



**Ministry of Earth Sciences  
India Meteorological Department  
Cyclone Warning Division, New Delhi**

**Tropical Cyclone Forecast Programme  
Report Dated 28<sup>th</sup> October, 2024**

**Time of Issue: 1100 UTC**

**Synoptic features (based on 0600 UTC analysis):**

- ❖ Yesterday's upper air cyclonic circulation over southwest Arabian Sea persisted over the same region and extended upto 1.5 km above mean sea level at morning (1130 hours IST) of today, the 28<sup>th</sup> of October.

**Environmental Features:**

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
<b>Sea Surface Temperature (SST) °C</b>	30°C over entire BoB	➤ 28-30°C over eastern parts of AS. ➤ 27°C over the western parts of AS
<b>Tropical Cyclone Heat Potential (TCHP) kJ/cm<sup>2</sup></b>	➤ >100 KJcm <sup>-2</sup> over north BoB, south Andaman Sea & westcentral and adjoining southwest BoB. ➤ 80-100 KJcm <sup>-2</sup> over remaining parts of BoB.	➤ 80-90 over central parts of south AS and adjoining EIO. ➤ 60-70 over eastcentral AS ➤ < 40 over westcentral & southwest AS & off Oman and Somalia coasts.
<b>Cyclonic Relative vorticity (X10<sup>-6</sup>s<sup>-1</sup>)</b>	50 over coastal Odisha and westcentral BoB.	40-50 over southwest AS
<b>Low Level convergence (X10<sup>-5</sup> s<sup>-1</sup>)</b>	5 over westcentral BoB	5 over Lakshadweep.
<b>Upper Level divergence (X10<sup>-5</sup> s<sup>-1</sup>)</b>	-	5 over Lakshadweep and Eastcentral AS
<b>Vertical Wind Shear (VWS knots) Low: 05-10 knots Moderate: 10-20 knots High: &gt;20 knots</b>	Moderate over central & adjoining north BoB	Moderate over central & adjoining north AS and southwest AS.
<b>Wind Shear Tendency (knots)</b>	Decreasing over Odisha.	Decreasing over Lakshadweep and adjoining Eastcentral AS, south AS and north AS
<b>Upper tropospheric Ridge</b>	along 20.0°N in association with anticyclonic circulation over Myanmar	Around 20.0°N.

## **Satellite observations based on INSAT imagery (0300 UTC):**

### **(a) Over the BoB & Andaman Sea: -**

Scattered low and medium clouds with embedded moderate to intense convection lay over south Bay of Bengal & Andaman Sea.

### **(b) Over the Arabian Sea:**

Scattered low and medium clouds with embedded moderate to intense convection lay over south Arabian Sea & Comorin area.

### **(c) Outside India:**

Scattered low & medium clouds with embedded moderate to intense convection lay over Sri Lanka, Gulf of Mannar, Maldives, China, Thailand, Gulf of Thailand, Cambodia, Laos, Vietnam, Gulf of Tonkin, Hainan, Taiwan, Sumatra, Strait of Malacca, Malaysia, Borneo, South China Sea, Java Sea, Celebes Islands & Sea, Philippines, Madagascar, South Mozambique Channel and over Indian ocean Between Equator to latitude 15.0 °S & long 55.0°E to 100.0°E.

### **M.J.O. Index:**

Madden Julian Oscillation (MJO) index is currently in Phase 6 with amplitude greater than 1. It is likely to move across phases 6 & 7 during next seven days with amplitude remaining more than 1.

