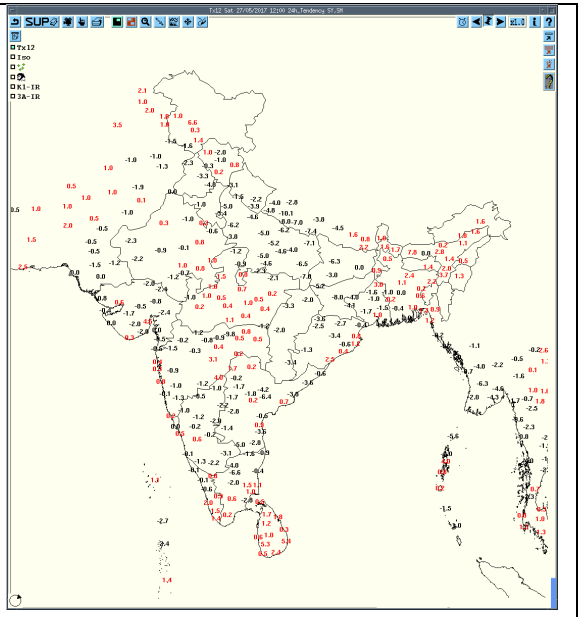
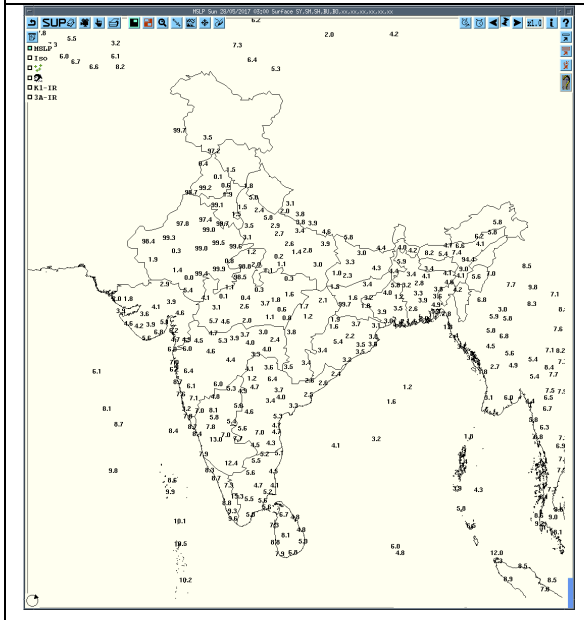
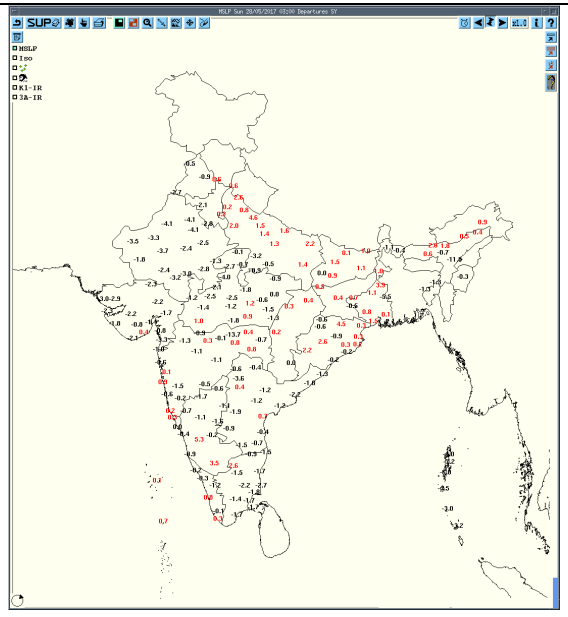
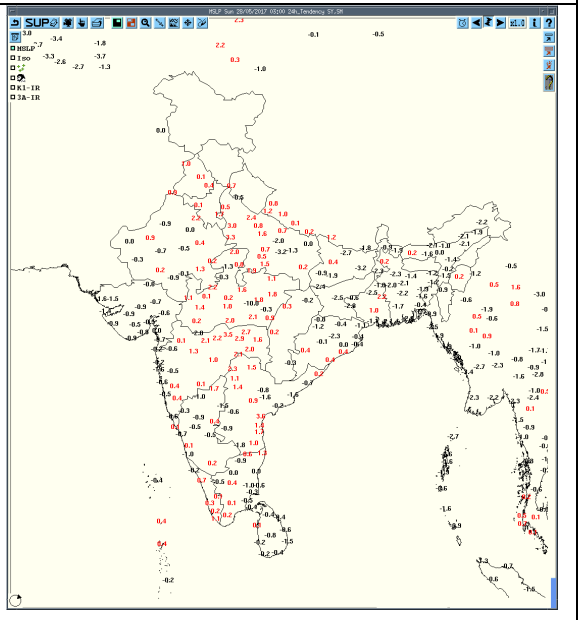
IOP Advisory for 48 hours

