



India Meteorological Department
FDP STORM Bulletin No.71 (15-05-2017)

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

The Western Disturbance as an upper air cyclonic circulation over Jammu & Kashmir & neighbourhood at 3.1 Km above mean sea level persists.

The Western Disturbance as a trough in mid-tropospheric westerlies roughly along longitude 56.0°E and north of latitude 30.0°N now runs roughly along longitude 60.0°E and north of latitude 27.0°N.

The upper air cyclonic circulation over East Uttar Pradesh and neighbourhood extending upto 0.9 km above mean sea level persists. The trough from this upper air cyclonic circulation over East Uttar Pradesh now runs upto east Arunachal Pradesh across Bihar, northern parts of Gangetic West Bengal & south Assam and extends upto 0.9 km above mean sea level with an embedded upper air cyclonic circulation over Bangladesh & neighbourhood extending upto 2.1 km above mean sea level.

The upper air cyclonic circulation over south Andaman sea & neighbourhood now lies over north Andaman sea & neighbourhood and extends upto 3.6 km above mean sea level.

The trough from northwest Madhya Pradesh to north Madhya Maharashtra has become less marked.

The upper air cyclonic circulation over North Interior Karnataka & neighbourhood has become less marked.

The trough from Marathwada to south Tamilnadu has become less marked.

SATELLITE OBSERVATIONS during past 24hrs and current observation:

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

Convective Activity and cloud description:

Cell No	Date/Time (UTC)	Area/Location	CTT (- Deg C)	Movement	Remarks
2 (old)	150000	North Interior Karnataka	83	---	---
	0100	North Interior Karnataka adjoining Goa	88		
	0200	Do	83		
	0300	North Interior Karnataka, Goa adjoining Madhya Maharashtra	80		
5 (old)	15/0000	E Bangladesh, Meghalaya	84	---	---
	0100	do	83		---
	0200	E Bangladesh, Meghalaya adjoining Assam, N Tripura, Manipur	79		
	0300	do	81		

Scattered low/medium clouds with embedded intense to very intense convection were seen over E Bangladesh, Meghalaya, E Assam, NMMT. Broken low/medium clouds with embedded intense convection were seen over N Karnataka. Broken low/medium clouds with

embedded moderate to intense convection were seen over Goa, extreme S Madhya Maharashtra, extreme s Kankan. Scattered low/medium clouds with embedded moderate to intense convection were seen over N Tamilnadu, Bay Islands. Scattered low/medium clouds with embedded weak to moderate convection were seen over Kerala, Telengana, W Rayalaseema and Lakshadweep. Scattered low/medium clouds with embedded weak convection were seen over E J & K extreme SW Punjab. Scattered low/medium clouds were seen over rest J & K, HP, rest Maharashtra, and rest parts of south India & east India except Bihar, Jharkhand, Chhattisgarh, S Odisha and E Sub Himalayan West Bengal.

Arabian Sea:

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

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded moderate to intense convection were seen over Central & south Bay of Bengal and Andaman Sea, Gulf of Martaban and Tenasserim coast.

Past Weather:

Convection:-

Moderate to Intense convection was observed over NW J&k, Himachal Pradesh, Uttarakhand, Uttar Pradesh, Odisha, West Bengal, Meghalaya, Assam, Tripura, Karnataka, Kerala Tamilnadu.

OLR:-

Upto 200 wm^{-2} was observed over North Interior Karnataka. Upto 230 wm^{-2} was observed over South Interior Karnataka, Meghalaya, Manipur. Upto 250 wm^{-2} was observed over J&K, Himachal Pradesh, North Uttarakhand, South West Odisha, Sikkim, Arunachal Pradesh, Tripura, Nagaland and Mizoram

Westerly Trough & Jet-Stream:.

No Westerly Trough & Jet Stream

Dynamic Features

Low to Medium wind shear is observed over India.

Negative shear tendency is observed over North West India and Positive shear tendency is observed over rest parts of India.

A positive Vorticity field is observed over Saurashtra, Vidarbha, East Madhya Pradeh , East Uttar Pradesh Coastal Odisha.

Negative low level convergence observed over West coast of India, Madhya Pradesh,Uttar Pradesh and Positive Low Level Convergence observed over the rest parts of India

Precipitation:

IMR:

Rainfall Upto 110mm was observed over North Interior Karnataka. Rainfall Upto 70 mm was observed over Rest Karnataka adjoining North West Tamilnadu, South West Odisha adjoining north Andhra Pradesh. Rainfall upto 50mm was observed over Meghalaya, South Assam, Tripura. Rainfall upto 30mm was observed over Manipur. Rainfall upto 20mm was observed over North Kerala. Rainfall upto 10mm was observed over J&K, Himachal Pradesh North Uttarakhand, Sikkim, East Assam, Nagaland South Kerala.

HEM:.

Rainfall upto 70 mm was observed over South West J&K, South West Odisha adjoining North Andhra Pradesh, Meghalaya, Tripura, North Kerala.