### **Storms and Depression over South China Sea/ South Indian Ocean:**

Nil

### **NWP Guidance for FDP Cyclone based on 0000 UTC for the next 7 days**

<b>MODEL GUIDANCE</b>	<b>Bay of Bengal (BoB)</b>	<b>Arabian Sea (AS)</b>
<b>IMD-GFS</b>	No significant system over BoB during next 7 days.	Cyclonic circulation over southwest Arabian Sea on today with westwards movement till 30 <sup>th</sup> .
<b>IMD-GEFS</b>	No significant system over BoB during next 7 days.	Cyclonic circulation over southwest Arabian Sea as on today having westward movement till 29 <sup>th</sup> . Another cycir over Lakshadweep Area on 31 <sup>st</sup> Oct with westwards movement till 2 <sup>nd</sup> November.
<b>IMD-WRF</b>	Cyclonic circulation over north Andaman Sea on 30 <sup>th</sup> Nov.	Cyclonic circulation over southwest Arabian Sea as on today with westwards movement till 28 <sup>th</sup> .
<b>NCMRWF-NCUM(G)</b>	No significant system over BoB during next 7 days.	No significant system over BoB during next 7 days.
<b>NCMRWF-NCUM(R)</b>	No significant system over BoB during next 3 days.	No significant system over BoB during next 3 days.
<b>NCMRWF-NEPS</b>	No significant system over BoB during next 7 days.	No significant system over BoB during next 7 days.

