India Meteorological Department

FDP STORM Bulletin No.93 (06-06-2017)

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

Southwest monsoon has further advanced into remaining parts of south Arabian Sea, Lakshadweep area, most parts of Kerala and some more parts of Tamilnadu and South West Bay of Bengal. The Northern Limit of Monsoon passes through Lat.12.0°N/Long.60.0°E, Lat.12.0°N/Long.70.0°E, Kannur, Uthagamandalam, Cuddalore, and Lat.13.0°N/ Long.86.0°E, Lat.17°N/ Long.90.0°E, Lat.20.0°N/Long 91.0°E, Agartala, William Nagar, Kokrajhar and Lat 27.0°N/Long 90.0°E.

The low pressure area over West Central Arabian Sea has become a well marked low pressure area over the same region with associated upper air cyclonic circulation extending upto mid tropospheric levels. It is likely to move towards Oman coast during next 24 hours.

A sheer zone runs roughly along Lat 13 .0°N between 4.5 & 5.8 Km above mean sea level.

An upper air cyclonic circulation lies over East Central Bay of Bengal and adjoining north Andaman Sea at 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 north Andhra Pradesh coast, now lies over north Andhra Pradesh coast & south Odisha and adjoining West Central Bay of Bengal between 3.1 & 3.6 Km above mean sea level.

The trough at mean sea level from northwest Uttar Pradesh to Gangetic West Bengal, now runs from northern parts of Punjab to north Coastal Odisha across Uttar Pradesh & Jharkhand and extends upto 0.9 km above mean sea level.

The upper air cyclonic circulation over East Uttar Pradesh & neighbourhood, now lies over Jharkhand & neighbourhood and extends upto 1.5 km above mean sea level.

The upper air cyclonic circulation over eastern parts of Assam & Meghalaya and neighbourhood persists and now extends upto 2.1 km above mean sea level.

The western disturbance as a trough in mid tropospheric westerlies with its axis at 3.1 km above mean sea level roughly along Longitude 62.0°E and north of latitude 30.0°N, now seen as an upper air cyclonic circulation over north Pakistan and neighbourhood between 3.1 Km & 3.6 Km above mean sea level.

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
01	06/0000 0100 0200 0300	EXT SE UTRKND ADJ NEPAL C UP ADJ SE UTRKND ADJ NEPAL C UP E UP	63 80 85 85	-	DEVELOPING
02	06/0200 0300	NE AP ADJ WC BAY DO	68 69	-	DEVELOPING

LOW LEVEL CIRCULATION (LLC):

Low level circulation over WC Arabian Sea has intensified in to vortex centred within half a degree of Lat 17.0N/62.0E. Intensity T1.0 associated broken low/medium clouds with embedded intense to very intense convection WC Arabian Sea (MINIMUM CTT MINUS 87 DEG C).

WESTERN DISTURBANCE (WD):

Scattered multi-layered clouds were seen over J & K adjoining Pakistan and over area between Lat 37.0N TO 49.5N Long 70.0E to 90.0E in association with WD over the area.

Cloud Description:

Broken low/medium clouds with embedded intense to very intense convection were seen over East Uttar Pradesh. Scattered low/medium clouds were seen over Himachal Pradesh, Uttarakhand, Southeast Rajasthan and Gujarat. Scattered low /medium clouds with embedded isolated moderate to intense convection were seen over Southwest Bihar and Northwest Jharkhand. Scattered low /medium clouds with embedded moderate to intense convection were seen over Northeast Arunachal Pradesh and adjoining WC Lakshadweep and Andaman Islands. Scattered low/medium clouds with embedded isolated weak to moderate convection were seen over J & K, Chhattisgarh; rest Bihar, Madhya Pradesh and Maharashtra,

Arabian Sea:

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

Bay of Bengal & Andaman Sea:

Scattered low/medium clouds with embedded intense to very intense convection were seen over WC EC adjoining Southeast Bay & Andaman Sea.

Past Weather:

Convection:-

Moderate to Intense convection was observed over Uttarakhand Uttar Pradesh Madhya Pradesh Maharashtra Chhattisgarh Odisha Bihar Jharkhand West Bengal Karnataka Kerala Tamilnadu Telangana & Andhra Pradesh.

OLR:-

Upto **200** wm^{-2} was observed over Vidarbha Kerala Coastal Odisha South Chhattisgarh North Gangetic West Bengal Central Jharkhand Upto **230** wm^{-2} was observed over J&K Rest Maharashtra Bihar Rest Jharkhand Rest West Bengal South Interior Karnataka Telangana South Tamilnadu Tripura. Upto **250** wm^{-2} was observed over North Uttarakhand Rest Odisha Meghalaya Rest Karnataka

Westerly Trough & Jet-Stream: No Westerly Trough & No Jet Stream observed over India.

Dynamic Features: Low to Medium wind shear is observed over India.

Negative shear tendency is observed over Gujarat Rajasthan Uttar Pradesh and Positive shear tendency is observed over rest parts of India.

A positive Vorticity field is observed over Uttar Pradesh Bihar West Bengal North Odisha.

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

Precipitation:

IMR:

Rainfall Up to **110** mm was observed over North East Uttar Pradesh, North Gangetic West Bengal. Rainfall Up to **50** mm was observed over East Uttar Pradesh, Madhya Pradesh Maharashtra, South Chhattisgarh, Jharkhand South East Odisha, Rayalaseema, North East Andhra Pradesh. Rainfall Up to **30** mm was observed over South Tamilnadu. Rainfall Up to **20** mm was observed over Kerala. Rainfall Up to **10** mm was observed over West J&K Rest Odisha Bihar Sub Himalayan West Bengal Arunachal Pradesh Tripura Telangana Rest Andhra Pradesh

HEM:.
Rainfall Up to **70** mm was observed over North East Uttar Pradesh West Madhya Pradesh Maharashtra South Chhattisgarh, South East Odisha, North Gangetic West Bengal, Sub Himalayan West Bengal South Tamilnadu.
Rainfall Up to **14** mm was observed over West J&K, North-East Bihar, Mizoram, Tripura and Rayalaseema.
Rainfall Up to **07** mm was observed over North-East States Rest Chhattisgarh Rest Odisha Rest Gangetic West Bengal Telangana Karnataka Andhra Pradesh Rest Tamilnadu.

RADAR and RAPID Observation:

DWR Composite at 1316hrs IST indicated moderate convection over Jharkhand.
RAPID RGB Satellite imagery at 1230hrs IST indicated significant convective development over J & K, Himachal Pradesh, East Uttar Pradesh, East Madhya Pradesh, South Odisha, North coastal Andhra Pradesh, Kerala Lakshadweep & Minicoy and Andaman & Nicobar Islands.