Rainfall upto 14 mm was observed over North Uttarakhand adjoining Himachal Pradesh, Nagaland, Manipur, Mizoram.

Rainfall upto 07 mm was observed over South Kerala, South Tamilnadu

RADAR and RAPID Observation:

Convection appears to be in progress over E Jharkhand adjoining West Bengal, North Coastal Tamilnadu & Meghalaya in DWR composite at 1350hrs IST

RAPID RGB satellite imagery at 1300hrs IST indicated convective clouds over Coastal and North Interior Karnataka, South Konkan & Goa, Meghalaya, Assam, Sikkim, Arunachal Pradesh, East Jharkhand, Lakshadweep & Minicoy and Andaman & Nicobar Islands.

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

Higher Dust concentration was observed over northern Africa and some parts of eastern Asia. Dust concentration is expected to remain high over western and northern India for next five days. High PM10 concentration was observed over north-western and northern India.

2. NWP MODEL GUIDANCE:

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

1. Weather Systems:

12UTC Charts of Day-0-4, also show evolution of heat low extending from over NW India and adjoining Pakistan south-eastwards over the IG plains, with MSLP values lower than 994hPa

12UTC charts on days from Day2-4: show a zones of wind discontinuity at 925 hPa :(i) SW-NE extending from northern Telangana-Maharashtra region to Chhattisgarh-Jharkhand region.

Over Bay of Bengal a CYCIR is seen at 925, 850 and 500 hPa(Day-0-3) over Andaman and Nicobar Islands which is moving towards Myanmar in Day-3

Over Arabian Sea a CYCIR is seen at 925, 850 and 500 hPa (Day-2-4) over west coast of Kerala and Karnataka.

At 500hPa Day-2 to Day-4 strong anticyclone is evolving over Maharashtra moving eastwards

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:

Day0: Jharkhand, Jammu Kashmir, Odisha, Madhya Maharashtra, TN Puducherry,

Day1: Gangetic WB, Jharkhand, West UP, Hry Chd Delhi, West RJ, Odisha, Madhya Maharashtra,

Day2: Arunachal Pradesh, Assam Meghalaya, Jharkhand, Hry Chd Delhi, East RJ, Odisha,

Day3: Jharkhand, East RJ, Odisha, West MP, Coastal AP, Rayalaseema, TN Puducherry,

Day4: Jharkhand, Bihar, East UP, West RJ, Odisha, Coastal AP, TN Puducherry.

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

Day0: Bihar, East UP, Uttarakhand, Himachal Pradesh, Odisha,

Day1: Arunachal Pradesh, Assam Meghalaya, West UP, Odisha,

Day2: Assam Meghalaya, Jharkhand, Hry Chd Delhi, Punjab, TN Puducherry,

Day3: TN Puducherry, Kerala,

Day4: Assam Meghalaya, Jharkhand, Bihar, East UP, Punjab, TN Puducherry

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

Day0: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day1: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Konkan Goa, Madhya Maharashtra, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day3: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Coastal AP, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Saurashtra Kutch, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka.

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

Day0: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, West MP, Madhya Maharashtra, Marathawada, 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, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Konkan Goa, Madhya Maharashtra, Marathawada, Vidarbha, Coastal AP, Telangana, Rayalseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka, Kerala,

Day2: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Konkan Goa, Madhya Maharashtra, Marathawada, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day3: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Coastal AP, Telangana, Rayalaseema, TN Puducherry, Coastal Karnataka, NI Karnataka, SI Karnataka,

Day4: Arunachal Pradesh, NE NMMT, Sub Himalayan WB, Gangetic WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, Odisha, Madhya Maharashtra, Coastal AP, Telangana, Rayalaseema, TN Puducherry, NI Karnataka, SI Karnataka

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

Day0: Arunachal Pradesh, Sub Himalayan WB, Gangetic WB, Bihar, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ, Coastal AP,

Day1: Arunachal Pradesh, Sub Himalayan WB, East UP, West UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, West RJ,

Day2: Arunachal Pradesh, Sub Himalayan WB, Bihar, East UP, West UP, Uttarakhand, Hry Chd Delhi, Punjab, Himachal Pradesh, Jammu Kashmir,

Day3: Arunachal Pradesh, Sub Himalayan WB, Bihar, East UP, Uttarakhand, Himachal Pradesh, Jammu Kashmir, Odisha, Coastal AP, Rayalaseema,

Day4: Arunachal Pradesh, Sub Himalayan WB, Jharkhand, Bihar, East UP, Uttarakhand, Punjab, Himachal Pradesh, Jammu Kashmir, West RJ, Odisha, Coastal AP

8. Rainfall and thunder storm activity

TN Puducherry, SI Karnataka,

Day2: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Gangetic WB, Jammu Kashmir, Andaman Nicobar, TN Puducherry,

Day3: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Jammu Kashmir, Andaman Nicobar,

Day4: Arunachal Pradesh, Assam Meghalaya, NE NMMT, Sub Himalayan WB, Bihar, Andaman Nicobar, Rayalaseema, Coastal Karnataka, SI Karnataka, Kerala,

Day5: Arunachal Pradesh, Assam Meghalaya, Sub Himalayan WB, Andaman Nicobar

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

Not Received

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, the upper air cyclonic circulation over East Uttar Pradesh and neighbourhood and the trough from this upper air cyclonic circulation over East Uttar Pradesh runs upto east Arunachal Pradesh across Bihar, northern parts of Gangetic West Bengal & south Assam and extends upto 0.9 km above mean sea level with an embedded upper air cyclonic circulation over Bangladesh & neighbourhood extending upto 2.1 km above mean sea level. Due to this circulation, Assam & Meghalaya and NMMT may experience rainfall activities along with thunder storm with gusty wind on Day-1.