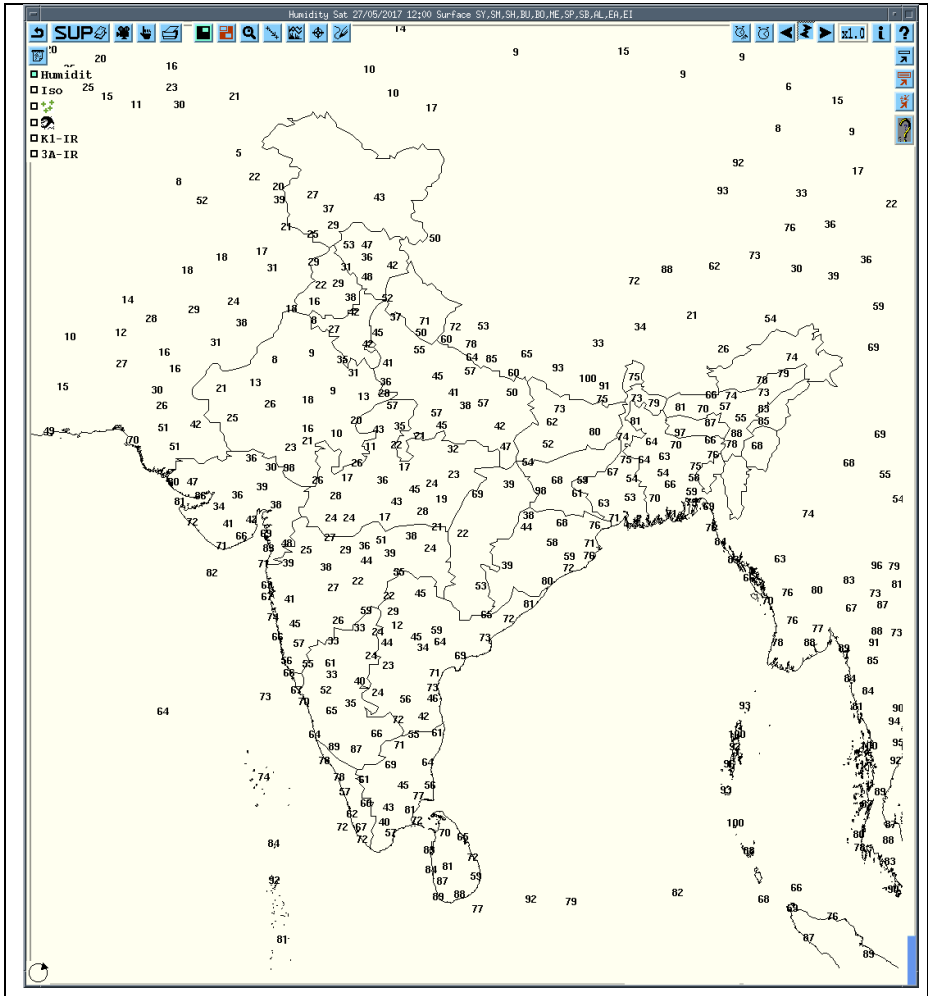
Not Available	
DWR Composite	**RAPID RGB Satellite Imagery at 1230 hrs IST of today**

Not Available	Not Available	
Forecast Dust Concentration for 00UTC of 30th May	**PM10 Forecast for 00UTC of 30th May**	**Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today**
		