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

Higher Dust concentration was observed over north 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 IGP. It is expected to decrease in the next five days.

2. NWP MODEL GUIDANCE:

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

1. Weather Systems: The analysis based on 00 UTC show a low level trough extends from CYCIR over north Pakistan to Gangetic West Bengal. Forecasts show that the eastern part of the trough would shift southwards and a CYCIR would develop over off Odisha coast on day3.
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.
3. Low level Vorticity:-Positive Vorticity 850hPa (>12 x 10^{-1}/s): The high vorticity belts are mainly over regions of Punjab, UP, Jharkhand, Chhattisgarh and eastern part of the country.
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): Mostly over Uttar Pradesh during next 24 hours.
Lifted Index (< -2): Less than threshold value over most parts of the country except J&K and south peninsula.
Total Total Index (> 50) : Less than threshold value all over the country.
Sweat Index (> 300): Mostly all over the country.
CAPE (> 1000): Mostly over Gangetic plain and along east coast.
CIN (50-150): Mostly all over the country except Gujarat during next 24 hours.
5. Rainfall and thunderstorm activity: 10-40 mm rainfall over NE states during next five days.
10-40 mm rainfall: over J&K during next 24 hours.
10-70 mm rainfall: over south peninsula during next 24 hours.
10-70 mm rainfall: over Sub- Himalayan West Bengal, Odisha and Andhra Pradesh on day2.
10-40 mm rainfall: along west coast during next 3 days.
70-200 mm rainfall: over coastal Maharashtra and adjoining Karnataka during day4 to day10.

3. IOP ADVISORY FOR 24 and 48Hrs:

Summary and Conclusions:

Day-1 & Day-2:

Presently, an upper air cyclonic circulation lies over East Central Bay of Bengal and adjoining north Andaman Sea at 5.8 Km above mean sea level. This will give rainfall activity over Andaman and Nicobar Islands on Day-1.

The upper air cyclonic circulation over north Andhra Pradesh coast, now lies over north Andhra Pradesh coast & south Odisha and adjoining West Central Bay of Bengal between 3.1 & 3.6 Km above mean sea level, this will give rise to isolated heavy rainfall over Kerala and Coastal Karnataka on Day-1 and Day-2.

The upper air cyclonic circulation over East Uttar Pradesh & neighbourhood, now lies over Jharkhand & neighbourhood and extends upto 1.5 km above mean sea level, this will give rise to thunder squall over East UP, Bihar, Jharkhand on Day-1.

The western disturbance as a trough in mid tropospheric westerlies now seen as an upper air cyclonic circulation over north Pakistan and neighbourhood between 3.1 Km & 3.6 Km above mean sea level this will give rise to thunderstorm with hail over J&K, Himachal Pradesh, Uttrakhand, West UP on Day-1.

24 hour Advisory for IOP:

J&K, Himachal Pradesh, Uttrakhand, West UP, Punjab, Haryana
East and West Rajasthan
Kerala, Lakshadweep, Coastal Karnataka
Jharkhand, GWB
Bihar, Orissa, Vidarbha, Chhattisgarh

48 hour Advisory for IOP:

J&K, Himachal Pradesh, Uttrakhand, West UP, Punjab, Haryana
Kerala, Coastal Karnataka
Chhattisgarh
East and West Rajasthan