The upper air cyclonic circulation over south Andaman sea & neighbourhood lies over north Andaman sea & neighbourhood and extends upto 3.6 km above mean sea level. This will give rise to isolated heavy rainfall over the area on Day-1.

Due to upper air circulation, the coastal Karnataka and adjoining area may experience the heavy rainfall on Day-1.

24 hour Advisory for IOP:

Andaman & Nicobar Islands,

Assam, Meghalaya, Nagaland, Manipur, Mizoram & Tripura

J & K, Punjab

Kerala, Interior Tamilnadu, Coastal Karnataka, North Interior Karnataka, South Interior Karnataka

Rayalaseema, Telangana, Coastal Andhra Pradesh

Bihar, Sikkim, GWB, SHWB

48 hour Advisory for IOP:

J & K, HP, Uttarakhand, Punjab, Haryana, E & W UP

Kerala, South Interior Karnataka, Coastal Karnataka, Interior Tamilnadu

ForNCMRWFNWPproducts:(<http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php>)

ForIMDNWPproducts:(<http://nwp.imd.gov.in/diagpronew.php>)

ForSynopticplotteddataandcharts

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

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

ForRAPIDtool:

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

LowLevelWinds

<http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR2017/?C=M;O=D>

Upperlevelwinds

<http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR2017/?C=M;O=D>

Past24hourHEMandIMRrainfall(upto03UTCoftoday)

IMR:<http://satellite.imd.gov.in/img/3Ddailyimr.jpg>

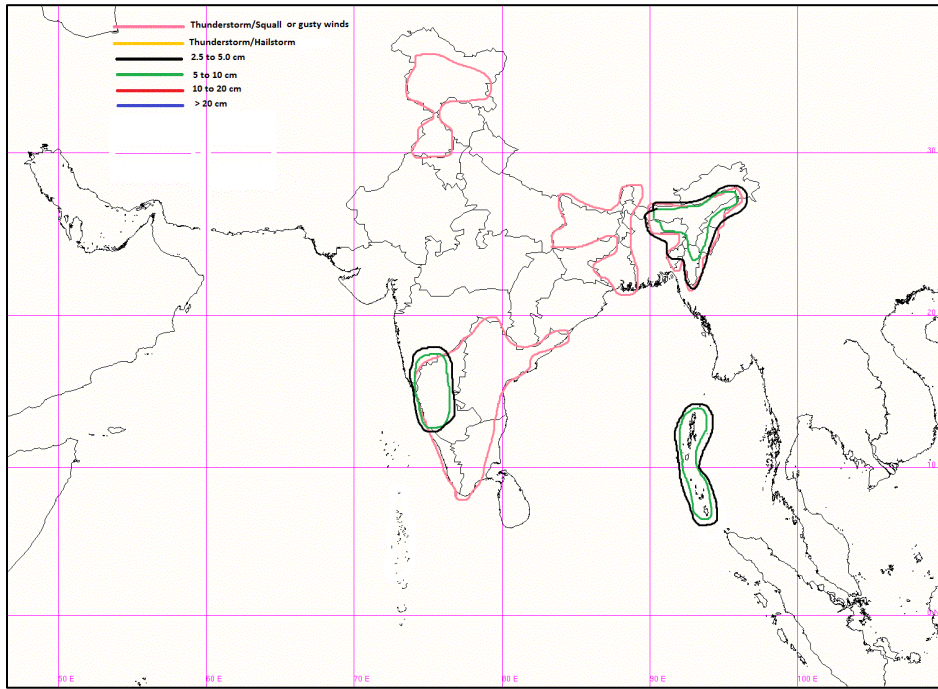
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ForRadarimagesofthepast24hoursincludingmosaicofimages:

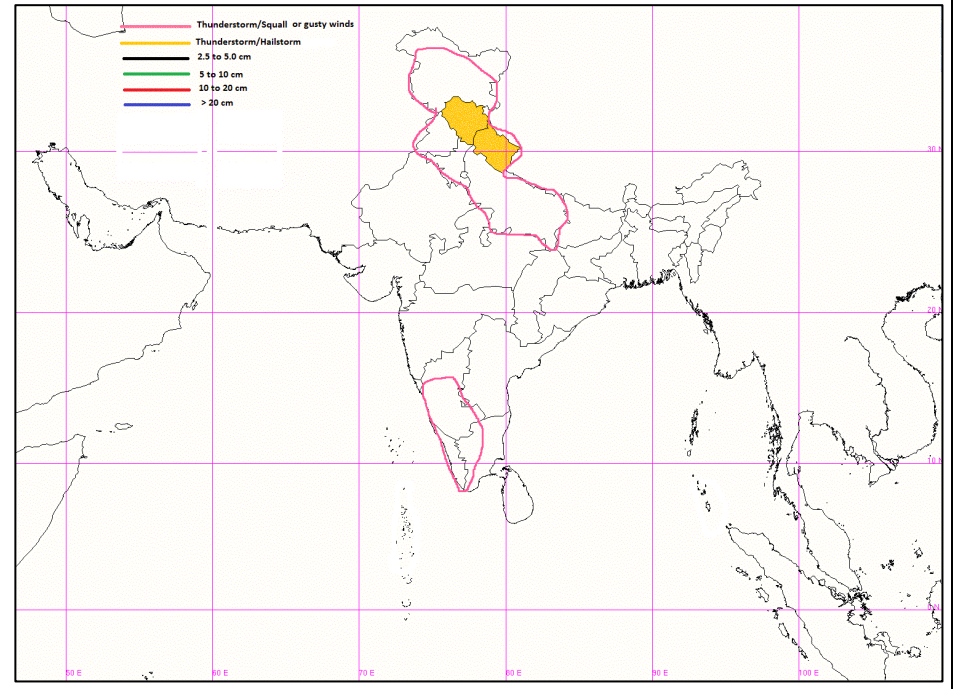
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SatellitesounderbasedT-Phigram

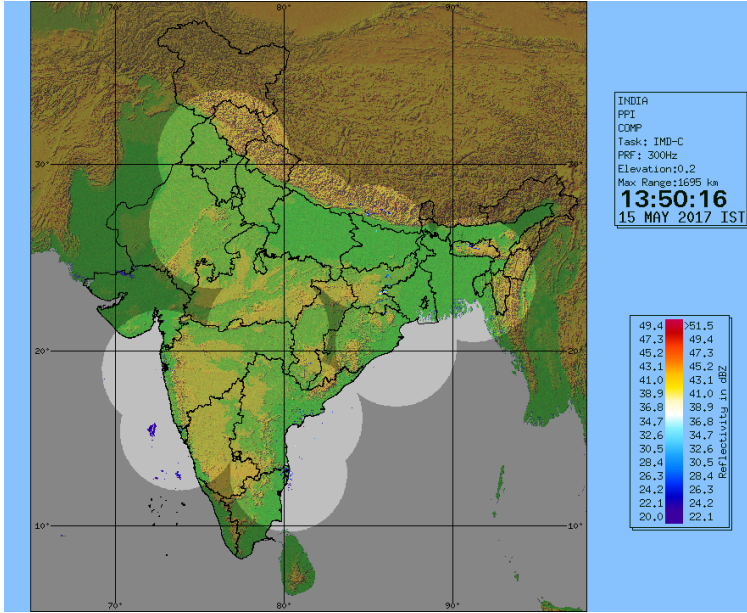
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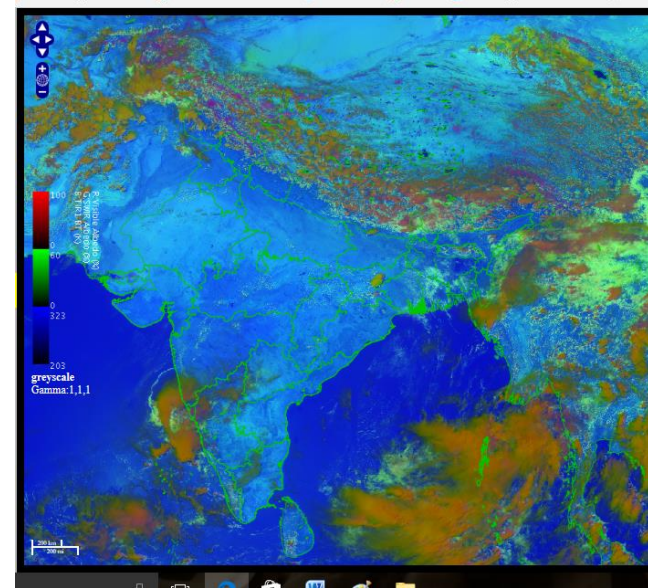
IOP Advisory for 24 hours