<b>ECMWF</b>	No significant system over BoB during next 7 days.	No significant system over BoB during next 7 days.
<b>NCEP-GFS</b>	No significant system over BoB during next 7 days. A cyclonic circulation over southeast BoB on 4 <sup>th</sup> November becoming Low on 08 <sup>th</sup> Nov.	No significant system over BoB during next 7 days.

**Summary:**

**(a) Bay of Bengal:**

No significant cyclonic disturbance is indicated by any of the models. However, NCEP-GFS model is indicating a cyclonic circulation over southeast Bay of Bengal and adjoining Andaman Sea around 4<sup>th</sup> November and Low pressure area over southwest BoB on 8<sup>th</sup> Nov.

**(d) Arabian Sea**

No significant cyclonic disturbance is indicated by any of the models.

**Inference:**

**Considering various environmental conditions and model guidance, it is inferred that:**

No fresh cyclogenesis is likely over Bay of Bengal & Arabian Sea for the next seven days.

**Probability of cyclogenesis (formation of depression and above intensity systems) over the Bay of Bengal during next 168 hours:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

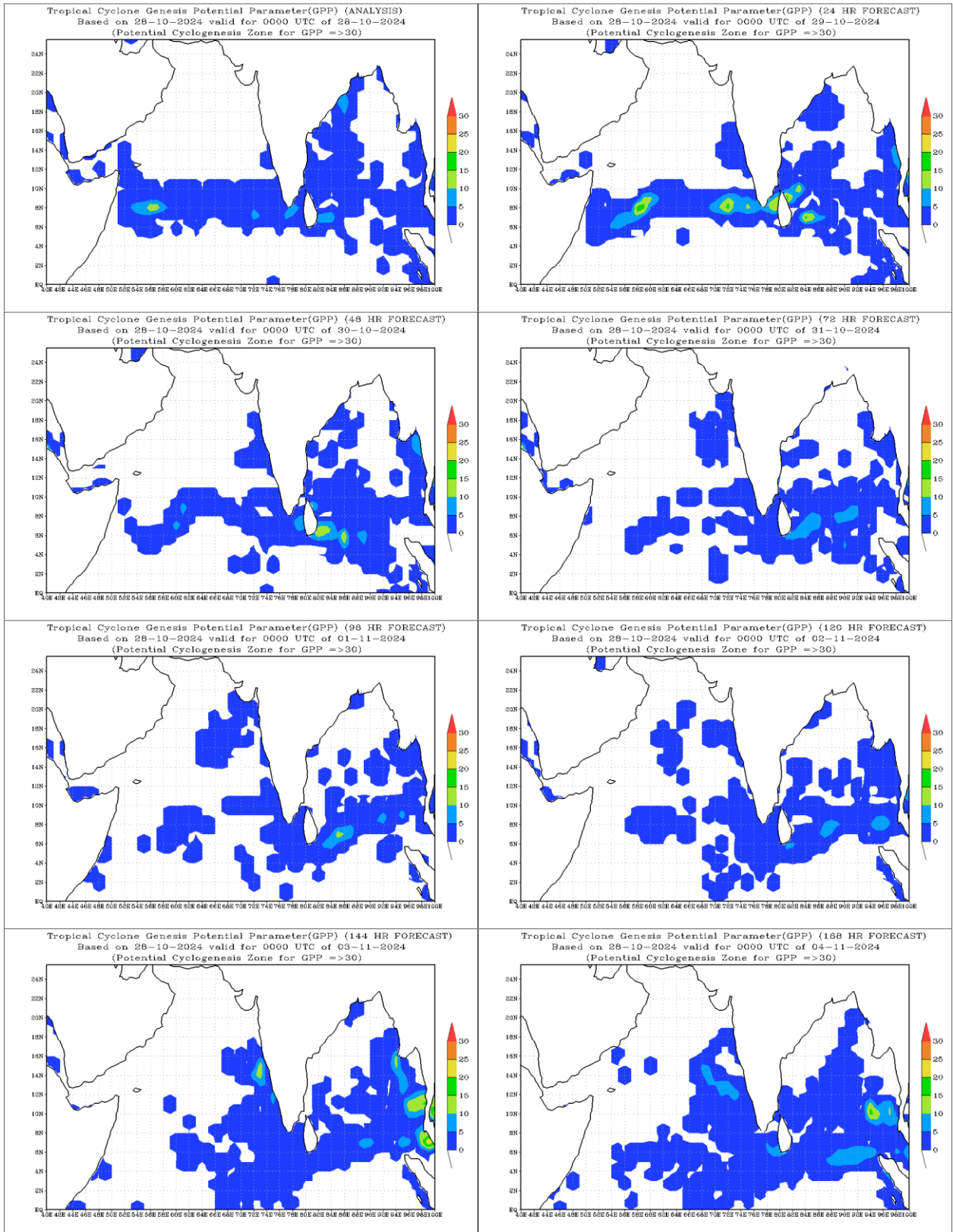
**Probability of cyclogenesis (formation of depression and above intensity systems) over the Arabian Sea during next 168 hours:**

