



India Meteorological Department **FDP STORM Bulletin No.83 (27-05-2017)**

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 well-marked low pressure area over east central and adjoining west central & southeast Bay of Bengal, which is likely to concentrate into a depression during next 24 hours, conditions are becoming favourable for the further advance of southwest monsoon into some more parts of southwest & east central Bay of Bengal, remaining parts of southeast Bay of Bengal in coming 3-4 days. Conditions are also favourable for the advance of southwest monsoon into northeast segment of India covering Nagaland, Manipur, Mizoram & Tripura during 30-31 May 2017. With the strengthening of westerlies and northward shift of shear zone, conditions are also becoming favourable for the advance of southwest monsoon into some parts of south Arabian Sea, entire Maldives-Comorin area and south Kerala during 30-31 May 2017.

The low pressure area over southeast Bay of Bengal & adjoining Central Bay of Bengal now lies as a well-marked low pressure area over east central and adjoining west central & southeast Bay of Bengal. The associated upper air cyclonic circulation and extends upto 5.8 Km above mean sea level. It is likely to concentrate into a depression during next 24 hours.

A trough at mean sea level runs from West Rajasthan to the centre of the well-marked low pressure area over Bay of Bengal, across north Madhya Pradesh, Chhattisgarh, Odisha and extends upto 0.9 km above mean sea level. The trough from northwest Rajasthan to Vidarbha has merged with the above system.

The upper air cyclonic circulation over Jharkhand and adjoining Bihar now lies over Bihar & adjoining Sub Himalayan West Bengal and extends upto 0.9 Km above mean sea level.

The upper air cyclonic circulation over north interior Karnataka & neighbourhood now seen as a trough from south Madhya Maharashtra to South Interior Karnataka at 0.9 km above mean sea level.

A trough runs roughly along Longitude 85.0°E to the north of Latitude 22.0°N between 3.1km & 5.8 km above mean sea level.

An upper air cyclonic circulation lies over central Pakistan & neighbourhood and extends upto 2.1 km above mean sea level.

The upper air cyclonic circulation over western parts of west central Arabian sea & neighbourhood has moved away westwards.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

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

Convective Activity: Nil

Vortex over Bay of Bengal:

VORTEX over west central bay of Bengal centred within a half degree of latitude 13.6N/longitude 88.4E. Intensity T1.0 repeat 1.0. Associated broken low/med clouds with embedded intense to very intense convection over Bay of Bengal between latitude 10.0N to 17.0N longitude 83.0E to 88.4E

Cloud Description:

Broken low/medium clouds with embedded moderate to intense convection were seen over Bay Islands. Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over E Uttar Pradesh, Bihar, Sikkim, Arunachal Pradesh, Assam, Meghalaya, E Vidarbha and rest parts of S India. Scattered low/medium clouds were seen over J & K, Himachal Pradesh, Uttarakhand, rest Maharashtra, E Madhya Pradesh and rest parts of East India.

Arabian Sea:

Scattered low/medium clouds with embedded isolated moderate to intense convection were seen over South Arabian Sea & Comorin.

Bay of Bengal & Andaman Sea:

Broken low/medium clouds with embedded intense to very intense convection were seen over rest Bay of Bengal, Andaman Sea and Tenasserim coast.

Past Weather:**Convection:-**

Moderate to Intense convection was observed over J&K Uttarakhand Uttar Pradesh South Chhattisgarh Bihar Jharkhand Odisha West Bengal Meghalaya North East States Karnataka Telangana Andhra Pradesh Kerala Tamilnadu .

OLR:-

Upto **230** wm^{-2} was observed over South East Jharkhand Coastal Odisha Meghalaya Nagaland Central Assam South Coastal Andhra Pradesh North Kerala North Tamilnadu. Upto **230** wm^{-2} was observed over J&K Himachal Pradesh Uttarakhand South Chhattisgarh Rest Odisha Sikkim West Bengal Rest Assam Arunachal Pradesh South Interior Karnataka Telangana Rest Andhra Pradesh.

Upto **250** wm^{-2} was observed over South Tamilnadu Manipur North Interior Karnataka

Westerly Trough & Jet-Stream:

No Trough in Westerlies & Jet Stream observed over India Dynamic Features:

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.

Positive low level convergence is observed over Vidarbha South Chhattisgarh Uttar Pradesh Bihar Odisha Andhra Pradesh Tamilnadu and

Negative low level convergence observed over rest parts of India,

Precipitation:**IMR:**

Rainfall Up to **130** mm was observed over North East Jharkhand Rainfall Up to **90** mm was observed over South Chhattisgarh Coastal Andhra Pradesh. Rainfall Up to **70** mm was observed over Odisha West Bengal South Interior Karnataka adjoining Tamilnadu Telangana Rest Andhra Pradesh North Tamilnadu. Rainfall Up to **20** mm was observed over East Assam. Rainfall Up to **10** mm was observed over J& K Himachal Pradesh Uttarakhand North East Uttar Pradesh Bihar Sikkim Rest Assam Arunachal Pradesh Nagaland Tripura South West Madhya Pradesh South.

HEM:.

Rainfall Up to **208** mm was observed over Extreme South West South Interior Karnataka. Rainfall Up to **70** mm was observed over South Chhattisgarh Odisha North West Bengal Meghalaya Rest South Interior Karnataka North Tamilnadu Coastal Andhra Pradesh. Rainfall Up to **14** mm was observed over South West J&K Himachal Pradesh Uttarakhand North Kerala. Rainfall Up to **07** mm was observed over North East Uttar Pradesh Bihar Arunachal Pradesh Nagaland Manipur Tripura North Interior Karnataka South Tamilnadu

RADAR and RAPID Observation:

Convection appears to be in progress over Odisha in DWR composite at 1250hrs IST.

RAPID RGB Satellite imagery at 1230hrs IST indicated convective clouds over Andaman & Nicobar Islands, Uttarakhand, E Uttar Pradesh adjoining Bihar, Coastal Odisha, Coastal Andhra Pradesh, extreme East Arunachal Pradesh, E Assam and Nagaland.

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 increase 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 show evolution of heat low over NW India and adjoining Pakistan with MSLP values lower than 990hPa on Day-1 to Day-4.

12UTC charts on days from Day0-2: show a zone of wind discontinuity at 925 hPa; SW-NE extending from Telangana to Jharkhand.