For NCMRWF NWP products:(http://www.ncmrwf.gov.in/HomePage/NEPS-prod-1.php)
For IMD NWP products:(http://nwp.imd.gov.in/diagpro new.php)
For Synoptic plotted data and charts
http://amssdelhi.gov.in/
http://www.amsskolkata.gov.in/
For RAPID tool:
http://rapid.imd.gov.in/
Low Level Winds
http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/LLW/MAR 2017/?C=M;O=D
Upper level winds
http://satellite.imd.gov.in/archive/INSAT-3D-IMAGER/3D-PRODUCTS/AMV/HLW/MAR 2017/?C=M;O=D
Past24hourHEMandIMRrainfall(upto03UTCoftoday)
IMR: http://satellite.imd.gov.in/img/3Ddaily imr.jpg
HEM: http://satellite.imd.gov.in/img/3Ddaily he.jpg
ForRadarimagesofthepast24hoursincludingmosaicofimages:
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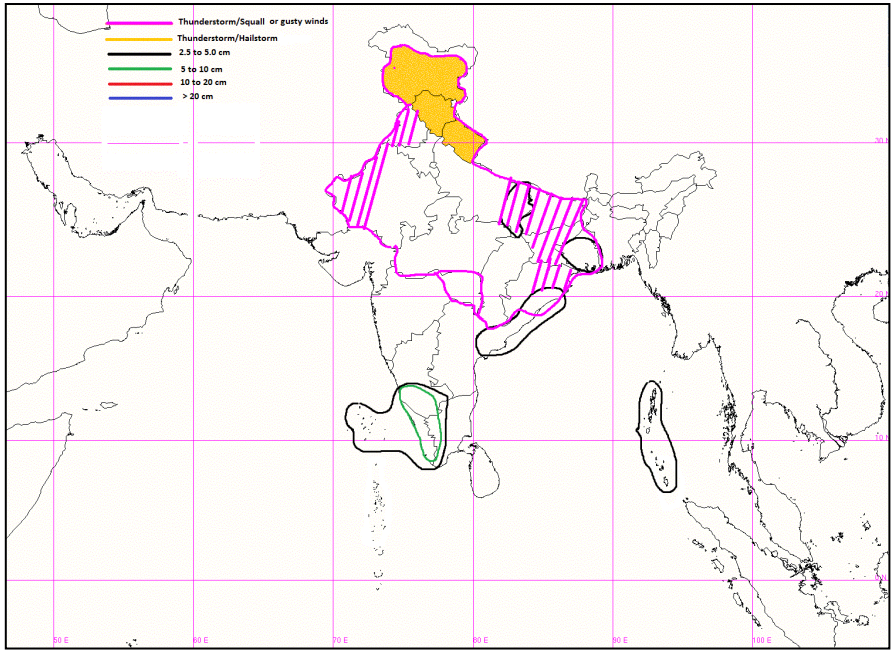
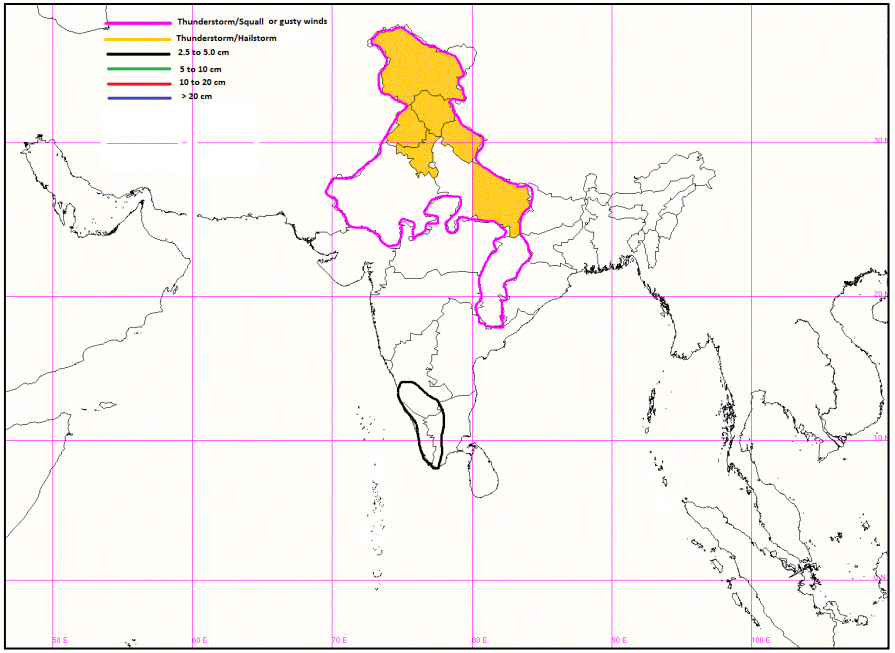
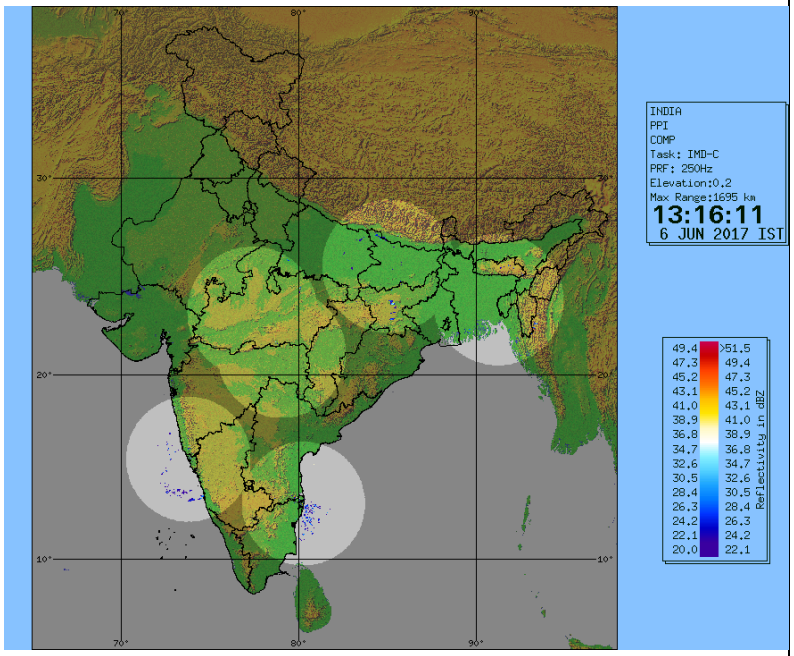
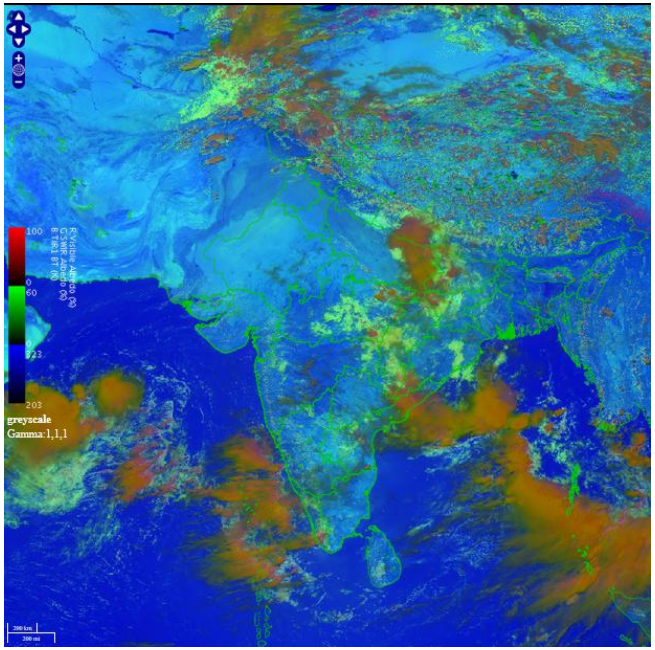
Satellite sounder based T- Phigram
http://satellite.imd.gov.in/map skm2.html

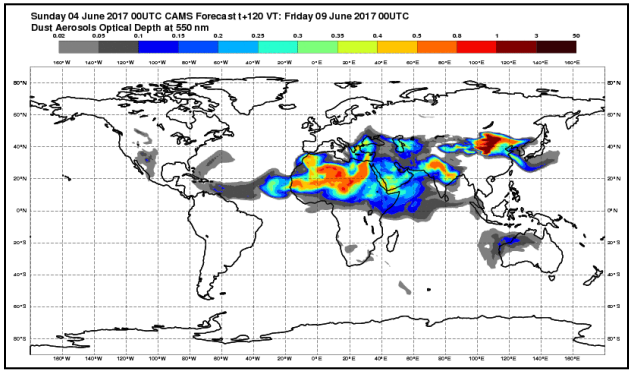


IOP Advisory for 24 hours

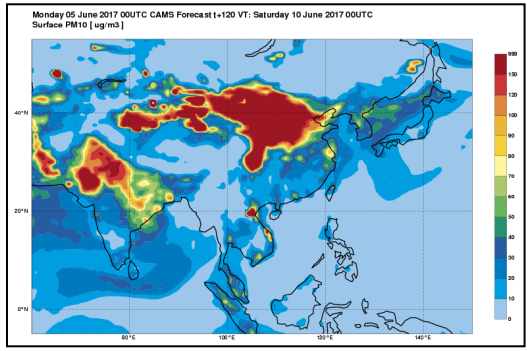


IOP Advisory for 48 hours

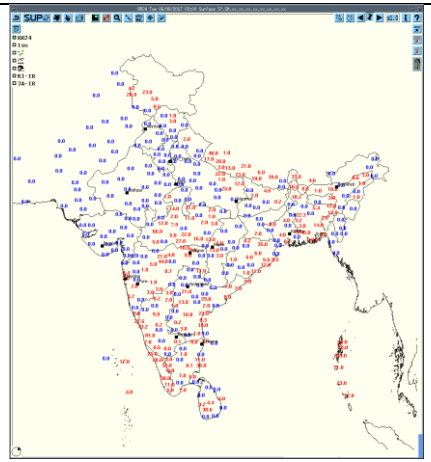
	
DWR composite at 1316 hrs IST	**RAPID RGB Satellite Imagery at 1230 hrs IST of today**