24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

“-“ indicate genesis has already occurred.

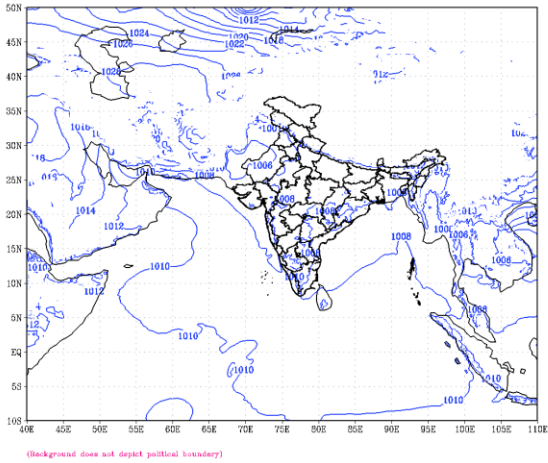
Probability is indicated as NIL for 0%, LOW for 1-33%, MOD for 34-67% and High for 68-100%.

**Intense Observation Period (IOP): NIL**

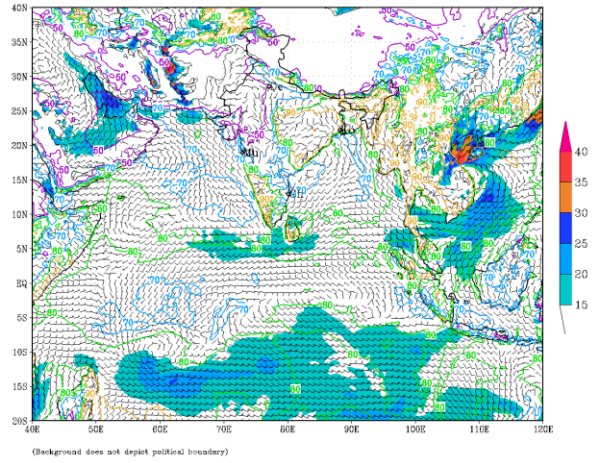




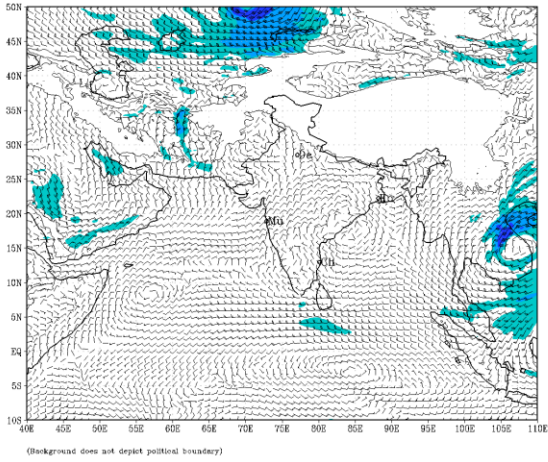
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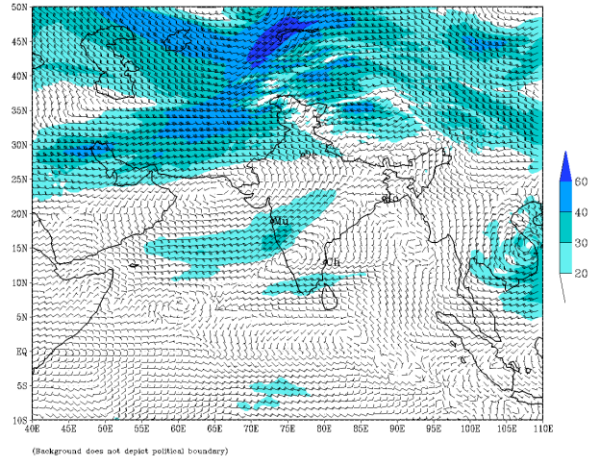
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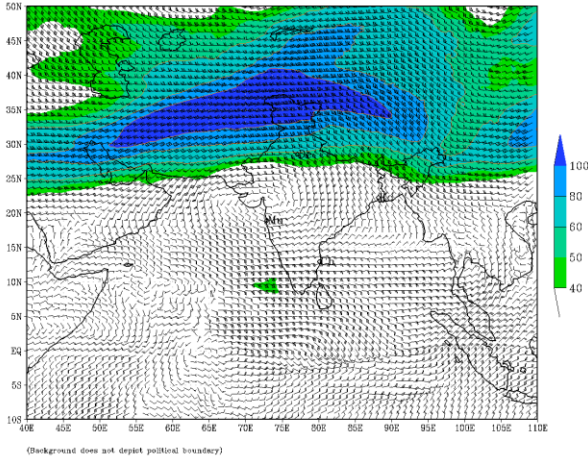