A CYCIR is seen 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/94E**

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: Jharkhand, Odisha, West MP, Chhattisgarh,

Day1: Jharkhand, Chhattisgarh,

Day2: Gangetic WB, Jharkhand, West UP, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, West MP,

Day3: NE NMMT, TN Puducherry,

Day4: West UP, Hry Chd Delhi, Punjab, West RJ, East RJ, 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: Jharkhand, East UP, West UP, West MP, East MP, Saurashtra Kutch,

Day1: Jharkhand, Bihar, East UP, Hry Chd Delhi, TN Puducherry,

Day2: Assam Meghalaya, Jharkhand, West UP, Punjab, West MP, TN Puducherry, Kerala,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Guj Reg, TN Puducherry,

Day4: NE NMMT, Uttarakhand, Punjab, Guj Reg, 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, Hry Chd Delhi, Himachal Pradesh, Jammu Kashmir, Odisha, Saurashtra Kutch, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Guj Reg, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, SI Karnataka,

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

Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Saurashtra Kutch, Konkan Goa, Madhya Maharashtra, Vidarbha, Chhattisgarh, Coastal AP, Telangana, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, West MP, Madhya Maharashtra

6. 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, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, West MP, Guj Reg, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

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

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

Day3: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Guj Reg, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema, TN Puducherry, 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, Sub Himalayan WB, Jharkhand, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Chhattisgarh, Coastal AP, Telangana, Rayalaseema,

Day1: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Guj Reg, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, TN Puducherry, SI Karnataka,

Day2: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Guj Reg, Saurashtra Kutch, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, Rayalaseema,

Day3: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Himachal Pradesh, Jammu Kashmir, West RJ, East RJ, Odisha, West MP, East MP, Konkan Goa, Madhya Maharashtra, Marathwada, Vidarbha, Chhattisgarh, Coastal AP, Telangana, NI Karnataka,

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

8. Rainfall and thunder storm activity:

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

Day1: Arunachal Pradesh, NE NMMT, Bihar, East UP, Uttarakhand, Andaman Nicobar,

Day2: NE NMMT, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Chhattisgarh, Andaman Nicobar, Telangana, Coastal Karnataka, Kerala,

Day3: NE NMMT, Jharkhand, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, Andaman Nicobar, TN Puducherry, Coastal Karnataka, Kerala,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, East UP, West UP, Hry Chd Delhi, Jammu Kashmir, Andaman Nicobar, TN Puducherry, Coastal Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir, East RJ, TN Puducherry

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

1. Weather Systems:

00 UTC analysis shows an east west trough over Haryana, UP, Bihar and adjoining areas. The trough also has a N-S component and is seen extending along MP up to Maharashtra region. The trough is now extending up to interior TN in the forecast and the low formed in the southeast BOB and adjoining central BOB region is now shown to move towards Bangladesh Coast and dissipate by day 3

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 4 and 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 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 east 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, AP, TN and over major regions bordering the west coast of the country 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.

CIN (50-150): Maximum CIN values are found in areas over 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 and is expected to persist for the next 3 days and on day 3 over some pocket of Haryana and western UP

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 today and tomorrow

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

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

CIN (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.

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Under the influence of the well-marked low pressure area over east central and adjoining west central & southeast Bay of Bengal, which is likely to intensify and move north-eastwards during next 24 hours, rainfall is likely to occur over Sub Himalayan West Bengal, Sikkim and adjoining north-eastern states on day 1. This rainfall is likely to intensify on day 2 over the region. Also, the north-easterly flow into east peninsular India from the above system is likely to result in thunderstorm activity over East peninsular India on day 1.

With conditions becoming favourable for monsoon onset over Kerala, widespread rainfall activity is also expected during the next two days over Kerala, Interior Tamilnadu and adjoining South Karnataka.

The trough at mean sea level, which runs from West Rajasthan to the centre of the well-marked low pressure area over Bay of Bengal, is also likely to result in thunderstorm activity over Northern states during day 1 and 2.

24 hour Advisory for IOP:

Interior Tamil Nadu, Kerala, South Interior Karnataka,
Coastal Andhra Pradesh, Telengana, Rayalaseema
Sikkim and Sub Himalayan West Bengal
Assam and Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura
Orissa, Jharkhand, Bihar, Gangetic West Bengal,
Uttarakhand, West Uttar Pradesh and East Uttar Pradesh
Andaman and Nicobar Islands

48 hour Advisory for IOP:

Interior Tamil Nadu, Kerala, South Interior Karnataka,
Andaman and Nicobar Islands
Sikkim and Sub Himalayan West Bengal
Assam and Meghalaya, Arunachal Pradesh, Nagaland, Manipur, Mizoram, Tripura
Jharkhand, Bihar, Orissa, Gangetic West Bengal,
Uttarakhand, Himachal Pradesh, Punjab, Haryana, West Uttar Pradesh and East Uttar Pradesh

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

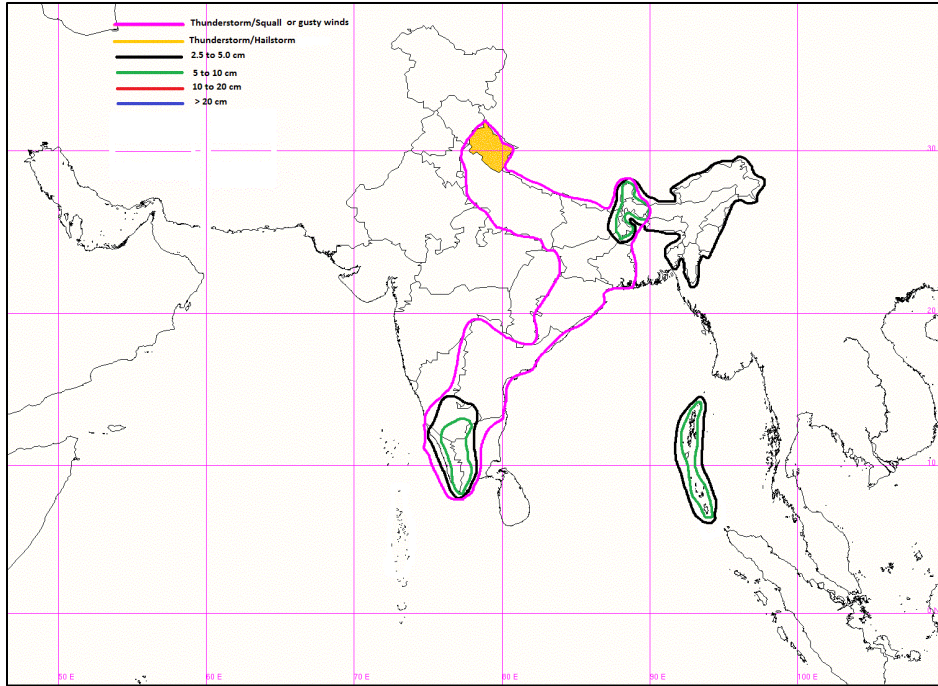
HEM: http://satellite.imd.gov.in/img/3Ddaily_he.jpg

ForRadarimagesofthepast24hoursincludingmosaicofimages:

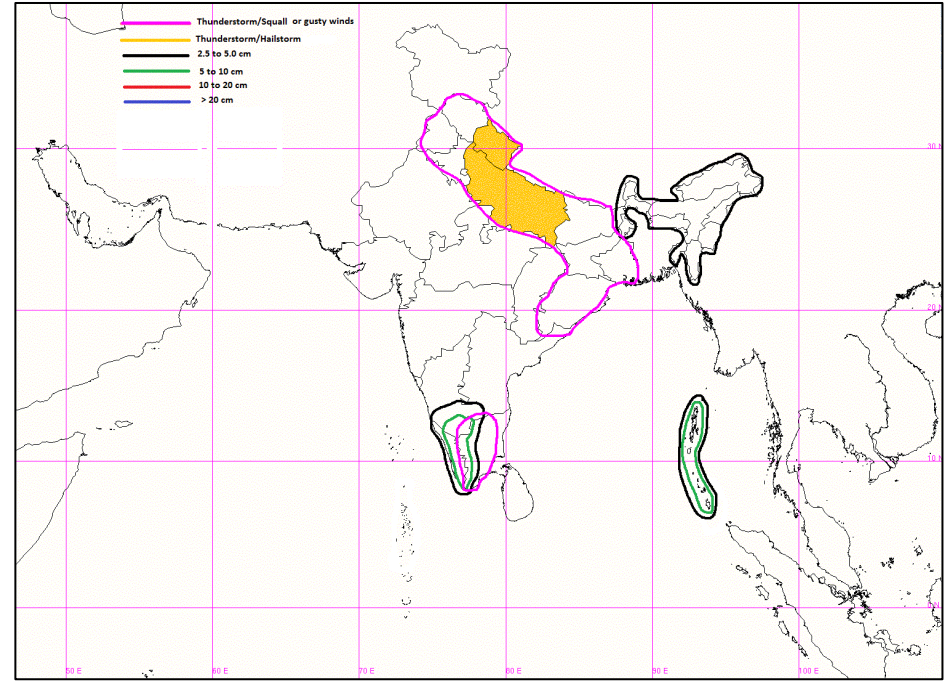
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Satellite sounder based T- Phigram

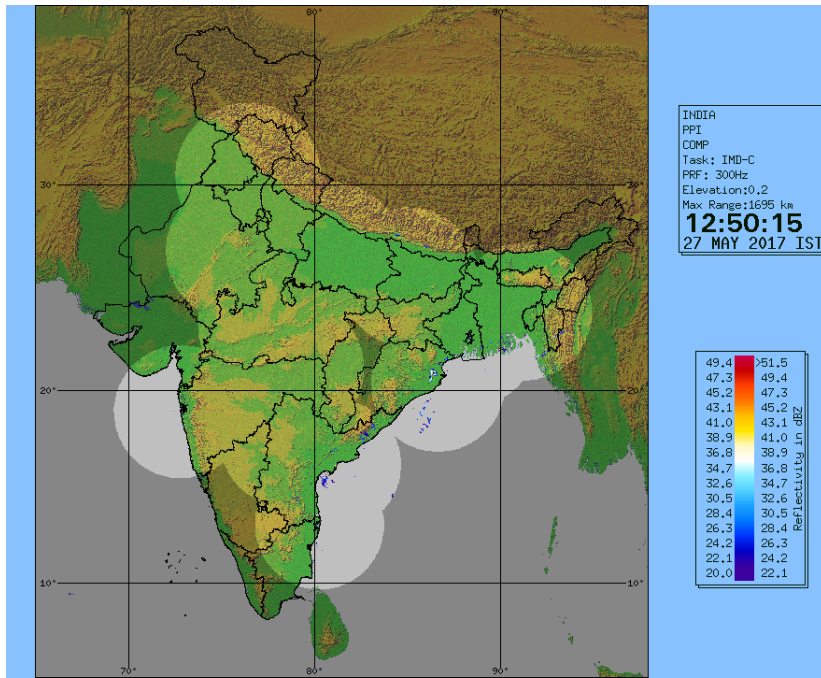
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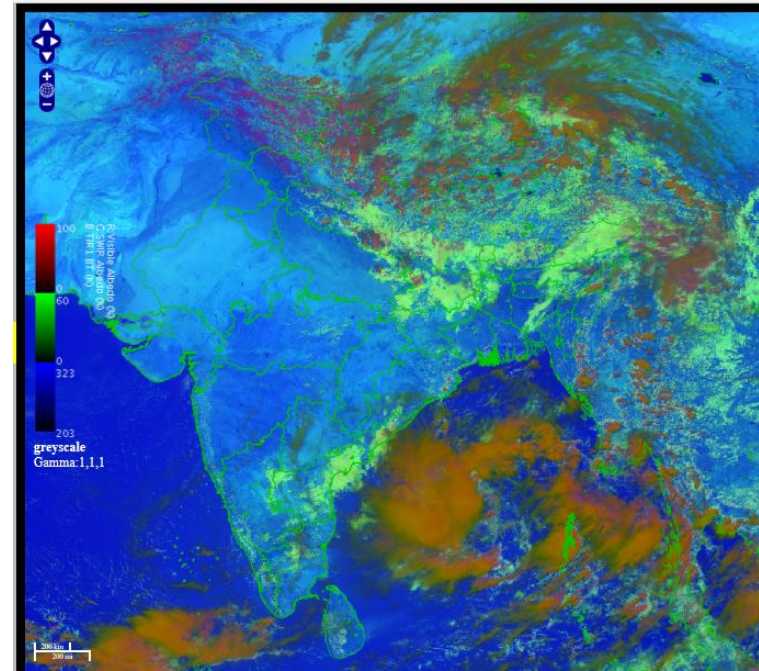
IOP Advisory for 24 hours



