



REGIONAL SPECIALISED METEOROLOGICAL CENTRE-TROPICAL CYCLONES, NEW DELHI SPECIAL TROPICAL WEATHER OUTLOOK

DEMS-RSMC TROPICAL CYCLONES NEW DELHI DATED 12.09.2024

SPECIAL TROPICAL WEATHER OUTLOOK FOR NORTH INDIAN OCEAN (THE BAY OF BENGAL AND THE ARABIAN SEA) VALID FOR NEXT 168 HOURS ISSUED AT 1515 UTC OF 12.09.2024 BASED ON 1200 UTC OF 12.09.2024.

SUB: DEPRESSION OVER CENTRAL UTTAR PRADESH

THE DEPRESSION OVER SOUTHWEST UTTAR PRADESH AND NEIGHBOURHOOD MOVED EAST-NORTHEASTWARDS WITH A SPEED OF 10 KMPH DURING PAST 6 HOURS AND LAY CENTRED AT 1200 UTC OF TODAY, THE 12TH SEPTEMBER OVER CENTRAL UTTAR PRADESH NEAR LATITUDE 27.5°N AND LONGITUDE 79.3°E, ABOUT 70 KM SOUTHWEST OF SHAHJAHANPUR(42266) 90KM WEST OF HARDOI (42271), 100 KM SOUTH OF BAREILLY (42189),130 KM EAST-SOUTHEAST OF ALIGARH (42262) AND 130 KM EAST-NORTHEAST OF AGRA(42261).

IT IS LIKELY TO CONTINUE TO MOVE EAST-NORTHEASTWARDS AND MAINTAIN ITS INTENSITY TODAY, THE 12TH SEPTEMBER AND WEAKEN GRADUALLY THEREAFTER FROM TOMORROW, THE 13TH SEPTEMBER. THE SYSTEM IS UNDER CONTINUOUS SURVEILLANCE OF DOPPLER WEATHER RADARS AT DELHI AND LUCKNOW.

AS PER INSAT 3DR IMAGERY AT 1200 UTC, THE CONVECTIVE CLOUDS ARE SHEARED TOWARDS NORTHEAST UNDER THE INFLUENCE OF APPROACHING WESTERLY TROUGH IN THE MIDDLE AND UPPER TROPOSPHERIC LEVELS. ASSOCIATED SCATTERED TO BROKEN LOW & MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION OVER NORTH WEST HIMACHAL PRADESH, EAST UTTARAKHAND, UTTAR PRADESH, NORTH MADHYA PRADESH WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 70-93°C AND MODERATE TO INTENSE CONVECTION OVER REST HIMACHAL PRADESH, WEST UTTARAKHAND, EAST HARYANA, DELHI, WEST CENTRAL & EAST RAJASTHAN, SOUTH MADHYA PRADESH WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 50-70°C.

ASSOCIATED MAXIMUM SUSTAINED WIND SPEED (MSW) IN ASSOCIATION WITH THE SYSTEM IS 20 KTS GUSTING TO 30 KTS. ESTIMATED CENTRAL PRESSURE IS 993 HPA. AT 1200 UTC, THE LOWEST MEAN SEA LEVEL PRESSURE 993.9 HPA IS RECORDED AT SHAHJAHANPUR (42266).

REMARKS:

MADDEN JULIAN OSCILLATION (MJO) INDEX IS CURRENTLY IN PHASE 5 WITH AMPLITUDE CLOSE TO 1. IT IS LIKELY TO CONTINUE IN SAME PHASE DURING NEXT 2-3 DAYS. THUS, MJO WOULD SUPPORT ENHANCEMENT OF CONVECTIVE ACTIVITY OVER NORTHERN PART OF INDIA.