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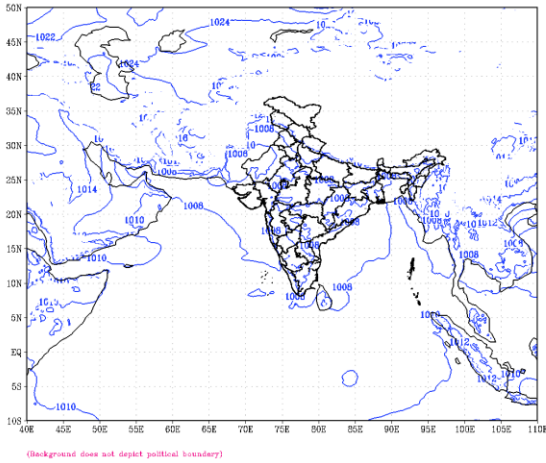
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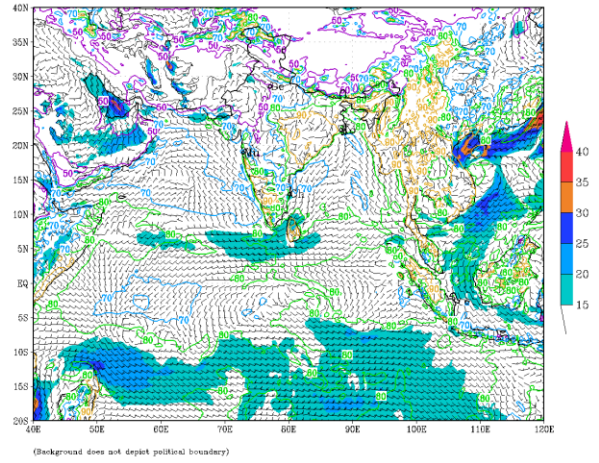
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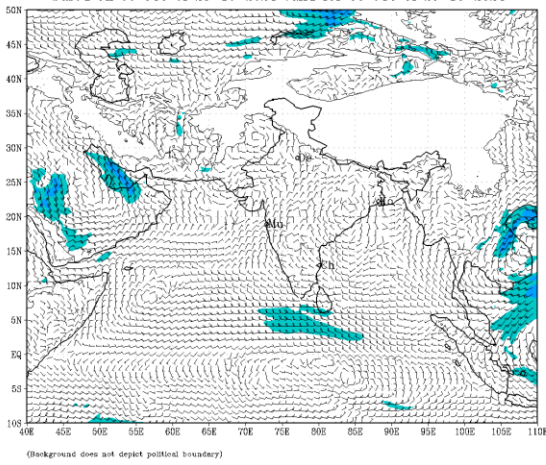
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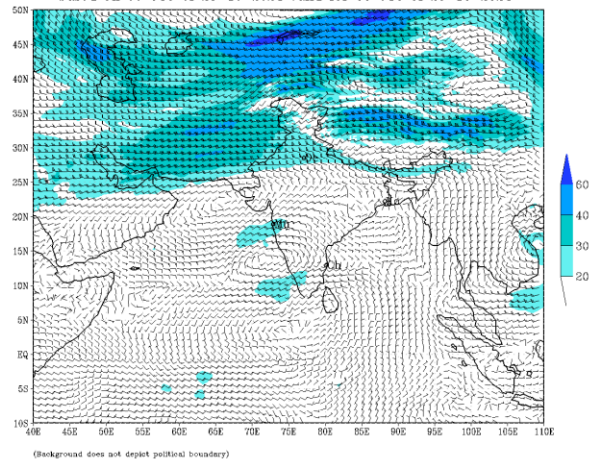
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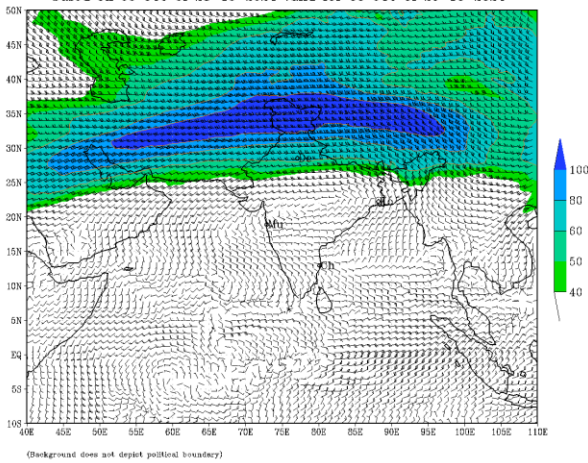
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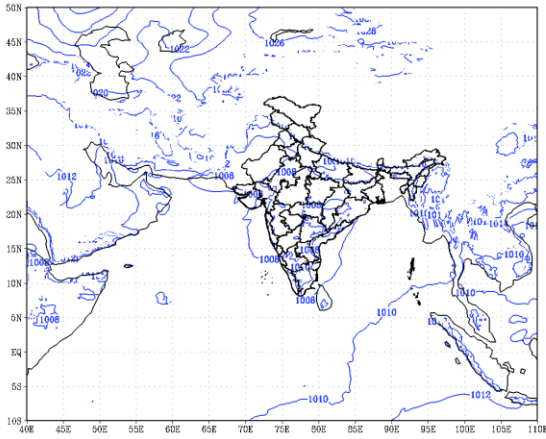