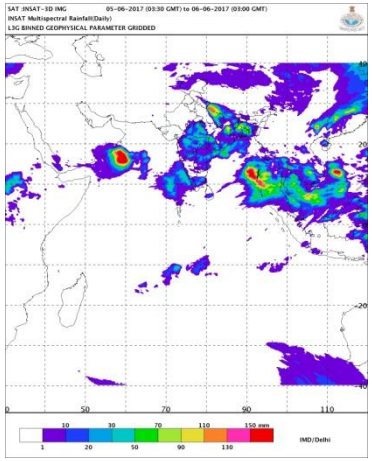
Forecast Dust Concentration for 00UTC of 9th June



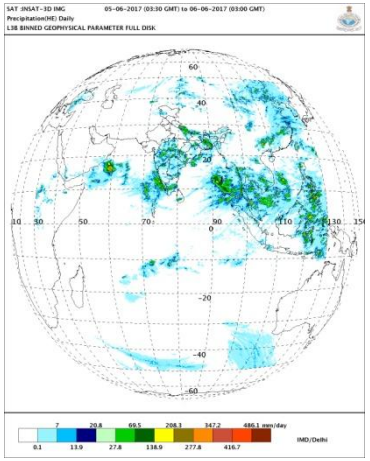
PM10 Forecast for 00UTC of 9th June



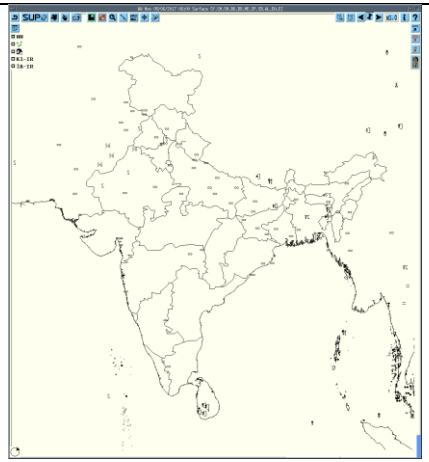
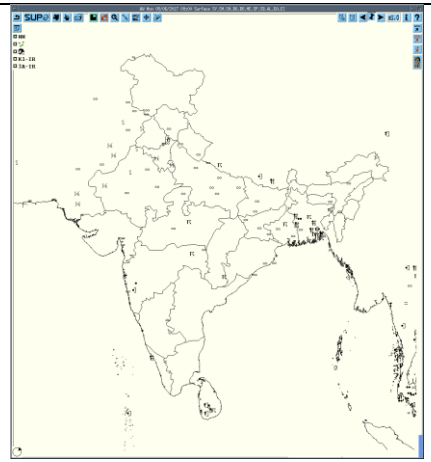
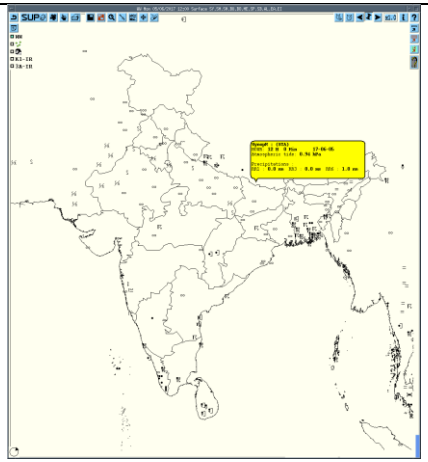
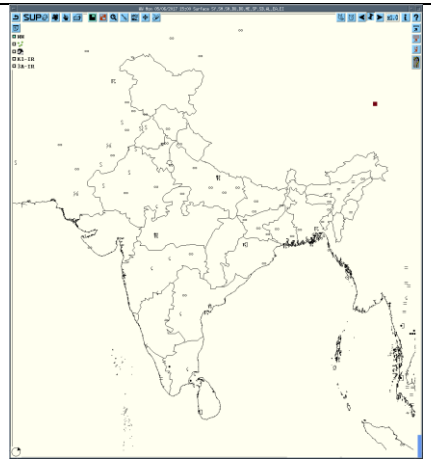
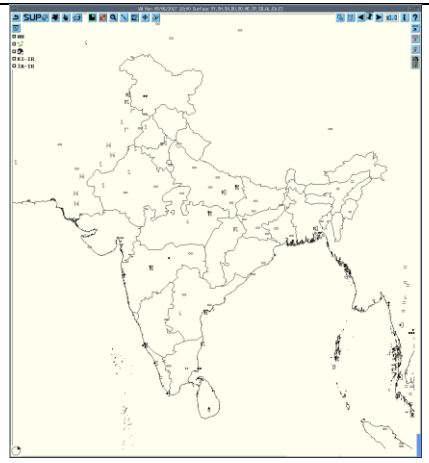
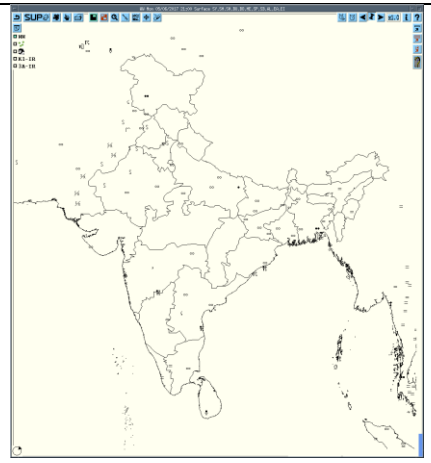
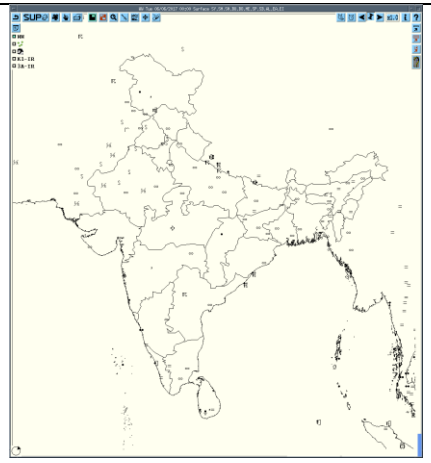
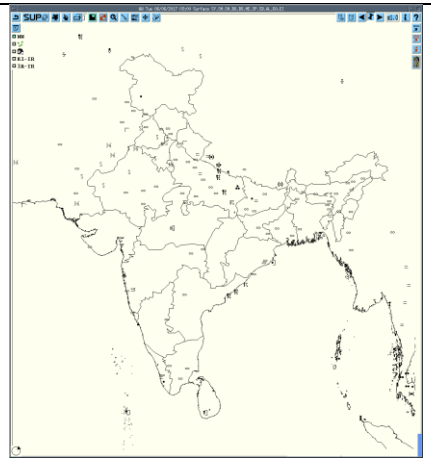
Accumulated 24 Hour rainfall (in red) recorded at 0300UTC of today