IOP Advisory for 48 hours

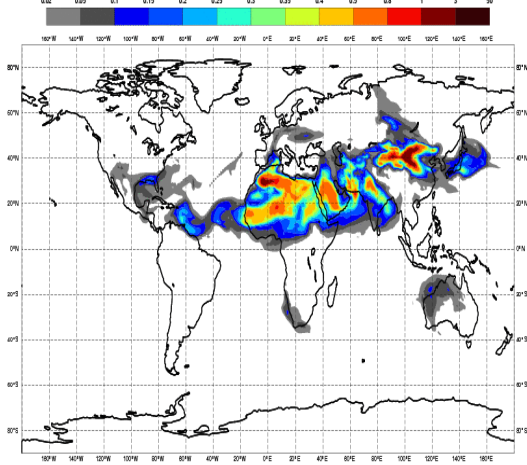


DWR Composite at 1250 hrs IST

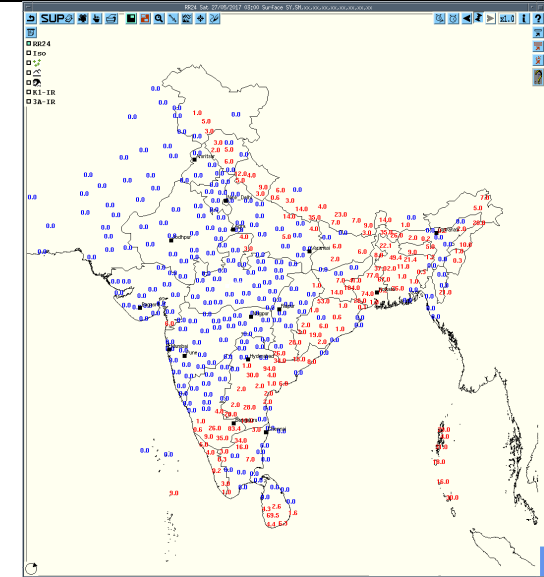
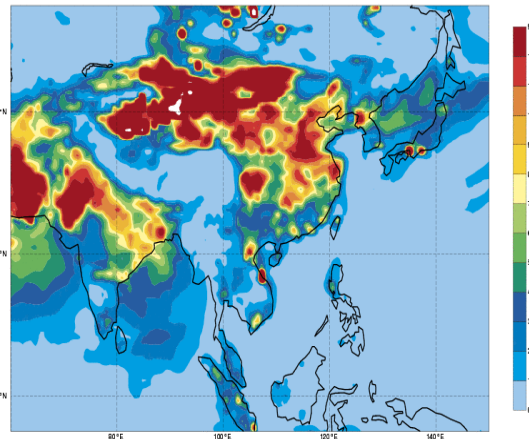


RAPID RGB Satellite Imagery at 1230 hrs IST of today

Friday 26 May 2017 00UTC CAMS Forecast (+120 VT: Wednesday 31 May 2017 00UTC
Dust Aerosols Optical Depth at 550 nm



Friday 26 May 2017 00UTC CAMS Forecast (+120 VT: Wednesday 31 May 2017 00UTC
Surface PM10 [$\mu\text{g}/\text{m}^3$]

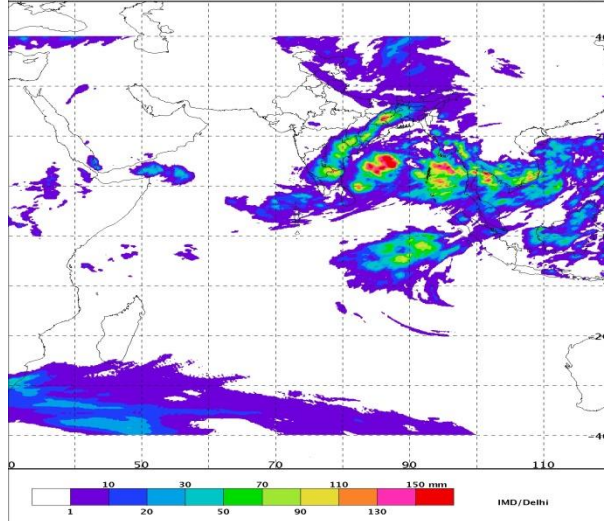


Forecast Dust Concentration for 00UTC of 31st May

PM10 Forecast for 00UTC of 31st May

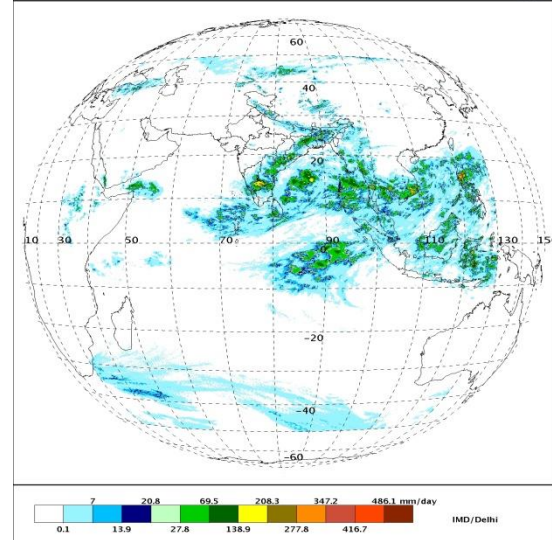
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today

SAT:INSAT-3D IMG
INSAT Multi-spectral Rainfall(Daily)
L3G BINNED GEOPHYSICAL PARAMETER GRIDDED