THE LOW LEVEL CONVERGENCE IS ABOUT $30 \times 10^{-5} \text{ S}^{-1}$ AROUND THE SYSTEM AREA. UPPER LEVEL DIVERGENCE IS ABOUT $30 \times 10^{-5} \text{ S}^{-1}$ AROUND SYSTEM AREA. THE WIND SHEAR IS MODERATE (10-15 KT) OVER SYSTEM AREA AND HIGH (>20) TO THE NORTH AND ALSO SOUTH OF SYSTEM AREA. VORTICITY AT 850 HPA LEVEL IS AROUND $200 \times 10^{-5} \text{ S}^{-1}$ OVER

SYSTEM AREA WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL. CURRENT ENVIRONMENTAL CONDITONS INDICATE THAT THE DEPRESSION OVER CENTRAL UTTAR PRADESH IS LYING IN A MODERATELY FAVOURABLE ENVIRONMENT AND WILL BE MOVING EAST-NORTHEASTWARDS AND WEAKEN GRADUALLY FROM TOMORROW.

MOST OF THE MODELS ARE INDICATING THAT THE SYSTEM WILL MAINTAIN ITS INTENSITY TODAY AND GRADUALLY WEAKEN FROM TOMORROW. IN VIEW OF ALL THE ABOVE, IT IS LIKELY TO MOVE EAST-NORTHEASTWARDS AND MAINTAIN ITS INTENSITY TODAY, THE 12TH SEPTEMBER AND WEAKEN GRADUALLY THEREAFTER FROM TOMORROW, THE 13TH SEPTEMBER.

NEXT UPDATE IN ASSOCIATION WITH THIS SYSTEM WILL BE ISSUED AT 2100 UTC OF TODAY, THE 12TH SEPTEMBER.

BAY OF BENGAL:

THE UPPER AIR CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH AND NEIGHBOURHOOD PERSISTED OVER THE SAME REGION AT 1200 UTC OF TODAY, THE 12TH SEPTEMBER 2024. UNDER ITS INFLUENCE, A LOW PRESSURE AREA IS LIKELY TO FORM OVER COASTAL BANGLADESH AND ADJOINING NORTH BAY OF BENGAL DURING NEXT 24 HOURS. THEREAFTER, IT IS LIKELY TO MOVE SLOWLY WEST-NORTHWESTWARDS AND CONCENTRATE INTO A DEPRESSION OVER COASTAL WEST BENGAL AND ADJOINING NORTHWEST BAY OF BENGAL DURING SUBSEQUENT 48 HOURS.

RECENT INSAT SATELLITE IMAGERY INDICATES THE LOW LEVEL CYCLONIC CIRCULATION OVER SOUTHEAST BANGLADESH AND NEIGHBOURHOOD AT 1200 UTC OF TODAY THE 12TH SEPTEMBER 2024. ASSOCIATED SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH EMBEDDED INTENSE TO VERY INTENSE CONVECTION LAY OVER EAST GANGETIC WEST BENGAL, SOUTH BANGLADESH, SOUTH TRIPURA, SOUTH MIZORAM, NORTH AND ADJOINING CENTRAL BAY OF BENGAL, ARAKAN COAST AND MYANMAR WITH MINIMUM CLOUD TOP TEMPERATURE OF MINUS 80 TO 93°C. SCATTERED TO BROKEN LOW AND MEDIUM CLOUDS WITH INTENSE TO VERY INTENSE CONVECTION LAY OVER ANDAMAN SEA, GULF OF MARTABAN AND TENASSERIM COAST. SCATTERED LOW AND MEDIUM CLOUDS WITH EMBEDDED ISOLATED WEAK TO MODERATE CONVECTION LAY OVER REST OF BAY OF BENGAL.

THE LOW LEVEL CONVERGENCE IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR. UPPER LEVEL DIVERGENCE IS ABOUT $20 \times 10^{-5} \text{ S}^{-1}$ OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR. THE WIND SHEAR IS LOW TO MODERATE (5-15 KT) OVER COASTAL BANGLADESH & NEIGHBOURHOOD. VORTICITY AT 850 HPA LEVEL IS AROUND $100 \times 10^{-5} \text{ S}^{-1}$ OVER NORTHEAST BAY OF BENGAL & ADJOINING MYANMAR WITH VERTICAL EXTENSION UPTO 200 HPA LEVEL.