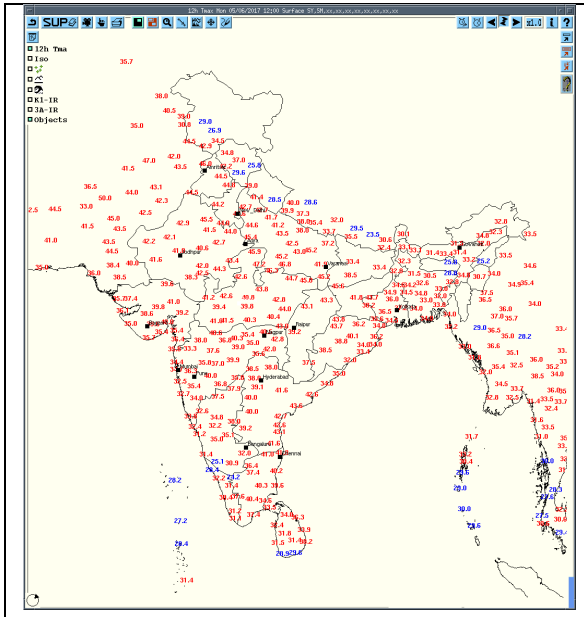
IMR Rainfall



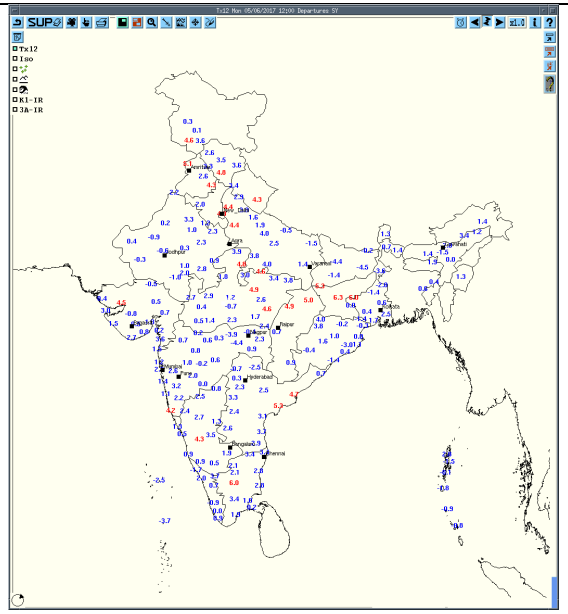
HEM Rainfall

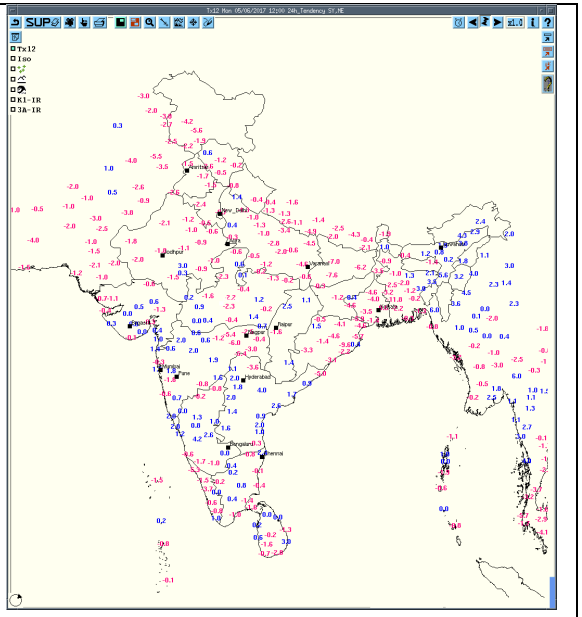
3hourly Past weather at 06,09,12,15,18,21UTC of yesterday and 00 & 03 hrs UTC of today