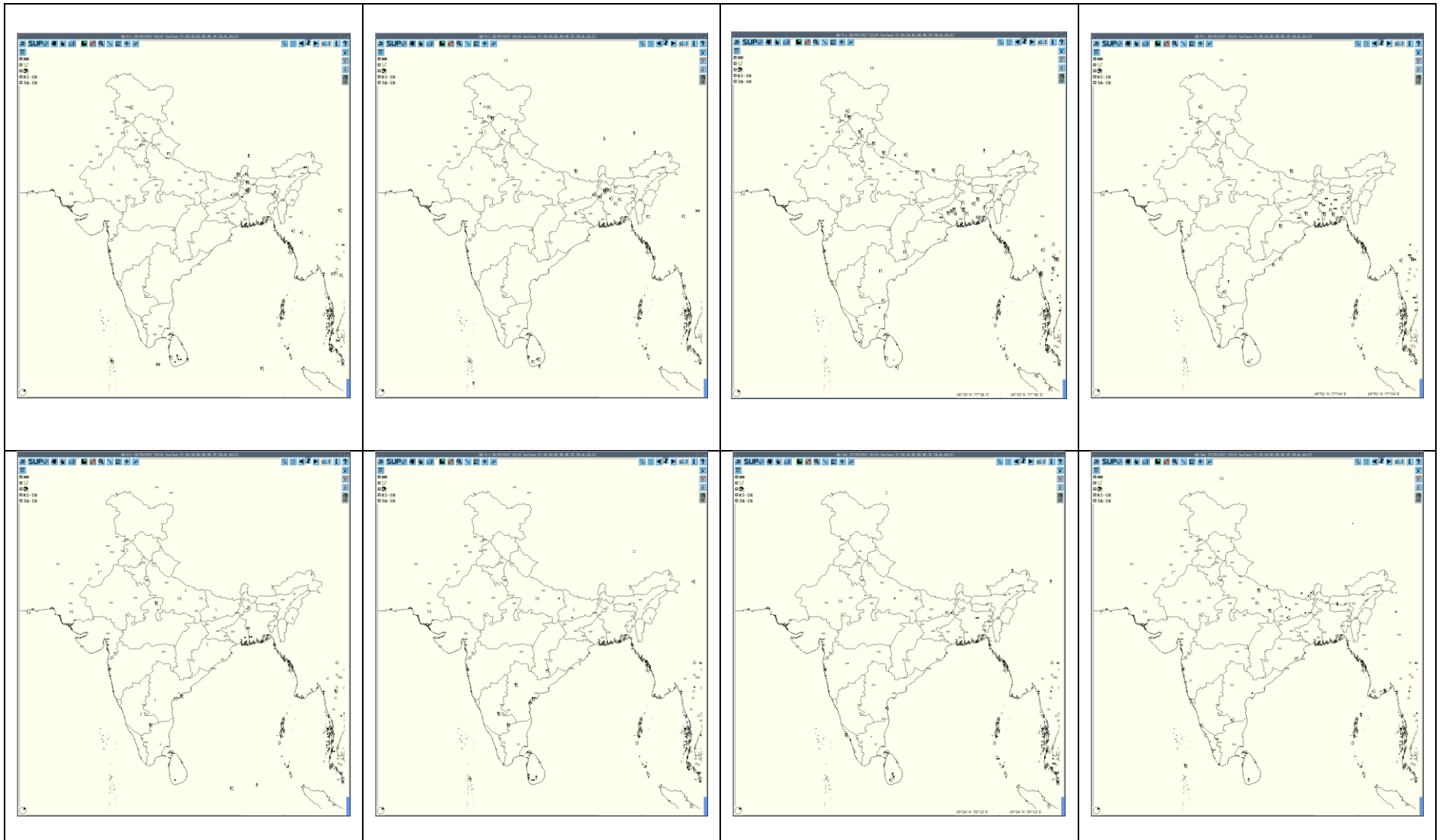


IMR Rainfall

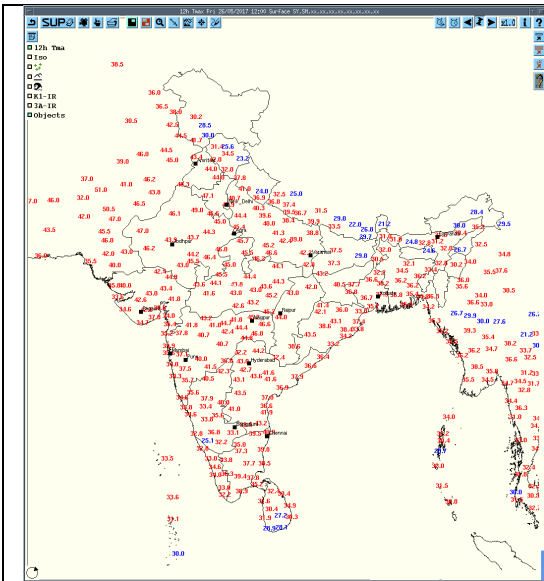
SAT:INSAT-3D IMG
Precipitation(HE) Daily
L3B BINNED GEOPHYSICAL PARAMETER FULL DISK



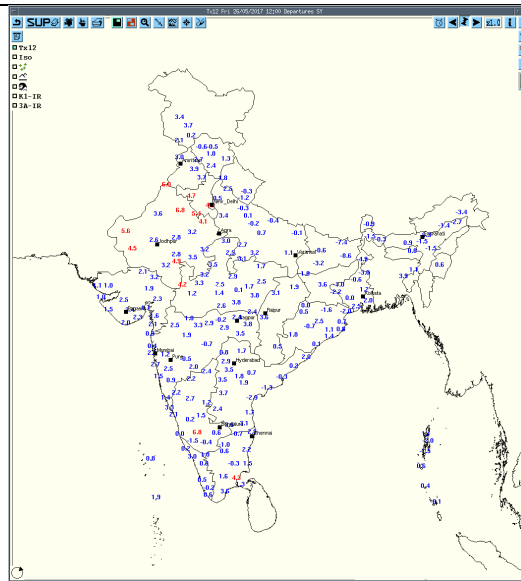
HEM Rainfall



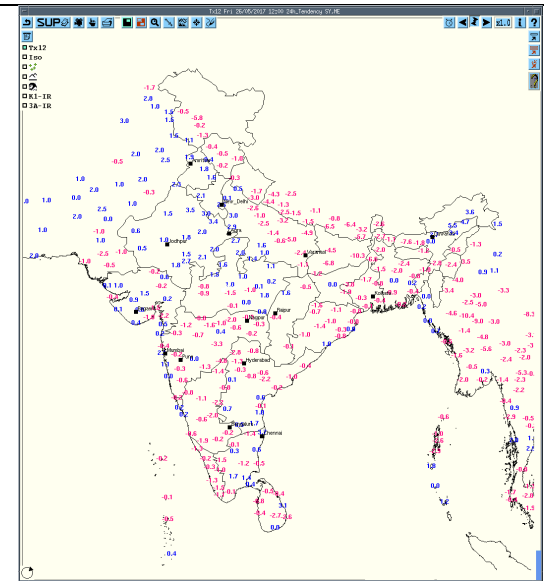
3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today