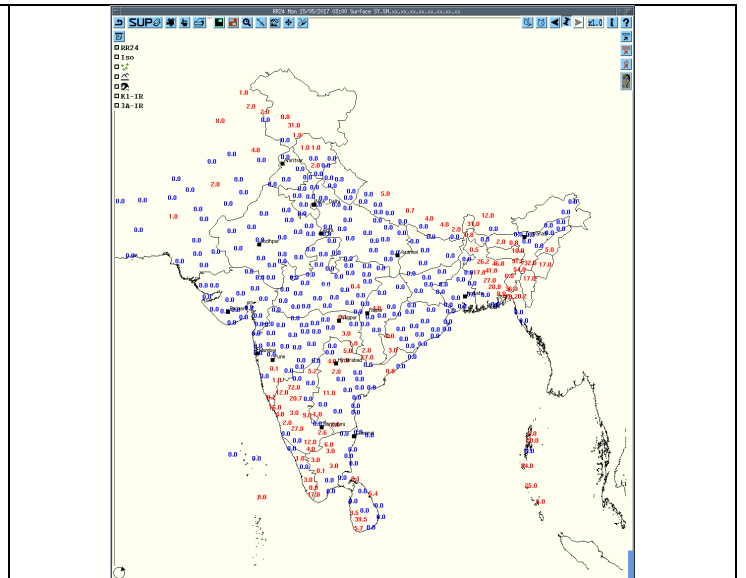
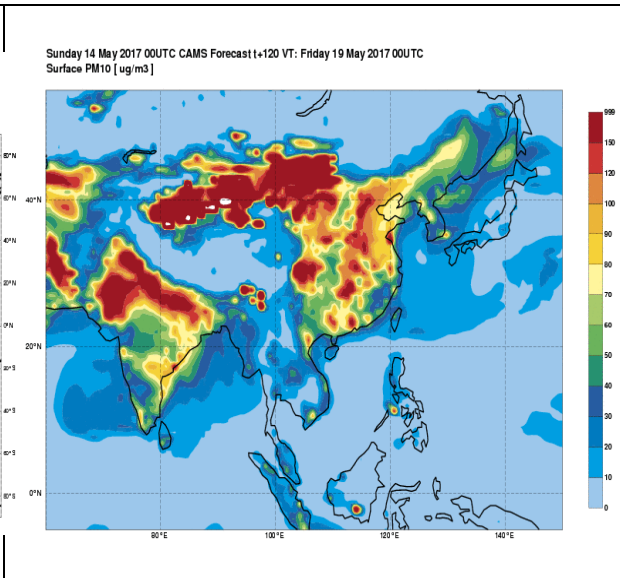
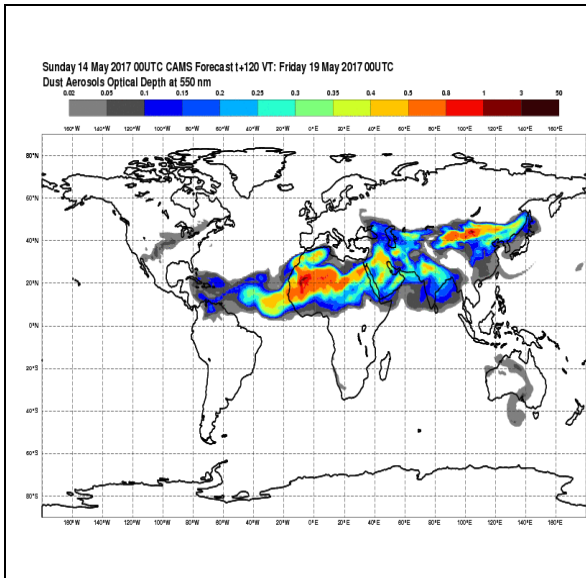
IOP Advisory for 48 hours