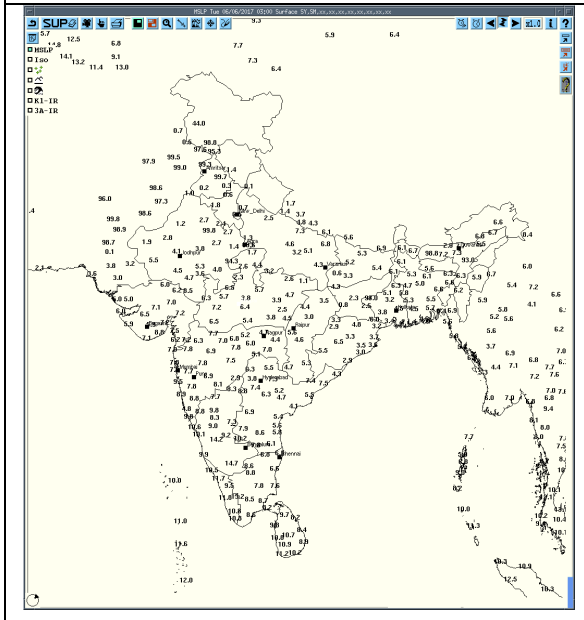
Tmax



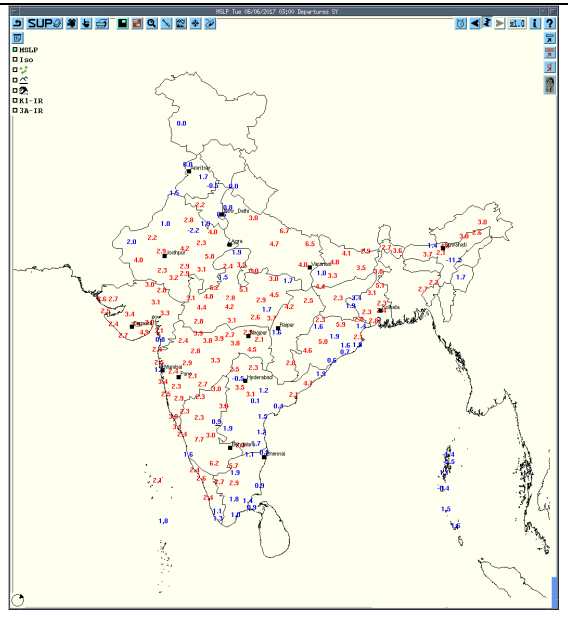
Departure Tmax



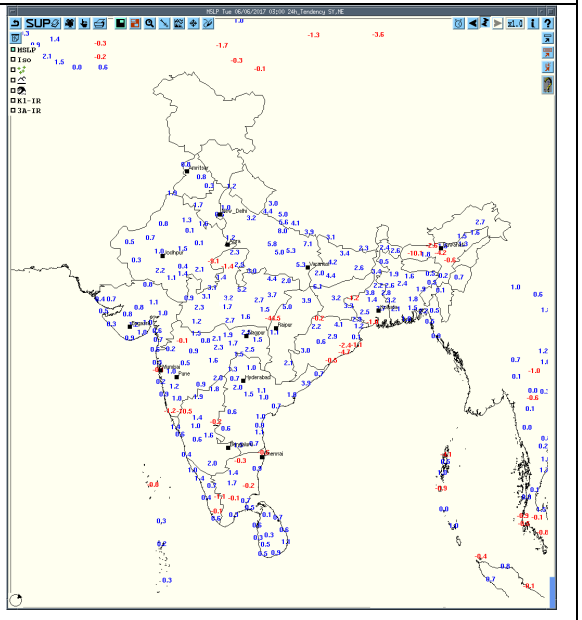
Tendency Tmax



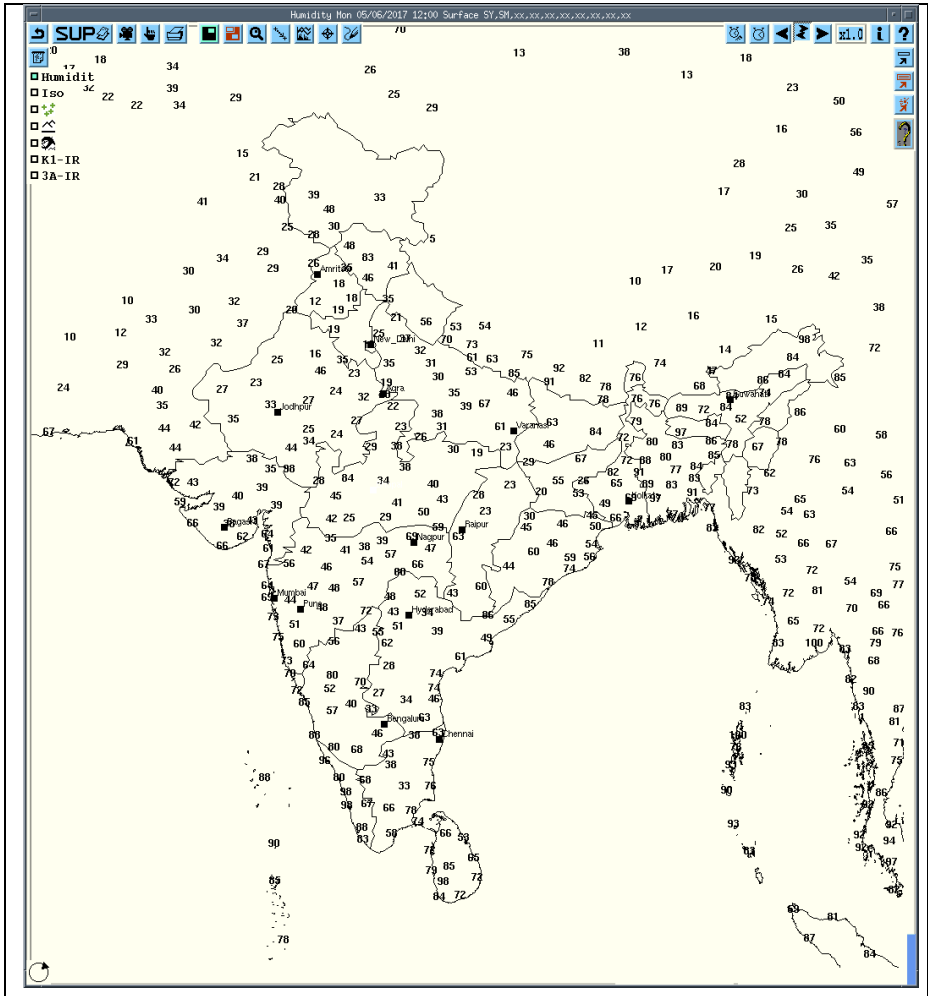
MSLP



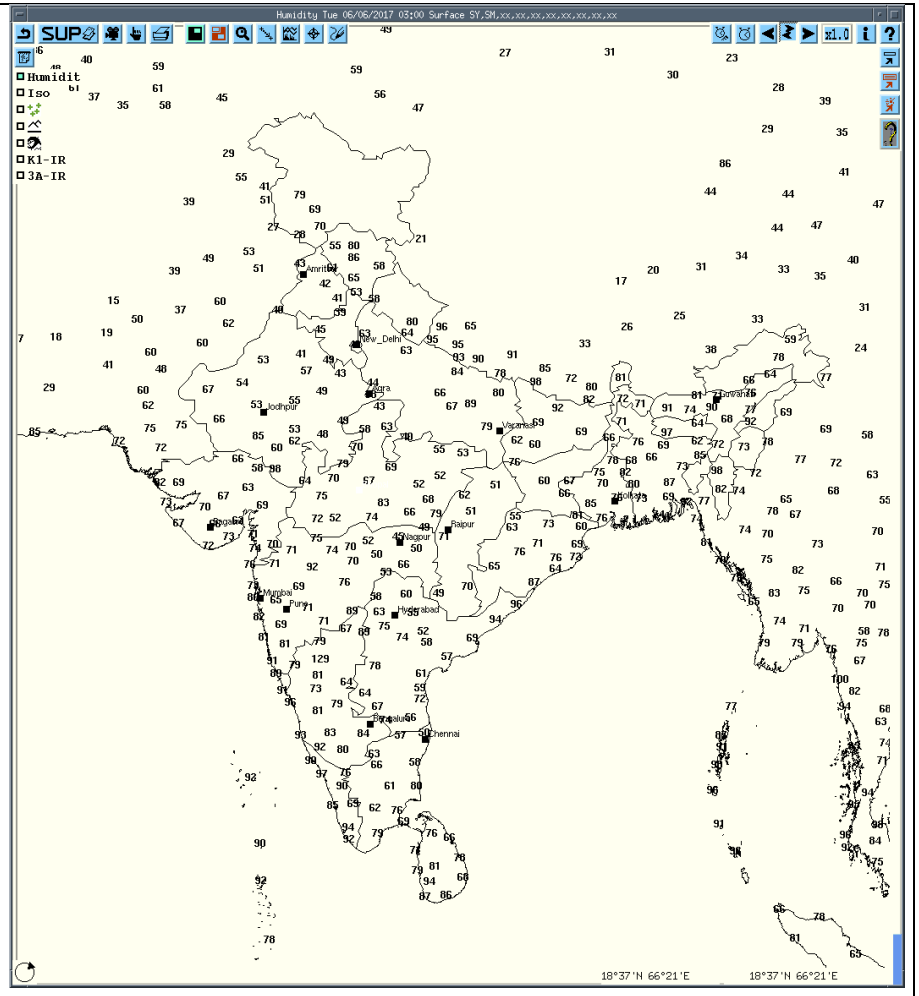
Departure MSLP



Tendency MSLP



RH at 12UTC yesterday



RH at 03UTC today

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

Realized weather past 24hours (Based on SYNERGIE Products)					
Date	**Time of Reporting**	**Name of Station Reporting**	**Region**	**STATE**	**Weather Event**
05-06-17	0600UTC	Bhagalpur	East India	Bihar	Thunderstorm
05-06-17	0900UTC	Ambala	Northwest India	Haryana	Thunderstorm
		Shanti Niketan	East India	West Bengal	Thunderstorm
		Sagar	Central India	Madhya Pradesh	Thunderstorm
		Nagpur	Central India	Vidarbha	Thunderstorm
		Jagdalpur	Central India	Chhattisgarh	Thunderstorm
		Kannur	South India	Kerala	Thunderstorm
05-06-17	1200UTC	Ranchi	East India	Jharkhand	Thunderstorm
		Shajapur	Central India	Madhya Pradesh	Thunderstorm
		Tuni, Ongole, Kavali, Tirupathi	South India	Andhra Pradesh	Thunderstorm
		Chennai, Madurai	South India	Tamilnadu	Thunderstorm
		Baje	South India	Karnataka	Thunderstorm
		Palakkad	South India	Kerala	Thunderstorm
05-06-17	1500UTC	Bahraich	Northwest India	Uttar Pradesh	Thunderstorm
		Indore	Central India	Madhya Pradesh	Thunderstorm
		Jharsuguda	East India	Odisha	Thunderstorm
		Vijayawada	South India	Andhra Pradesh	Thunderstorm
05-06-17	1800UTC	Gorakhpur, Sultanpur	Northwest India	Uttar Pradesh	Thunderstorm
		Ambikapur	Central India	Chhattisgarh	Thunderstorm
		Satna	Central India	Madhya Pradesh	Thunderstorm
		Aurangabad	West India	Maharashtra	Thunderstorm
		Bapatla	South India	Andhra Pradesh	Thunderstorm
		Baje	South India	Karnataka	Thunderstorm
		Chennai	South India	Tamilnadu	Thunderstorm
05-06-17	2100UTC	Sholapur	West India	Maharashtra	Thunderstorm
		Puri, Gopalpur	East India	Odisha	Thunderstorm
		Nellore	South India	Andhra Pradesh	Thunderstorm

Realized weather past 24hours (Based on SYNERGIE Products)					
Date	**Time of Reporting**	**Name of Station Reporting**	**Region**	**STATE**	**Weather Event**
06-06-17	0000UTC	Bhaderwah	Northwest India	J & K	Thunderstorm
		Gopalpur	East India	Odisha	Thunderstorm
		Calingapatnam, Hyderabad	South India	Andhra Pradesh	Thunderstorm
06-06-17	0300UTC	Bahraich, Sultanpur, Varanasi	Northwest India	Uttar Pradesh	Thunderstorm
		Bhopal	Central India	Madhya Pradesh	Thunderstorm
		Calingapatnam, Vishakhapatnam, Tuni	S India	Kerala	Thunderstorm

Past 24 hours DWR Report:

Radar Station name	Date	Time interval of observation (UTC)	Organization of the cells (Isolated single cells/multiple cells/ convective regions/ squall lines) with height of 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	06/06/17	050302 - 050622	Multiple cells formed NNE OF DWR Agartala at a distance of 150km with Maximum cell Height 11.7 **km at 0302 UTC** and maximum reflectivity 36.50 **dBZ**	Formed NNE at 150 km respectively of DWR and moves West wards with around 40 kmph.	Cells dissipated at 0622 UTC over 150km in NE Direction.	N/A	N/A
		050442 - 051352	Multiple Cells WNW of DWR Agartala with maximum cell Height 10.5 **km at 0442 UTC** and maximum reflectivity 33 **dBZ at 04422 UTC.**	Formed 170 km W of DWR and moved East wards at around 35kmph	Cells dissipated at 01352 UTC over 120km West.	N/A	N/A
Srinagar	06/06/2017	05 JUNE 03Z to 06JUNE03Z(24hrs)	A single cell enveloped in south of DWR at 0850 UTC and moved SE direction Multiple cells developed in all direction of DWR at 1050 UTC and moved in in East and SE direction	Moved across the valley towards East South east direction	Thunderstorm observed at Srinagar Pahalgam, Kupwara, Banihal and Batote and Bhaderwah	Light rain at isolated places	All hilly districts
Patiala	06/06/17	05 JUNE 0300 UTC- TO 0600 UTC	NO ECHO	----------	-------		
		05 JUNE 0600 UTC- TO 0900 UTC	NO ECHO	----------	--------		
		05 JUNE 0900 UTC- TO 1200 UTC	Multiple cells Max=56.5 Ht.=10-11km				
		05 JUNE 1200 UTC TO 06 JUNE 0300 UTC	NO ECHO		----------		
		05 JUNE 0300 UTC- TO 0600 UTC	NO ECHO	----------	-------		

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
Paradeep	5/06/17	0300-1000 UTC	Convective regions seen in the southern sector of the RADAR between 70-240 and with av. Reflectivity value of 35 dBZ and heights exceeding 14 km.	Position: Southern sector of radar at a distance of 0-250 km approx. Movement: Nly	NIL	TS with Rain	Khorda, Puri, Ganjam and Nayagarh.
Jaipur	06/06/17	1102-1512 UTC	Multiple cells with average height of 5 km & maximum reflectivity 57.50 dBZ	Multiple Cells develop 1102 to 1512 UTC of 05/06/2017 towards SSE, SE of Jaipur and moved to SE Wards at speed 25 - 30 km/hr	Cells starts forming from 1102 UTC of 05/06/2017 AT SSE, SE of Jaipur and reaches maximum reflectivity during 1102-1432 UTC and died down 1512 UTC.	Thunderstorm/rain at isolate places	Kota, Baran, Jhalawar
	06/06/17	1512-1752 UTC	Multiple cells with average height of 4.3 km & maximum reflectivity 55.50 dBZ	Multiple Cells develop 1512 to 1752 UTC of 05/06/2017 towards SE of Jaipur and moved to SE Wards at speed 25 -30 km/hr	Cells starts forming from 1512 UTC of 05/06/2017 AT SE of Jaipur and reaches maximum reflectivity during 1512 to 1732 UTC and died down 1822 UTC.	Thunderstorm/rain at isolate places	Kota, Baran, Jhalawar