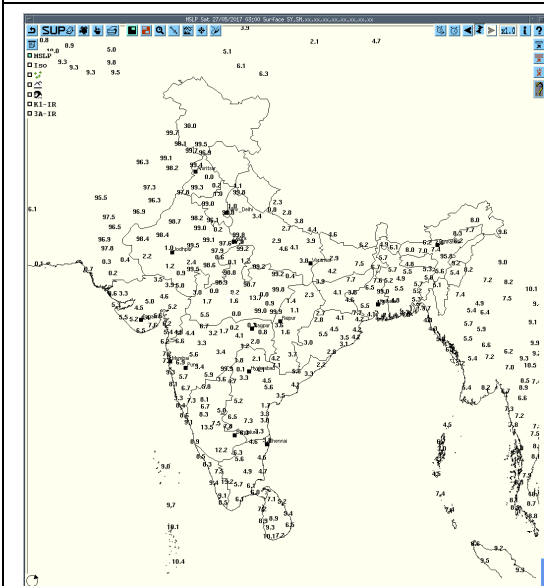
Tmax



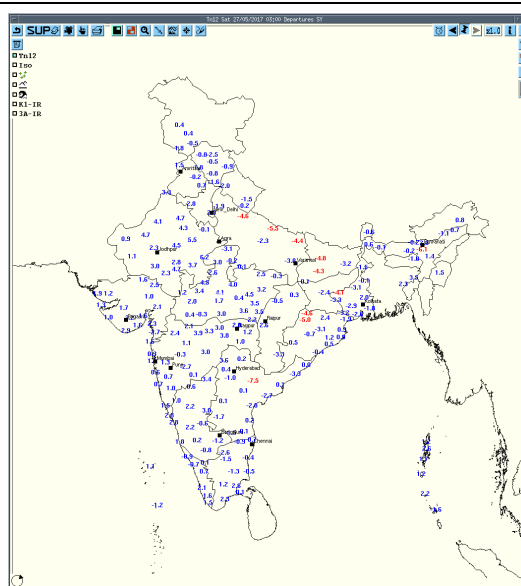
Departure Tmax



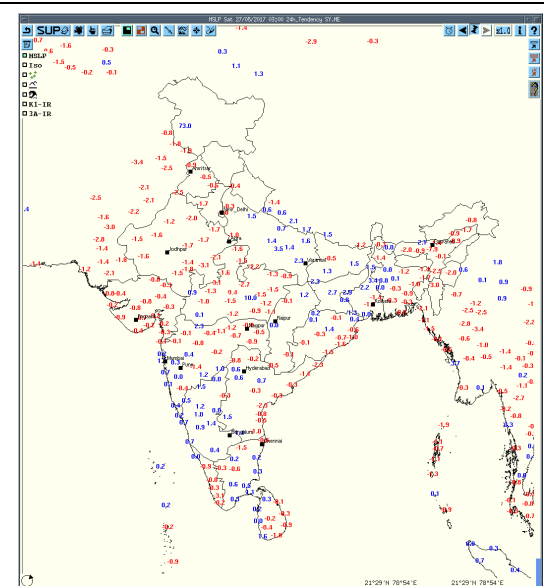
Tendency Tmax



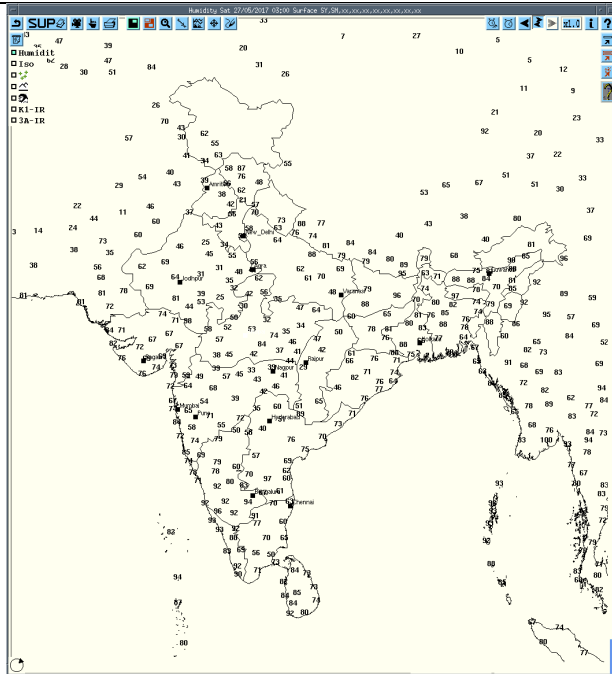
MSLP



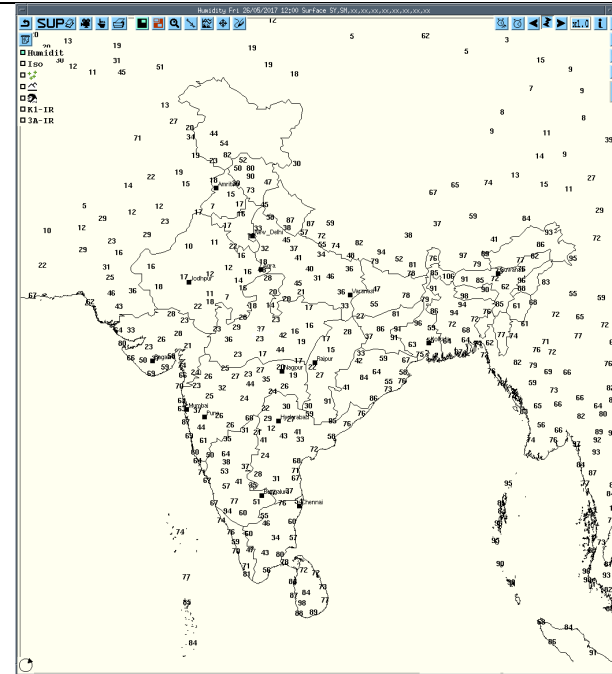
Departure MSLP



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
26-05-17	0600UTC	Pahalgam	NW India	J & K	Thunderstorm
		Mukteshwar	NW India	Uttarakhand	Thunderstorm
		Purnea	E India	Bihar	Thunderstorm
		Gangtok	NE India	Sikkim	Thunderstorm
		Jalpaiguri	NE India	West Bengal	Thunderstorm
		Cherrapunjee	NE India	Meghalaya	Thunderstorm
26-05-17	0900UTC	Pahalgam, Batote, Bhaderwah	NW India	J & K	Thunderstorm
		Sundernagar	NW India	Himachal Pradesh	Thunderstorm
		Purnea	E India	Bihar	Thunderstorm
		Ranchi	E India	Jharkhand	Thunderstorm with Hail
		Malda	E India	West Bengal	Thunderstorm
26-05-17	1200UTC	Kukernag, Batote, Bhaderwah	NW India	J & K	Thunderstorm
		Sundernagar, Shimla	NW India	Himachal Pradesh	Thunderstorm
		Tehri, Mukteshwar	NW India	Uttarakhand	Thunderstorm
		Bankura, Panagarh, Shantiniketan	E India	West Bengal	Thunderstorm
		Burdwan	E India	West Bengal	Thunderstorm with Hail
		Agartala	NE India	Tripura	Thunderstorm
		Jagdapur	C India	Chhattisgarh	Thunderstorm
		Nalgonda, Tirupati	S India	Andhra Pradesh	Thunderstorm
		Puducherry	S India	Puducherry	Thunderstorm
26-05-17	1500UTC	Srinagar	NW India	J K	Thunderstorm
		Sundernagar	NW India	Himachal Pradesh	Thunderstorm
		Jharsuguda	E India	Odisha	Thunderstorm
		Bankura	E India	West Bengal	Thunderstorm
		Kalingapatnam, Anantapur	S India	Andhra Pradesh	Thunderstorm
		Vishakhapatnam	S India	Andhra Pradesh	Thunderstorm with Hail
		Vijayawada	S India	Andhra Pradesh	Lightening
		Bengaluru	S India	Karnataka	Thunderstorm
		Tiruchirappalli	S India	Tamilnadu	Lightening
26-05-17	1800UTC	Bhraich	NW India	Uttar Pradesh	Lightening
		Patna	E India	Bihar	Lightening
		Imphal	NE India	Manipur	Lightening
		Gwalior	C India	Madhya Pradesh	Thunderstorm
		Jharsuguda	E India	Odisha	Thunderstorm
		Machilipatnam, Bapatla	S India	Andhra Pradesh	Thunderstorm
		Kurnool	S India	Andhra Pradesh	Lightening

		Chitradurga	S India	Karnataka	Lightening
		Bengaluru	S India	Karnataka	Thunderstorm
26-05-17	2100UTC	Patna	E India	Bihar	Lightening
		Imphal	NE India	Manipur	Thunderstorm
		Puri	E India	Odisha	Thunderstorm
		Bapatla, Ongole	S India	Andhra Pradesh	Thunderstorm
		Hyderabad,	S India	Telangana	Thunderstorm
		Nellore	S India	Andhra Pradesh	Lightening
		Chitradurga, Bengaluru	S India	Karnataka	Thunderstorm
		Coimbatore	S India	Tamilnadu	Lightening
		Thiruvananthapuram	S India	Kerala	Lightening
		27-05-17	0000UTC	Bhagalpur	E India
Kannur	S India			Kerala	Thunderstorm
27-05-17	0300 UTC	Bahraich, Fursatganj, Varanasi	NW India	Uttar Pradesh	Thunderstorm
		Minicoy	S India	Lakshadweep & Minicoy Islands	Thunderstorm