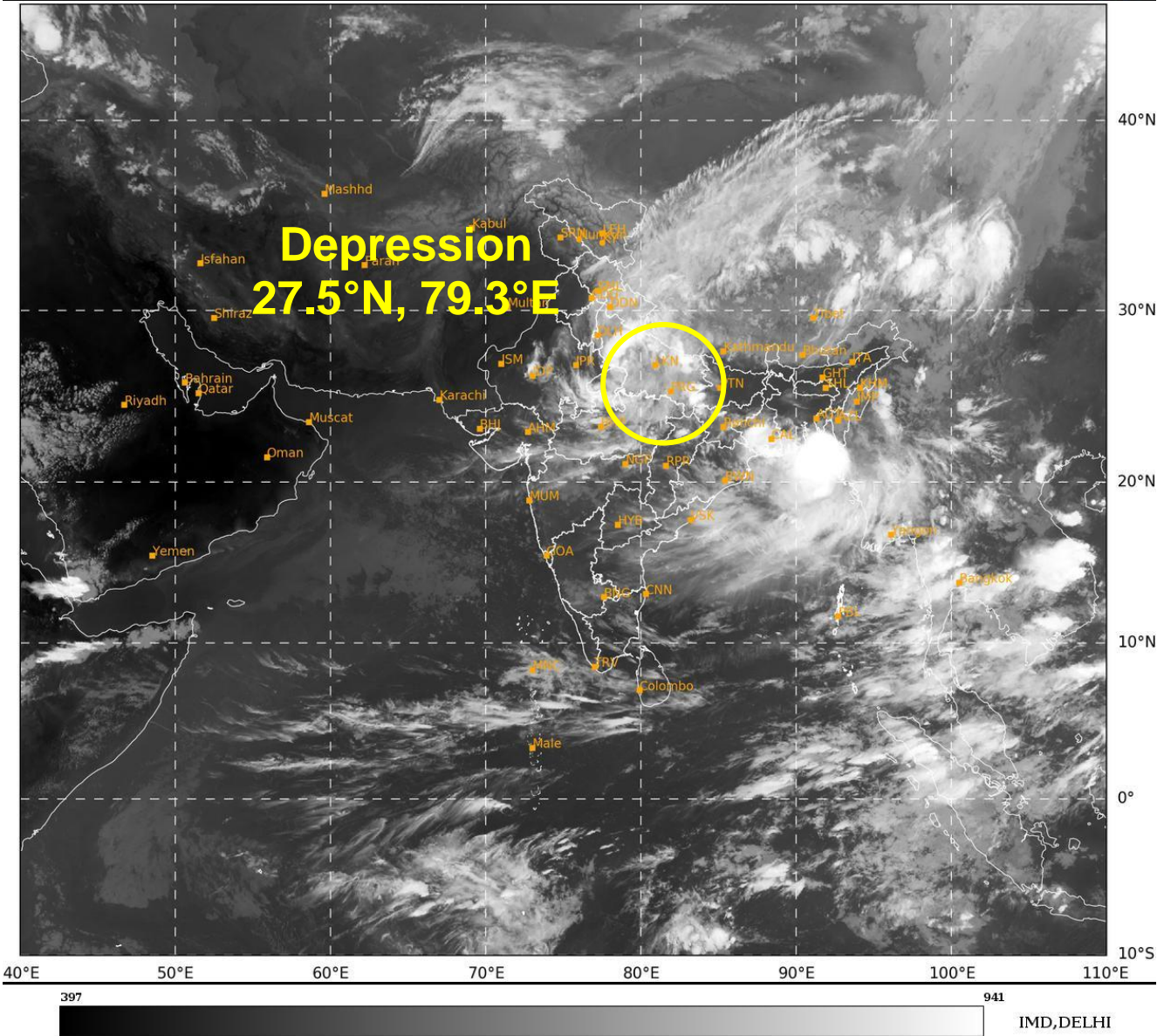
MOST OF THE NWP MODELS INDICATE GRADUAL WEST-NORTHWESTWARD MOVEMENT AND INTENSIFICATION INTO A DEPRESSION DURING NEXT 3 DAYS.

***PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION) DURING NEXT 168 HRS:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	LOW	MOD	HIGH	-	-	-

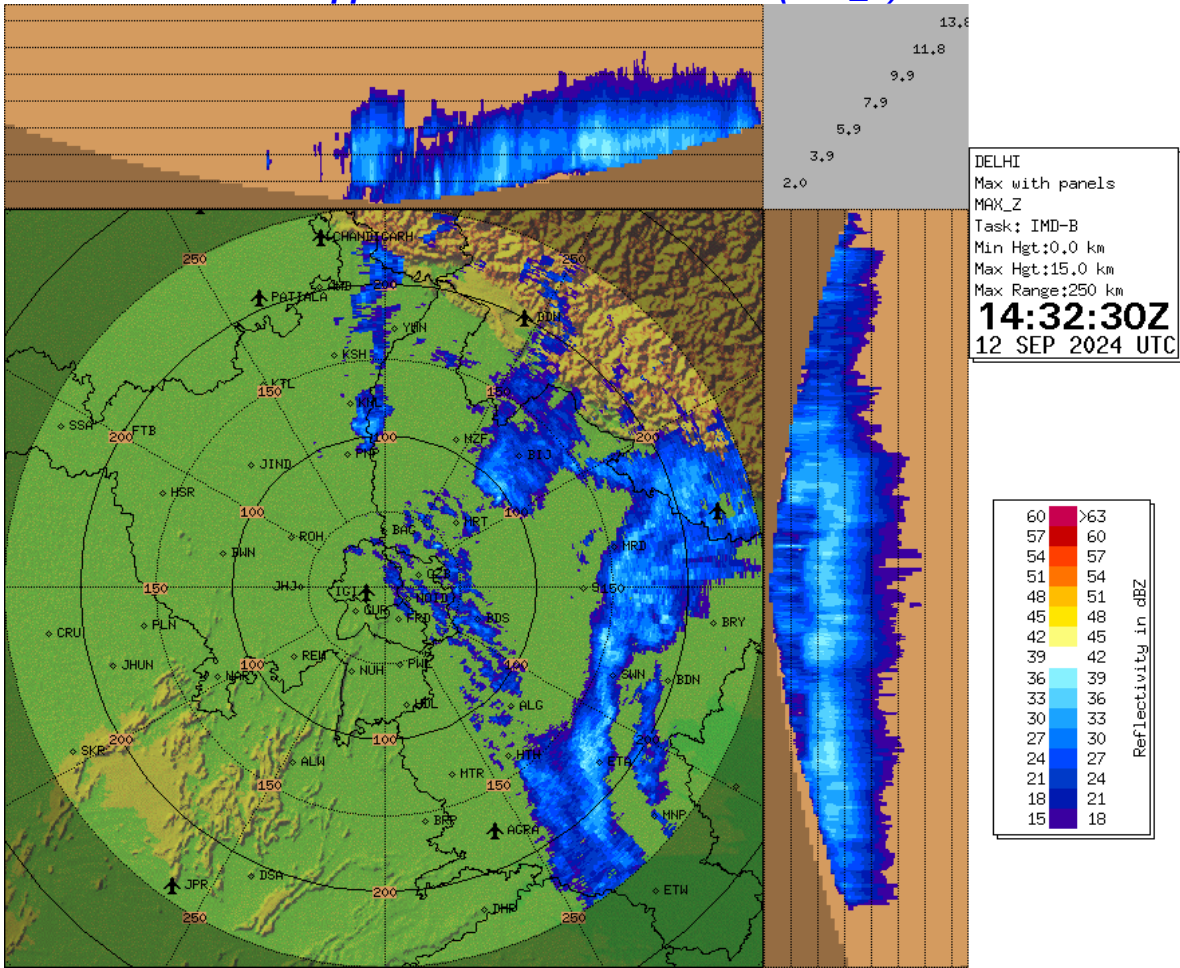
***NOTE: EVERY 24HR FORECAST IS VALID UPTO 0300 UTC (0830 IST) OF NEXT DAY**

AKHIL SRIVASTAVA
SC.-D, RSMC NEW DELHI



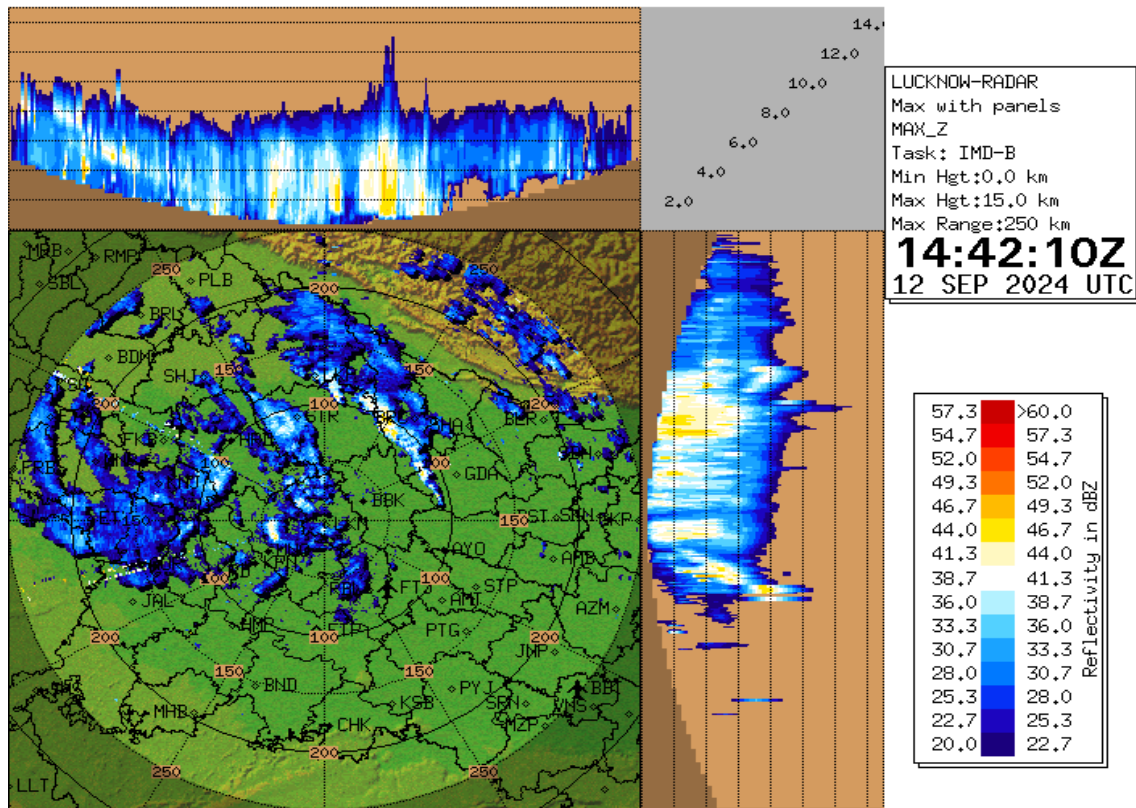
Cloud distribution: (a) Isolated: <25%, Scattered:25-50%, Broken: 51-75%, Solid:>75%, Convection Intensity: (a) Weak: Cloud Top Temperature (CTT) >-25°C, (b) Moderate: CTT: - 25°C to -40°C, (c) Intense: CTT: - 41°C to -70°C and (d) Very Intense: : Less than -70°C
PROBABILITY OF CYCLOGENESIS (FORMATION OF DEPRESSION):NIL: 0%, LOW: 1-33%, , MODERATE: 34-66% AND HIGH: 67-100%
This is a guidance Bulletin for WMO/ESCAP Panel Member countries. Visit respective National websites for Country specific Bulletins

Doppler Weather Radar at Delhi (Max_Z)