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
DWRVSK	05/06/17	0300 UTC 0600 UTC	Multiple cells at NE and EAST with max reflectivity 58 dbz and average height 14kms	SW ly	Matured stage.	-	-
DWRVSK	05/06/17	0600 UTC 0900 UTC	Multiple cells AT NW and NE with Max height of 16 km of maximum reflectivity 62dBz.	NW 208 KMS moving Southerly direction	CB Cells are fully matured.	-	-
DWRVSK	05/06/17	0900 UTC 1200 UTC	Multiple cells AT NW and with Max height of 16 km of maximum reflectivity 62dBz.	NW 77 KMS (nearest to radar)moving South-westerly direction	CB Cells are fully matured.	-	-
DWRVSK	05/06/17	1200 UTC 1500 UTC	Multiple cells towards NW with Max height of 14 km of maximum reflectivity 55dBz.	NW 120 Km and moving South-westerly direction	CB Cells are dissipating from 1331 UTC	-	-
DWRVSK	06/06/17	1800 UTC 0000 UTC	Convective cloud region at NE and N with max height 16 Km and 56 dbz	NE 38 Km (Very nearer to radar) and moving SEly	Convective clouds are in maturing stage and very close to station with max reflectivity 56dbz.	Slight rain with thunderstorms-	-
DWRVSK	06/06/17	0000 UTC 0300 UTC	Highly convictive clouds over NE sector with max reflectivity 60dbz and average height 14kms.	Continuous formation since last observation and moving SE ly .	Likely to be intensified .	Slight rain with moderate thunderstorms.-	-
DWR BHUJ	05/06/2017	0430 TO 1200	NIL	-	NIL	NIL	NIL

Radar Station name DWR Machilipatnam	Date	Time interval of observation (UTC)	Organization of the cells (Isolated single cells/multiple cells/ convective regions/ squall lines) with height of 20dBZ echo top and maximum reflectivity	Formation w.r.t radar station and Direction of movement	Remarks	Associated severe weather if any	Districts affected
	03Z of 05.06.2017 to 03Z of 06.06.2017	0841to 1351 UTC	Isolated Multiple cells average height of 12 km with maximum reflectivity of 66 dBZ Malkangir)	NE (250KM) and moving SW ly direction with average speed of 25.0kmph	Cell started forming at0841UTC, at NE(250km) from Radar the maximum reflectivity during 0841 to 1341 UTC and died down at 1351TC	Possibility of Thunder storm with Hail and rain with moderate winds.	Malkangir, Visakhapatnam, East Godavari, Bhadradri Kothagudum Districts.
	03Z of 05.06.2017 to 03Z of 06.06.2017	0851to 1301 UTC	Isolated Multiple cells average height of 9.5 km with maximum reflectivity of58.5dBZ	SW (120KM) and moving SW ly direction with average speed of 12.5kmph	Cell started forming at 0851UTC, at SW(120km) from Radar the maximum reflectivity during 0851 to 1251 UTC and died down at 1301UTC	Possibility of Thunder storm with rain and winds.	Prakasam, Nellore Districts.
	03Z of 05.06.2017 to 03Z of 06.06.2017	1111to 2121 UTC	Convective region (Krishna, Guntur, Prakasam, Nellore, Kurnool) average height of 12 km with maximum reflectivity are of 60.5dBZ,63.5dBZ,64.5dBZ.	NW (22KM) and moving SW ly direction with average speed of 35.0kmph	Cell started forming at1111UTC, at NW(22km) from Radar the maximum reflectivity during 1741 to 2051 UTC and died down at 2121UTC	Possibility of Thunder storm with Hail and rain with moderate winds.	Krishna, Guntur, Prakasam, Nellore, Kurnool Districts.
	03Z of 05.06.2017 to 03Z of 06.06.2017	1021to 1301 UTC	Isolated Multiple cells average height of 11.5 km with maximum reflectivity of57.5dBZ	W (240KM and moving E ly direction with average speed of 28 kmph	Cell started forming at 1021UTC, at W(240km) from Radar the maximum reflectivity during 1021 to 1251 UTC and died down at 1301UTC	Possibility of Thunder storm with rain and winds.	Kurnool and Nalgonda Districts.
	03Z of 05.06.2017 to 03Z of 06.06.2017	0051to 0251 UTC	Isolated Multiple cells average height of 9.5 km with maximum reflectivity of 59dBZ	NE (240KM) and moving SW ly direction with average speed of 35.0kmph	Cell started forming at 0051UTC, at NE(240km) from Radar the maximum reflectivity during 0301 to 0251 UTC and continued for the next day	Possibility of Thunder storm with rain and winds.	Visakhapatnam and East Godavari Districts.

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
DWR KOLKATA	05-06-2017	0301-0411 UTC	NIL	NIL	NO ECHO	NIL	NIL
		0421-1440 UTC	i). Multi cells developed in a big cell system with maximum reflectivity of 59.0 dBz at 0752 UTC and maximum height more than 18.89 km at 0631 UTC	NNE (223 km) moving towards SE-ly	Multi cells developed at 0421 UTC and Marge with ii) cell at 0911 UTC in ESE at a distance of 137.2 km from radar.	Thunderstorm / Squall /Hail / Rain	N/A
		0521- 1440 UTC	ii). Single cell developed in a multi cells system with maximum reflectivity of 60.5 dBz at 0712 UTC and maximum height more than 20.44 km at 0731 UTC	NNW (248 km) moving towards SE-ly	Single cells developed at 0521 UTC and Dissipated at 1440 UTC in ESE at a distance of 211.3 km from radar.	Thunderstorm / Squall /Hail / Rain	N/A
		1031 – 1602 UTC	Single cell developed in a multi cells system with maximum reflectivity of 69.5 dBz at 1241 UTC and maximum height more than 16.67 km at 13.02 UTC	WNW (248.9 km) moving towards SE-ly	Single cells developed at 1031 UTC and Dissipated at 1602 UTC in SW at a distance of 83.0 km from radar.	Thunderstorm / Squall /Hail / Rain	N/A
Kolkata	05-06-2017	1611-2351 UTC	NIL	NIL	NO ECHO	NIL	NIL
	06-06-2017	0001-0301 UTC	NIL	NIL	NO ECHO	NIL	NIL