Past 24 hours DWR Report:

Radar Station name	Date of Reporting	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
Karaikal	27-05-17	260502-260542	1.Isolated cell with average height of 6 Km with maximum reflectivity of 50 dBZ	1.E (70Km) moving in SW-ly direction at a speed of 5 Km/hr.	1.Cells started forming at 0500 UTC at E (70 km) from radar. Max reflectivity during 0522 to 0542 and died down at 0600	N/A	N/A
		260832-270100	1.Squall line convective system with average height of 11 km with maximum reflectivity of 95 dBZ	1.N (187 KM) moving in SW-ly Direction at speed of 20 kmph	1. Cells started forming at 0830 UTC at N(187 KM) from radar. Organized into squall line MCS during 1000 to 1530 UTC and disorganised at 1830 UTC	N/A	N/A
Jaipur	27-05-17	261030-261310	One or two cells with average height of 8.5 km maximum reflectivity 53.0 dBZ	Cell develop 1030 to 1310 UTC of 26/05/17 towards N,,NNE,NE of jaipur and moved to S and SE WARDS at speed 30-36 km/hr	Cells starts forming from 1030 UTC AT NE of Jaipur and reaches maximum refelectivity during 1200-12300 UTC.	Moderate Thunderstorm at a few plces and isolated places	Jaipur
		261510-261600	One or two cells with average height of 8.5 km maximum reflectivity 54.5 dBZ	Cell develop 1510 to 1600 UTC of 26/05/17 towards E of jaipur and moved to S and SE at speed 24-30 km/hr	Cells starts forming from 1510 UTC in E of Jaipur and maximum refelectivity during 1510-1540 UTC.	Thunderstorm at a few plces and isolated places	Karauli
Machilipatnam	27-05-17	260741-261231	Multiple cells average height of 12.5 km with maximum reflectivity of 62 dBZ	W (181km) and moving SE ly direction with average speed of 8.4 kmph	Cell started forming at 0741UTC, at W (181km) from Radar the maximum reflectivity	Possibility of Thunder storm with Hail and rain with	Guntur, Prakasam, Nellore,Kurnool Districts

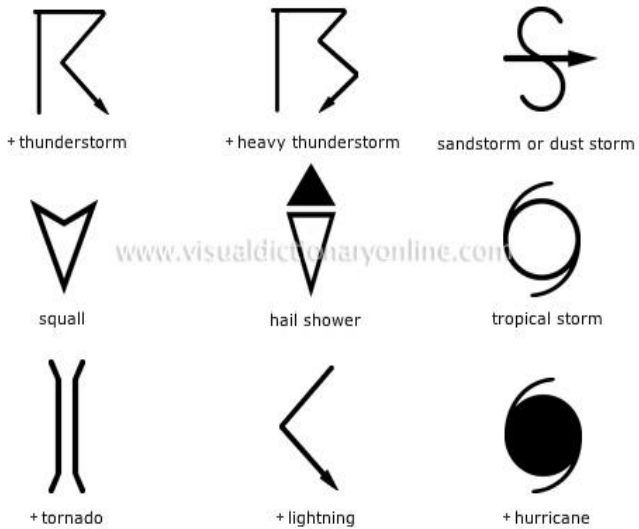
					during 0741 to 1231 UTC and died down at 1241UTC	moderate winds	
		260921-261341	Multiple cells average height of 11.0 km with maximum reflectivity of 63.5 dBZ	NE (250km) and moving SW ly direction with average speed of 38 kmph	Cell started forming at 0921UTC, at NE (250km) from Radar the maximum reflectivity during 0921 to 1341 UTC and died down at 1351UTC	Possibility of Thunder storm with Hail and rain with winds	Visakhapatnam, East and West Godavari Districts
		260901-261101	Multiple cells average height of 11.5 km with maximum reflectivity of 64.5 dBZ	SW (225km) and moving SE ly direction with average speed of 12.5 kmph	Cell started forming at 0901UTC, at SW (225km) from Radar the maximum reflectivity during 0901 to 1101 UTC and died down at 1111UTC	Possibility of Thunder storm with hail and rain with winds	Prakasam and Nellore Districts
		261031-261931	Covective region in NW and N direction with average height of 13 km with maximum reflectivity of 64.0 dBZ	NW (223km)&N(250Km) and moving SE ly direction with average speed of 15.5 kmph	Covective region in NW(223Km)&N(250Km) direction started forming from Radar and the reflectivities during 1031 to 1931 UTC are :62.0dBZ,63.5Dbz, 64.0dBZ ,etc-and slowly dissipated around19.31UTC .	Possibility of Thunder storm with hail and rain moderate winds	Khamma,SUrysrampet,Janagaom,Hunmakonda,Mahabubabad,Warangal,Nalgonda,etc and Krishna,Guntur, West Godavari and Prakasam Districts
		262251-270211	Multiple cells average height of 6.5 km with maximum reflectivity of 60.0 dBZ	NNE (195km) and moving SW ly direction with average speed of 46.0 kmph	Cell started forming at 2251UTC, at NNE (195km) from Radar the maximum reflectivity during 2251 to 0211 UTC and died down at 0221UTC	Possibility of Thunder storm with hail and rain with winds	East and West Godavari and Krishna Districts
Patiala	27-05-17	260300-260600	NO SIGNIFICANT ECHO	-----	-----	-----	-----
		260600-260900	Multiple cells max. 51.5 dbz Ht. 9-13 km	NORTH AND NE SECTOR. MOVEMENT SE WARDS	-----	TS/RA	DHARAMSHALA, KULLU, MANDI, UTTARKASHI
		260900-261200	Multiple cells max. 62.0 dbz Ht. 11-12 km	NE SECTOR. MOVEMENT SE WARDS	-----	TS/RA/HAIL	DASUA, BDAM, SHIMLA, SOLAN, NAHAN,

							BILASPUR, MANDI, HAMIRPUR, UTTARKASI
		2601200- 261500	Multiple cells max. 58.0 dbz Ht. 12 km	SE WARDS	-----	TS/RA	- MUSSORRIE,DEH RADUN, KALSI, BEHAT, ROORKEE HARDIWAR, BILASPUR, MANDI.
		261500- 261800	NO SIGNIFICANT	-----	-----	-----	
		261800- 262100	NO SIGNIFICANT ECHO	-----	-----	-----	-----
		262100- 270000	NO SIGNIFICANT ECHO	-----	-----	-----	-----
		270000 - 27252	NO SIGNIFICANT ECHO	-----	-----	-----	-----
Agartala	27-05-17	260100 - 260620	Multiple cells formed one after another with Maximum Height 14 km and maximum reflectivity 44.5 dBZ at 0120 UTC over East Meghalaya	Formed 150 km NE of DWR and moved E- wards at around 25 kmph	Cells dissipated at 0620 UTC over South Assam	Squall with heavy rain occurred.	Cachar, Karimganj & Hailakandi dists. of South Assam.
		260640 - 261500	Multiple cells formed one after another with Maximum Height 15 km and maximum reflectivity 46 dBZ at 1100 UTC over Bangladesh	Formed 200 km NW of DWR and moved SE- wards at around 20 kmph	Cells dissipated at 1500 UTC over South Tripura	Squall with heavy rain occurred.	Udaipur, Bishalgarh & Belonia dists. of South Tripura.
Patna	27-05-17	260300 - 260310	NIL	NIL	NIL	NIL	NIL