IMR Rainfall	**HEM Rainfall**	

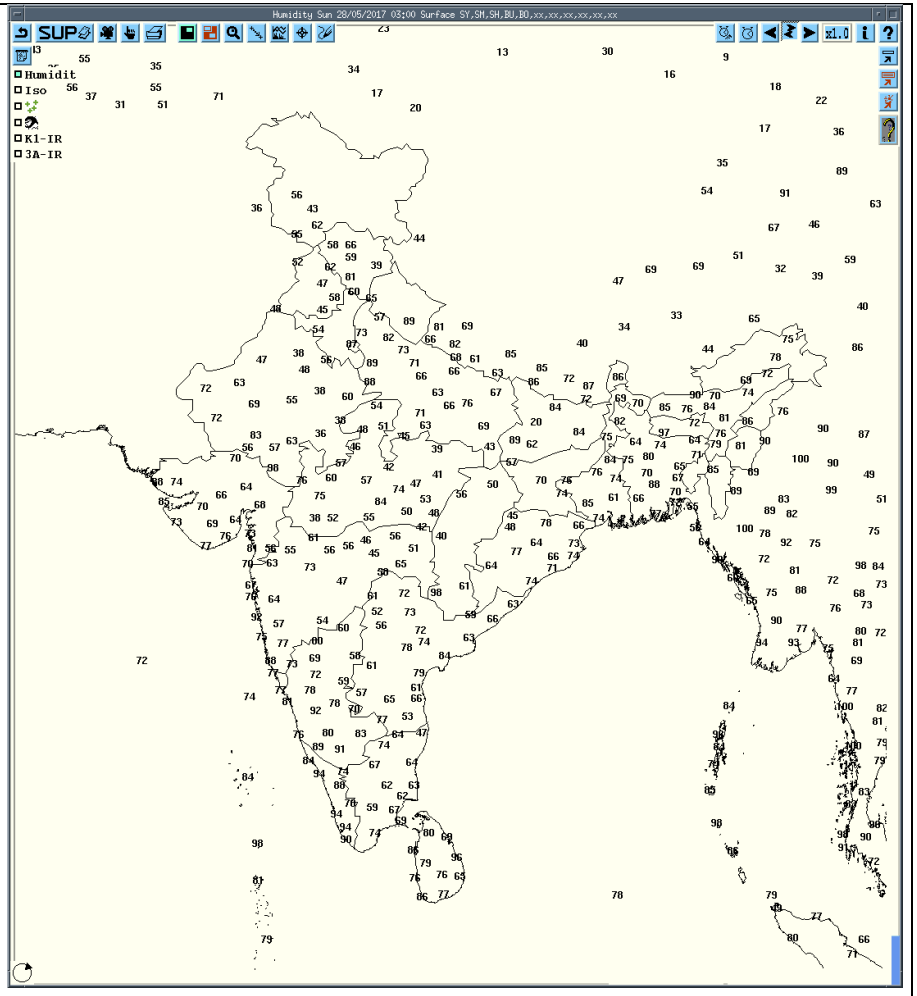









3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today

		
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**
27-05-17	0600UTC	Nil	Nil	Nil	Nil
27-05-17	0900UTC	Pendra Road	Central India	Chhattisgarh	Thunderstorm
27-05-17	1200UTC	Amritsar	NW India	Punjab	Thunderstorm
		Imphal	NE India	Manipur	Thunderstorm
		Jhansi	NW India	Uttar Pradesh	Thunderstorm
		Pendra Road	Central India	Chhattisgarh	Thunderstorm
		Khammam, Tirupathi	South India	Andhra Pradesh	Thunderstorm
		Bangalore	South India	Karnataka	Thunderstorm
		Kodaikanal	South India	Tamilnadu	Thunderstorm
27-05-17	1500UTC	Pendra Road	Central India	Chhattisgarh	Thunderstorm
27-05-17	1800UTC	Churu	NW India	Rajasthan	Thunderstorm
		Jabalpur	Central India	Madhya Pradesh	Thunderstorm
		Jharsuguda	East India	Odisha	Thunderstorm
		Bangalore	South India	Karnataka	Thunderstorm
27-05-17	2100UTC	Jagdalpur	Central India	Chhattisgarh	Thunderstorm
28-05-17	0000UTC	Sultanpur, Bareilly	NW India	Uttar Pradesh	Thunderstorm
		Narsarapur	South India	Andhra Pradesh	Thunderstorm
28-05-17	0300 UTC	Agra	NW India	Uttar Pradesh	Thunderstorm
		Khajuraho	Central India	Madhya Pradesh	Thunderstorm
		Minicoy	South India	Minicoy Islands	Thunderstorm

Past 24 hours DWR Report:

Radar Station Name	Date 28-05-2017	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
Patiala		27 MAY 0300 UTC-TO 0900 UTC	NO ECHO	---------.	-------	--------	----------
		27 MAY 0900 UTC-TO 1200 UTC	Multiple Cells Max. 60.5 dBZ Ht. 12-14 Km	NE SECTOR. MOVEMENT SE WARDS	----------		Uttarkashi, Gangotri, Rampur
		27 MAY 1200 UTC TO 1500 UTC	Multiple Cells Max. 58.5 dBZ Ht. 12-14 Km	NE SECTOR. MOVEMENT SE WARDS	----------	TS/RA	Uttarkashi, Gangotri, Bhunter, Amritsar
		27MAY 1500 UTC-TO 1800 UTC	Multiple Cells Max. 45.5 dBZ Ht. 8-10 Km	NE SECTOR. MOVEMENT SE WARDS			Ambala, Saharanpur
		27 MAY 1800 UTC-TO 2100 UTC	Multiple Cells Max. 43.0 dBZ Ht. 9-10 Km	SE SECTOR. MOVEMENT SE WARDS	----------	----------	Hardwar, Roorkee
		27MAY 2100 UTC-TO 0000 UTC	Multiple Cells Max. 58.5 dBZ Ht. 10-12 Km	SE SECTOR. MOVEMENT SE WARDS	----------	----------	Karnal, Pehowa, Saharanpur, Jind
		28 MAY 0000 UTC-TO 0252 UTC	Multiple Cells Max. 56.5 dBZ Ht. 10-12 Km	SE SECTOR. MOVEMENT SE WARDS	----------	----------	Delhi, Jind, Roorkee, Rohtak
Lucknow	28-05-17	270300UTC to 270530UTC	Multiple cells with height of 8Kms echo top and maximum reflectivity was 32dBz	100 Kms WNW and moving WNWly direction	Cells started forming at 0252UTC	TS/Squall	Hardoi, Sitapur, Barabanki and Faizabad
		272352UTC to 280042UTC	Multiple cells with height of 8Kms echo top and maximum reflectivity was 27dBz	125 Kms WNW from and moving WNWly direction	Cells started forming at 2342 UTC	TS/Squall	Kanpur and Unnao

Radar Station name	Date	Time interval of observation (UTC)	Organization of the cells	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
Nagpur	27/05/17	0722-2042	**Multiple**	**100 km N, moving S'ly & SE'ly…dissipates 240 km in SSE**	**43.50dBZ, cloud ht.=3.5-8.1 km.. At 0822, 48dBZ, cloud ht.=1.5-4.7 km.. At0942, 57dBZ, cloud ht.=5.6-6.5 for rest till 9.3 km… At1122,54.50 dBZ, cloud ht.=3.5-7.5 km**	**Hail warning at 0942 & 1122 Thunderstorm warning started at 0822 and continuous till 1832**	**At 0942=55 km NE At 1122=55 km SE Mostly in region SSW,WSW, sometimes NE & NW**
		0752-2052	**Multiple**	**125 km WWS, moving S'ly & SE'ly, out of radar range in SW**	**At 0822, 46.50dBZ, cloud ht.=2.5-7 km.. At 1152, 52.50dBZ,cloud ht.=4.5-5.8 km**	**Rain occurs all around radar range except 150 to 250 km in W & WWN direction**	
		0822-1352	**Multiple**	**150 km SSW, moving S'ly & SE'ly, out of radar range in S**	**At 0922,41.50dBZ,cloud ht.=2.5-5.8 km At 1032, 54dBZ, cloud ht. =5-6.5 km..**		
		0902-2352-0252(28/5/17)	**Multiple**	**Coming from N & NW, moving S';y & SE'ly**	**At1312, 44dBZ, cloud ht. =3.5-5.8 km.. At 1602, 51dBZ, cloud ht.=3-4.7 km..**		
	28/05/17	0000-0302	**Nil**				