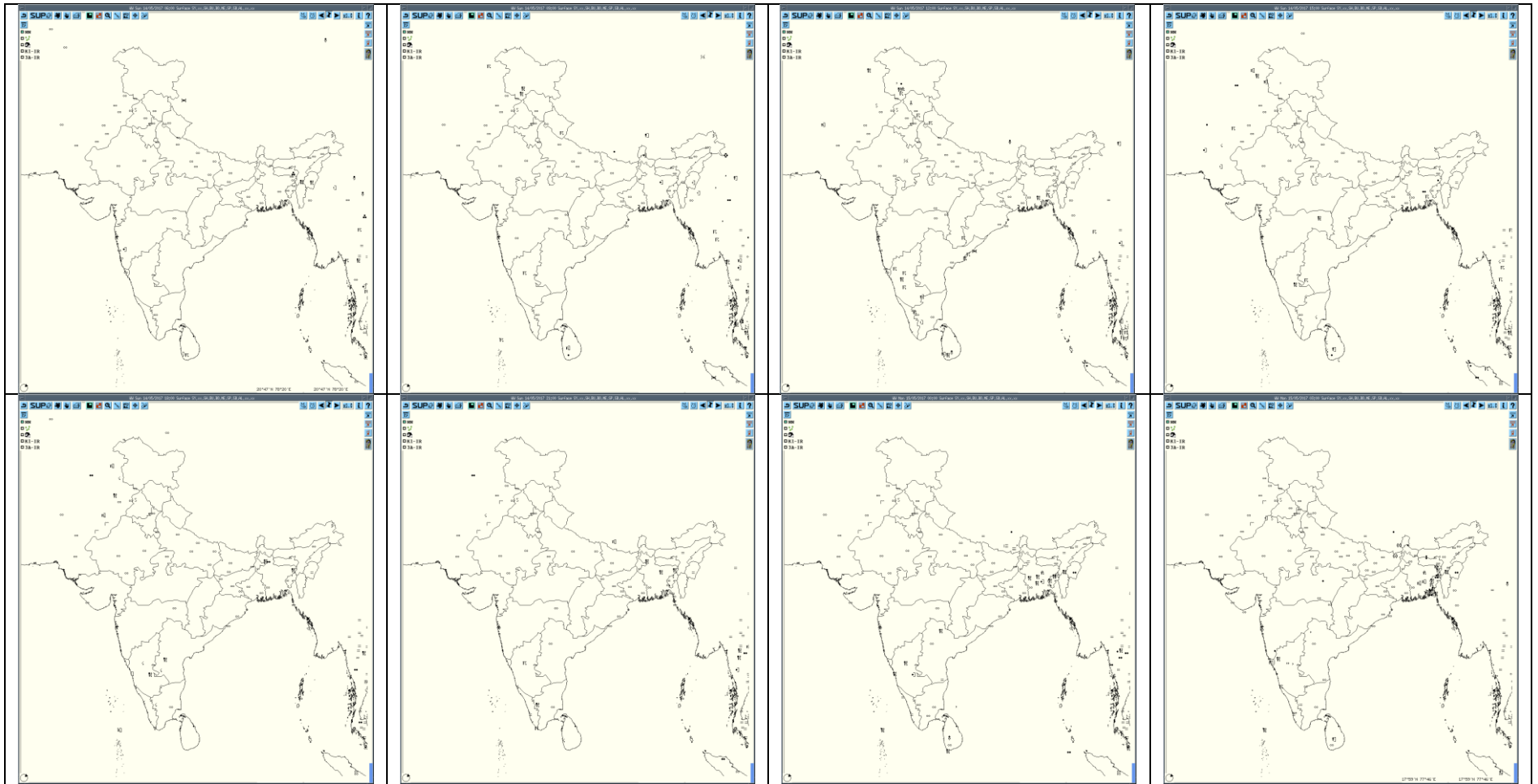


DWR Composite at 1350 hrs IST of today

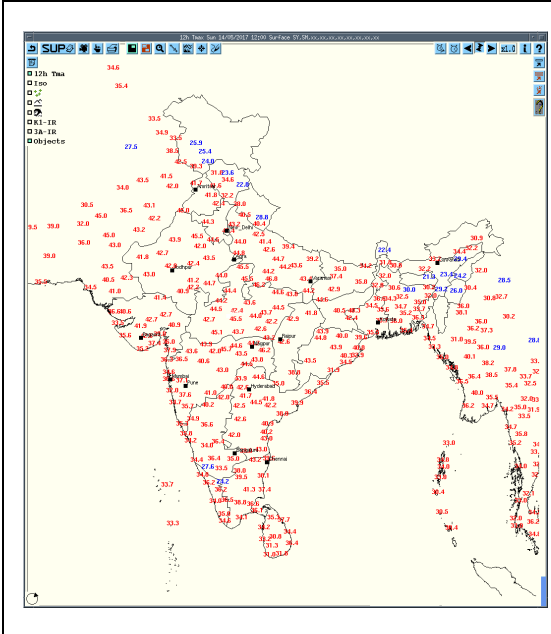


RAPID RGB Image of INSAT 3D at 1300 hrs IST of today

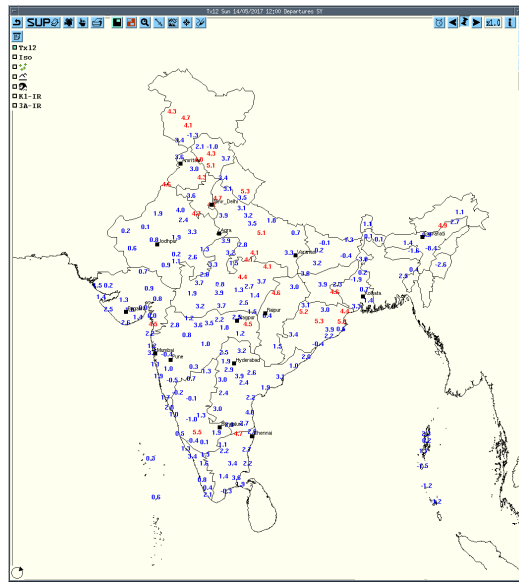




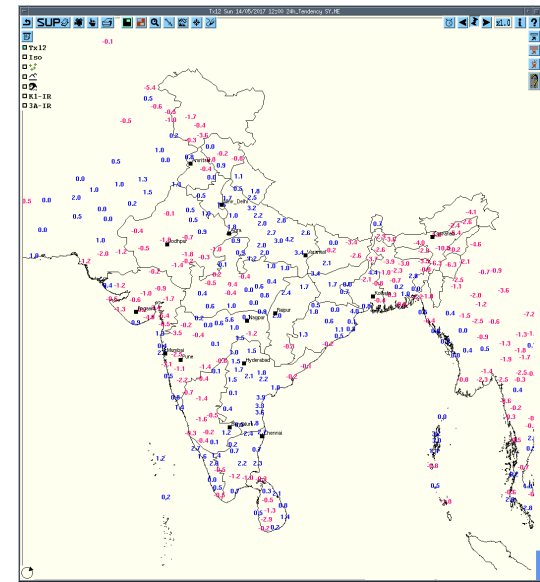
3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today