		260310 - 260510	Multi cell. Maximum Reflectivity : 46.5 dBZ Echo Top : 13 KM	Range: 049 km North from DWR Patna Movement- Eastward	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMS	Thunderstorm with Squall & Rain	Muzaffarpur, Samastipur, Darbhanga, Kishanganj, Katihar, Purnia, Araria
		260510 - 261420	NIL	NIL	NIL	NIL	NIL
		261420 - 261720	Multi cell. Maximum Reflectivity : 42.50 dBZ Echo Top : 13 KM	Range: 181 km North West from DWR Patna Movement- SE	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMS	Thunderstorm with Squall & Rain	West Champaran, East Champaran, Gopalganj, Siwan, Seohar, Sitamarhi, Muzaffarpur, Madhubani, Darbhanga
		261620 - 261820	Multi cell. Maximum Reflectivity : 43.50 dBZ Echo Top : 12 KM	Range: 49 km North from DWR Patna Movement- SE	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMS	Thunderstorm with Squall & Rain	Vaishali, Samastipur, Begusarai, Saharsa.
		261820 - 262040	NIL	NIL	NIL	NIL	NIL
		262040 - 262340	Multi cell. Maximum Reflectivity : 51 dBZ Echo Top : 10 KM	Range: 141km North West from DWR Patna Movement- SE	Warning E-mail and Fax sent to State Disaster management Authority and Concern DMS	Thunderstorm with Squall & Rain	Buxar,, Bhojpur, Siwan Chapra, Patna, Vaishali, Samstipur, Khagaria, Begusarai Munger, Lakhisarai, Saharsa, Madhepura, Purnia, Bhagalpur.

		262340 - 270040	NIL	NIL	NIL	NIL	NIL
Lucknow	27-05-17	260342- 260432	Single cells with average height of 7.0 KM. Echo tops:6.5KM with Maximum Reflectivity of 48 dBZ	NE(140KM) From LKN Radar and moving in SE'ly direction at speed of 48 km/hr	Single cell started forming at NNE(140KM) from LKN Radar at 0332 UTC did not intensified and dissipated at 0432 UTC at NE(150KM) from LKN Radar.	TS	Baharaich
		261532- 262132	Squall line convective system with average height of 9 KM. with Maximum Reflectivity of 50 dBZ	NNW(150KM) From LKN Radar and moving in SE'ly direction at speed of 74 km/hr	Cells started forming at 1522 UTC at NNW(230 km) from DWR LKN organized into MCS during 1642 UTC to 1952 UTC and disorganized at 2002 UTC into a single cell.the single cell dissipated at 2102 UTC at ESE(200km) from Radar	TS,RAIN	Bareilly,shahjahanpur, lakhimpur kheri,sitapur,baharaich, lucknow,gonda,barabanki, faizabad,basti
		26231- 270300	Squall line convective system with average height of 7.5 KM. with Maximum Reflectivity of 48 dBZ	NNW(150KM) From LKN Radar and moving in SE'ly direction at speed of 43 km/hr	Cells started forming at 2302 UTC at NW(170 km) from DWR LKN organized into MCS during 262332 UTC System remained stable upto 270300 UTC	TS,RAIN	Lucknow,sitapur, shahjahanpur,Hardoi, unnao,Kanpur,gonda,basti, baharaich,barabanki,faizabad, lakhimpur kheri,raibareilly, amethi,pratapgarh, kannauj, fatehpur
Nagpur	27-05-17	260802- 260832	Multiple Multiple Nil	245 km SW 74 km E, moving towards South	Max Z=45 ht of cloud=5.8-9.3km Max Z=49 ht of cloud=1.2-8.5km	Thunderstorm warning started at 1122 till 1233 in SE direction 216 Km away from Radar	Isolated places in district of Durg, Betul,Hingoli, Pusad, and Yeotmal.
		260942- 261342					
		261352- 262349					

		270000-270255	Nil				
Kolkata	27-05-17	260301-261000	NIL	NIL	RADAR U/S	NIL	NIL
		261001-261801	1.Multicelled system converted to squall line with maximum reflectivity of 66.0 dBz at 1221 UTC and maximum height more than 18 km at 1021 UTC	1.W to NW (200 km) moving in E-ly/ SE-ly direction with a speed of 55 kmph.	1. Multicelled system seen at W to NW at a distance of 200 km from Radar at 1001 UTC. Formed squall line at 1101 UTC Cell no 2 merged at 1121 UTC. Matured and Dissipated at 1801 UTC in W	Hailstorm/Thunderstorm /Squall/ Rain	N/A
			2. Single cell converted to multicelled system with maximum reflectivity of 66.5 dBz at 1121 UTC and maximum height more than 18 km at 1001 UTC	2. N (154 km) moving in SE-ly direction with a speed of 46 kmph	2. Single cell seen at N at a distance of 154 km from Radar at 1001 UTC. Converted to multicelled system. Cell no 2 merged at 1121 UTC. Matured and Dissipated at 1542 UTC in ENE	Hailstorm/Thunderstorm /Squall/ Rain	N/A
			3.Multicelled system with maximum reflectivity of 64.5 dBz at 1101 UTC and maximum height more than 18 km at 1021 UTC	3. NNW (160 km) moving in E-ly/ ESE-ly direction with a speed of 23 kmph	3. Single cell seen at NNW at a distance of 160 km from Radar at 1001 UTC. Matured. Merged at 1121 UTC with cell no. 1.	Hailstorm/Thunderstorm /Squall/ Rain	N/A
		261001-261801	4.Multicelled system with maximum reflectivity of 64.0 dBz at 1121 UTC and maximum height of 16 km at 1121 UTC	4. N to NE (171 km) with almost no movement.	4. Isolated cells seen and formed from N to NE at a distance of 171 km from Radar since 1001 UTC. Matured. Merged at 1121 UTC with cell no.2	Hailstorm/Thunderstorm /Squall/ Rain	N/A
		261801-262351	NIL	NIL	NO SIG ECHO	NIL	NIL
		270011-270301	NIL	NIL	NO SIG ECHO	NIL	NIL



∞	haze
☁	smoke
☄	dust or sand storm
☁	fog
☂	drizzle
•	rain
✳	snow
▽	showers
△	hail
☄	thunderstorm
Weather Symbols	