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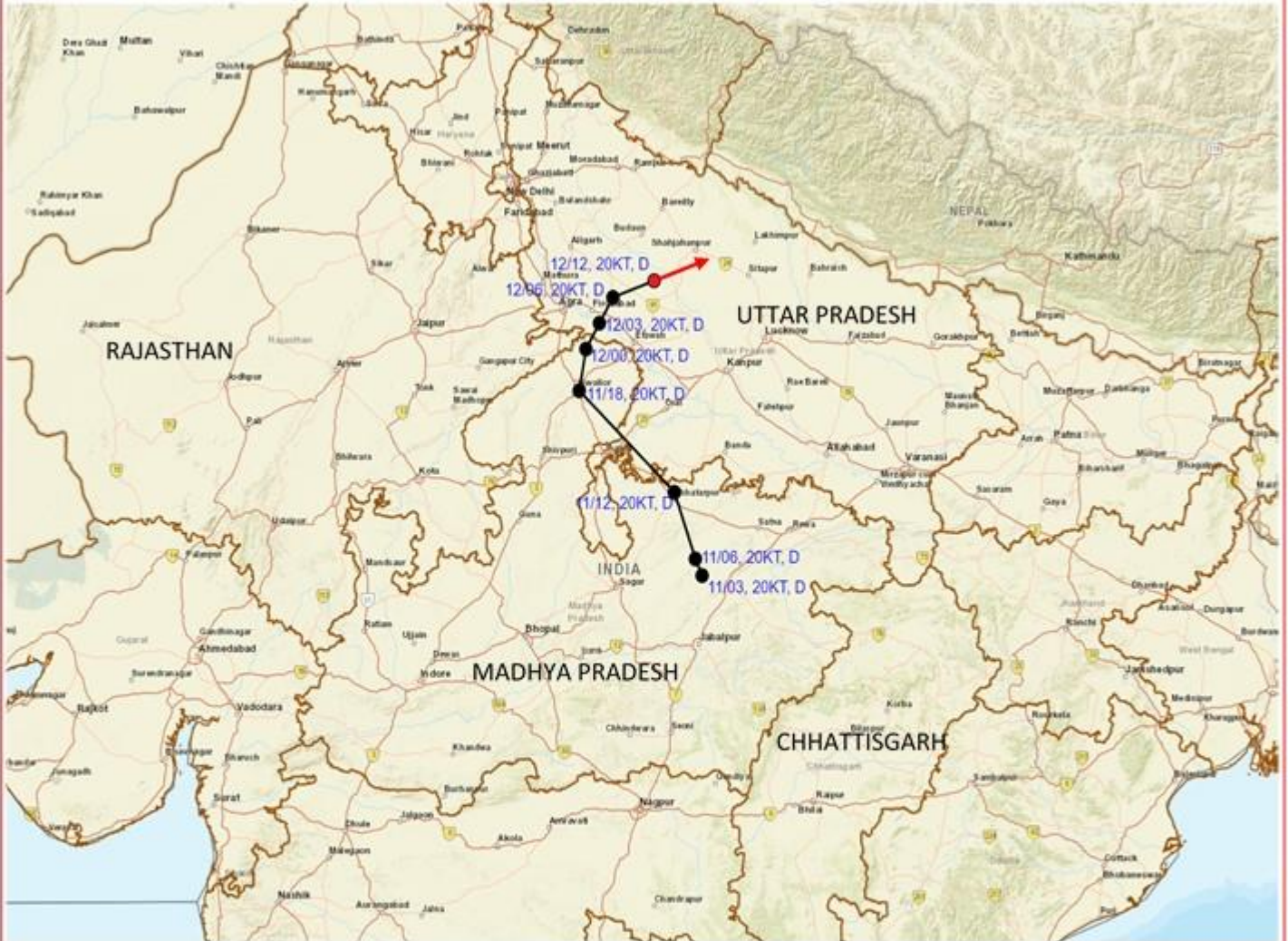
Doppler Weather Radar at Lucknow (Max_Z)



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OBSERVED AND FORECAST TRACK OF DEPRESSION OVER CENTRAL UTTAR PRADESH BASED ON 1200 UTC (1730 IST) OF 12TH SEPTEMBER, 2024.



DATE/TIME IN UTC
 IST=UTC + 0530
 L: LOW PRESSURE AREA
 WML: WELL MARKED LOW PRESSURE AREA
 D: DEPRESSION (17-27 KT)
 DD: DEEP DEPRESSION (28-33 KT)
 CS: CYCLONIC STORM (34-47 KT)
 SCS: SEVERE CYCLONIC STORM (48-63KT)
 VSCS: VERY SEVERE CYCLONIC STORM (64-89 KT)
 ESCS: EXTREMELY SEVERE CYCLONIC STORM (90-119 KT)
 SuCS: SUPER CYCLONIC STORM (≥ 120 KT)

● LESS THAN 34 KT
 ○ 34-47 KT
 ○ ≥ 48 KT
 — OBSERVED TRACK
 — FORECAST TRACK
 ● CONE OF UNCERTAINTY

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