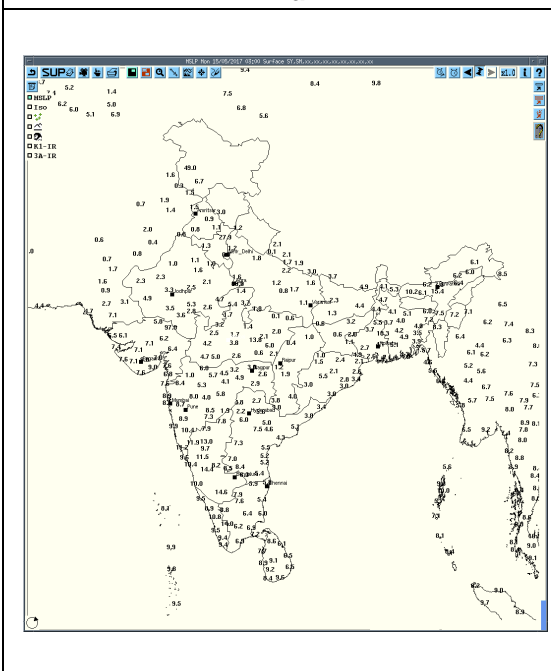
Tmax



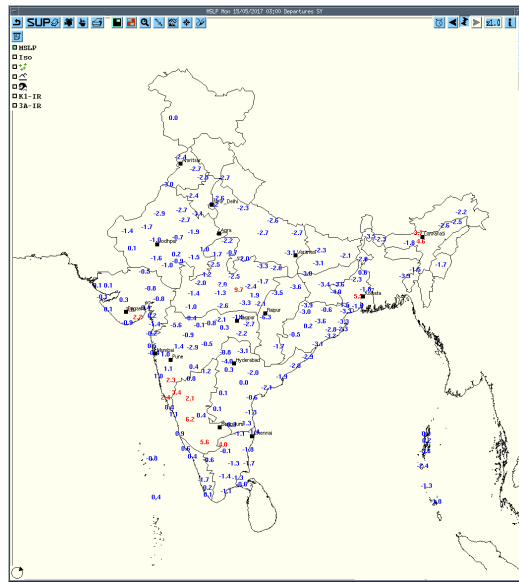
Departure Tmax



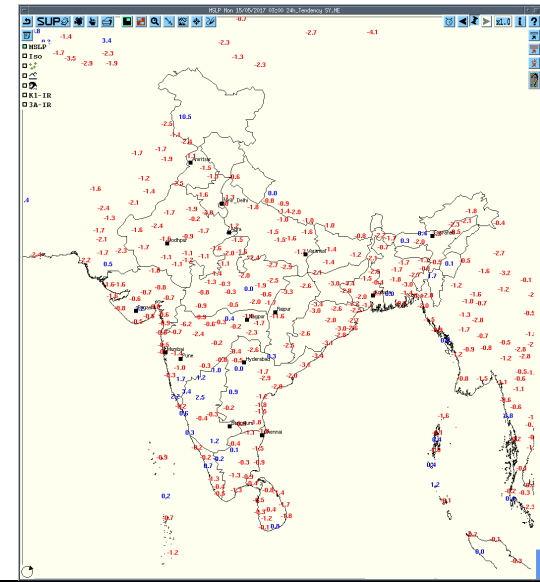
Tendency Tmax



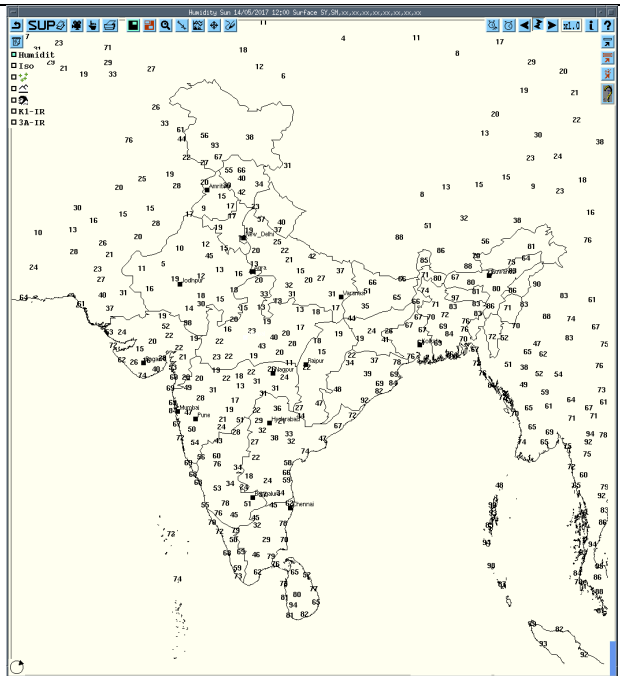
SLP



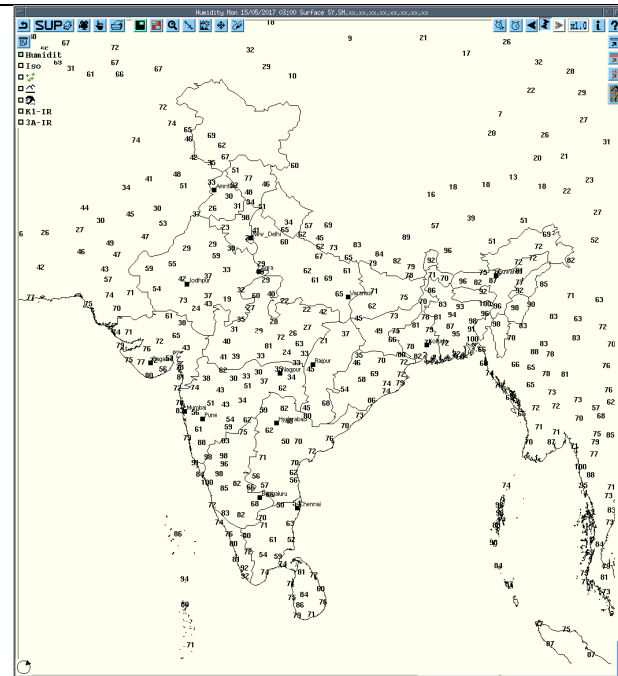
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday












RH at 03UTC today

Realized weather past 24hours (Based on SYNERGIE Products)					
Date	Time of Reporting	Name of Station Reporting	Region	STATE	Weather Event
14-05-17	0600UTC	Silchar	NE India	Assam	Thunderstorm
		Imphal	NE India	Manipur	Thunderstorm
14-05-17	0900UTC	Kukernag, Batote, Qazigund	NW India	J & K	Thunderstorm
		Mukteshwar	NW India	Uttarakhand	Thunderstorm
		Minicoy	S India	Lakshadweep & Minicoy Islands	Thunderstorm
		Gadag	S India	Karnataka	Thunderstorm
14-05-17	1200UTC	Qazigund, Banihal, Batote	NW India	J & K	Thunderstorm
		Kukernag	NW India	J & K	Thunderstorm with Hail
		Shimla	NW India	Himachal Pradesh	Thunderstorm
		Tehri	NW India	Uttarakhand	Thunderstorm
		Belgaum, Gadag, Haveri, Shimoga, Bengaluru	S India	Karnataka	Thunderstorm
		Coonoor	S India	Tamilnadu	Thunderstorm with Hail
		Kakinada, Tuni	S India	Andhra Pradesh	Thunderstorm
Jagdalpur	C India	Chhattisgarh	Thunderstorm		
14-05-17	1500UTC	Chitradurga	S India	Karnataka	Thunderstorm
		Bengaluru	S India	Karnataka	Lightening
		Tiruchirappalli	S India	Tamilnadu	Lightening
		Anantapur	S India	Andhra Pradesh	Thunderstorm