Radar Station Name	Date	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
Kolkata	27-05-2017	0301-0622	NIL	NIL	NO ECHO	NIL	NIL
		0631-1331 UTC	1.Single cell with maximum reflectivity of 56.0 dBz at 0641 UTC and maximum height 7.8 km at 0641 UTC	1.SE (162.6 km) almost no movement	1. Single cell developed at SE at a distance of 162.6 km from Radar at 0631 UTC. Not matured and Dissipated at 0721 UTC in SE	Thunderstorm / Rain	N/A
			2.Single cell with maximum reflectivity of 59.5 dBz at 0731 UTC and maximum height 11.4 km at 0651 UTC	2.SE (118.4 km) almost no movement	2. Single cell developed at SE at a distance of 118.4 km from Radar at 0641 UTC. Not matured and Dissipated at 0751 UTC in SE	Thunderstorm / Rain	N/A
			3 .Isolated single cells with maximum reflectivity of 57.5 dBz at 0911 UTC and maximum height 11.6 km at 0911 UTC	3.SE (114 km) almost no movement	3. Isolated single cells started developing at E to SE at a distance of 114 km from Radar at 0731 UTC. Not matured and Dissipated at 0951 UTC in ESE	Thunderstorm / Rain	N/A
			4 .Isolated single cells with maximum reflectivity of 58.5 dBz at 1220 UTC and maximum height 8.96 km at 1131 UTC	4.S to NE (Between 10 to 53 km) almost no movement	4. Isolated single cells started developing at S to NE at a distance between 10 km to 53 km, from Radar from 1001 UTC. Not matured and Dissipated at 1331 UTC in ENE	Thunderstorm / Rain	N/A
	27-05-2017	1341-1921 UTC	NIL	NIL	NO ECHO	NIL	NIL
		1921-2021 UTC	5.Multicelled system with maximum reflectivity of 56.5 dBz at 2001 UTC and maximum height 7.35 km at 1941 UTC	5.NNE (168 km) almost no movement	5. Multi celled system developed at NNE at a distance of 168 km from Radar at 1921 UTC. Not matured and Dissipated at 2021 UTC in NNE	Thunderstorm / Rain	N/A
		2031-2352 UTC	NIL	NIL	NO ECHO	NIL	NIL
	28-05-2017	0001-0301 UTC	NIL	NIL	NO ECHO	NIL	NIL

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
Agartala	28/05/17	270642 - 270802	cell formed over Agartala with Maximum Height **6 km** and maximum reflectivity 42 **dBZ at0722 UTC**	Formed 06 km NE of DWR and moved SE-wards at around 18 Kmph.	Cells dissipated at 0832 UTC over Agartala.	N/A	N/A
		270612 - 271922	Multiple cells formed at 270612 UTC over SE Mizoram and BD with Maximum Height **16 km at 271052 UTC** and maximum reflectivity 50 **dBZ at271102 UTC.**	Formed 250 km SSE of DWR and moved NE-wards at around 50 Kmph	Cells dissipated at 271922 UTC over Assam Silchar.	N/A	N/A
		272102 - 280142	Multiple cells with Maximum Height **16 km at272312 UTC** and maximum reflectivity **50 dBZ at 272312 UTC**	Formed 250 km NW of DWR and Movement is Stationary..	Cells dissipated at 280142 UTC over Bangladesh.	N/A	N/A
Patna	28/05/17	270520 - 270820	Multi cell. Maximum Reflectivity : 40.0 dBZ Echo Top : 07 KM	Range: 122.8km North West from DWR Patna Movement- South East	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunderstorm/rain/hail /gusty wind	Buxar,, Bhojpur, Siwan, Vaishali, Gopalganj, Saran, Patna
		280245 - 280545	Multi cell. Maximum Reflectivity : 49.50 dBZ Echo Top : 11.6 KM	Range: 167 km North West from DWR Patna Movement- SE	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMs	Thunderstorm/rain/gus ty wind	West Champaran, East Champaran, Gopalganj, Siwan, Seohar, Sitamarhi, Muzaffarpur,

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	28/05/17	1012-1332 UTC	Multiple cells with average height of 6.0 km maximum reflectivity 50.0 dBZ	Cell develop 1012 to 1332 UTC of 28/05/17 towards E,NE,N of Jaipur and moved to SE WARDS at speed 16-27 km/hr	Cells starts forming from 1012 UTC AT E, NE, W of Jaipur and reaches maximum reflectivity during 1012-1200 UTC. And died down 1132 UTC	Thunderstorm at a isolated places	Alwar, Bharatpur, Karauli Districts
	28/05/17	1332-1512	NO DATA	LIGHT CUT	FROM 1332 TO 1512 UTC		
	28/05/17	1512-2002 UTC	One or two cells with average height of 7.0 km maximum reflectivity 52.0 dBZ	Cell develop 1512 to 1642 UTC of 28/05/17 towards NE of Jaipur and moved to SE at speed 16-24 km/hr	Cells starts forming from 1512 UTC in NE OF JAIPUR of Jaipur and maximum reflectivity during 1512-1612 UTC.& died down 2002 UTC	Thunderstorm at a few places and isolated places	Alwar, Bharatpur
	28-05-17	2022-0022 UTC	One cell with height of 7.0 km maximum reflectivity 48.0 dBZ	Cell develop 2022 UTC of 27/05/17 towards West wards of Jaipur and moved SE at speed 06 TO 24 km/hr	Cell starts forming from 2022 UTC w of Jaipur and maximum reflectivity during 2300-0002 UTC and died down 0022 UTC	Thunderstorm at isolated places	Jhunjhunu, Alwar, Bharatpur District