		Kalingapatnam	S India	Andhra Pradesh	Lightening
		Nagpur	C India	Maharashtra	Lightening
14-05-17	1800UTC	Coimbatore	S India	Tamilnadu	Lightening
		Minicoy	S India	Lakshadweep & Minicoy Islands	Thunderstorm
		Bengaluru, Gadag	S India	Karnataka	Lightening
		Chitradurga	S India	Karnataka	Thunderstorm
		Kurnool	S India	Andhra Pradesh	Thunderstorm
		Anantapur	S India	Andhra Pradesh	Lightening
14-05-17	2100UTC	Gadag	S India	Karnataka	Thunderstorm
		Coimbatore	S India	Tamilnadu	Thunderstorm
		Thiruvananthapuram	S India	Kerala	Thunderstorm
15-05-17	0000UTC	Ramagundam	S India	Telangana	Thunderstorm
		Gadag, Honnavar	S India	Karnataka	Thunderstorm
		Minicoy	S India	Lakshadweep & Minicoy Islands	Thunderstorm
		Agartala, Kailasahar	NE India	Tripura	Thunderstorm
		Silchar	NE India	Assam	Thunderstorm

15-05-17	0300 UTC	Mormungao	W India	Goa	Thunderstorm
		Minicoy	S India	Lakshadweep & Minicoy Islands	Thunderstorm
		Belgaum, Bajpe	S India	Karnataka	Thunderstorm
		Cherrapunjee	NE India	Meghalaya	Thunderstorm
		Kailasahar, Agartala	NE India	Tripura	Thunderstorm
		Aizawl	NE India	Mizoram	Thunderstorm
		Silchar	NE India	Assam	Thunderstorm

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

		
+ thunderstorm	+ heavy thunderstorm	sandstorm or dust storm
		
squall	hail shower	tropical storm
		
+ tornado	+ lightning	+ hurricane

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