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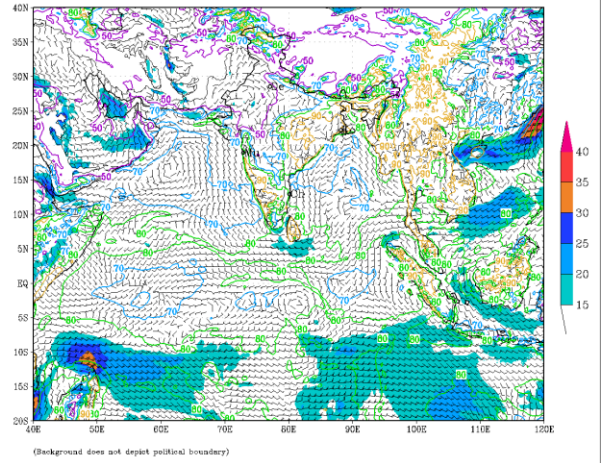




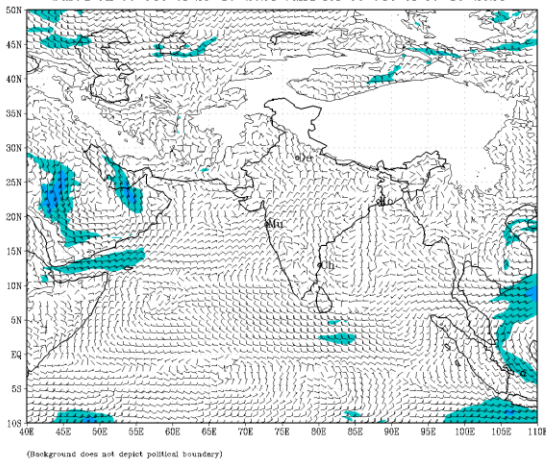
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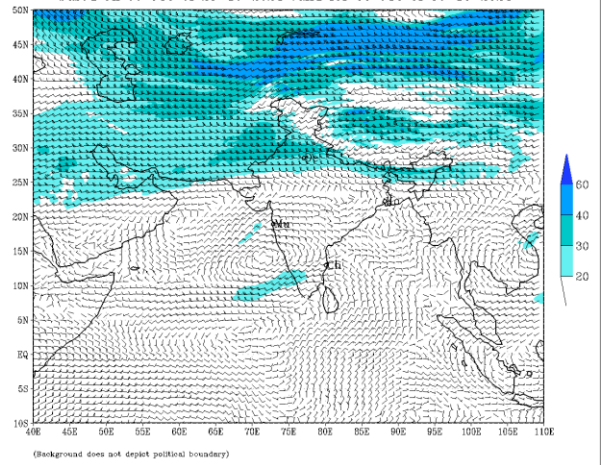
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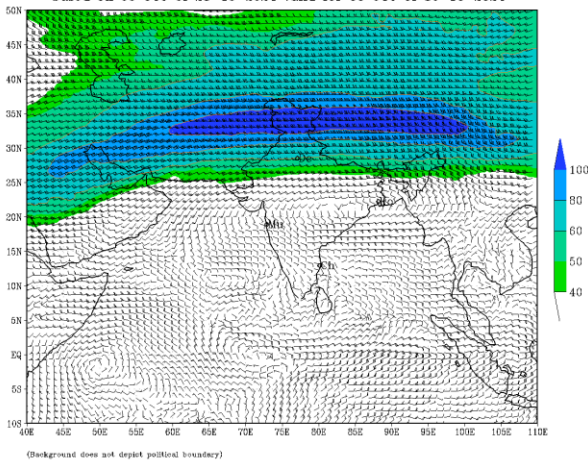
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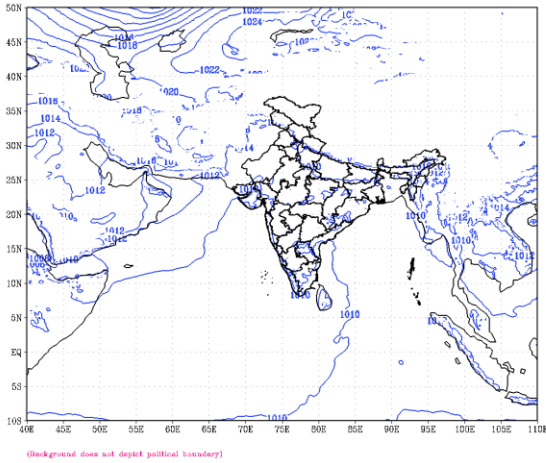
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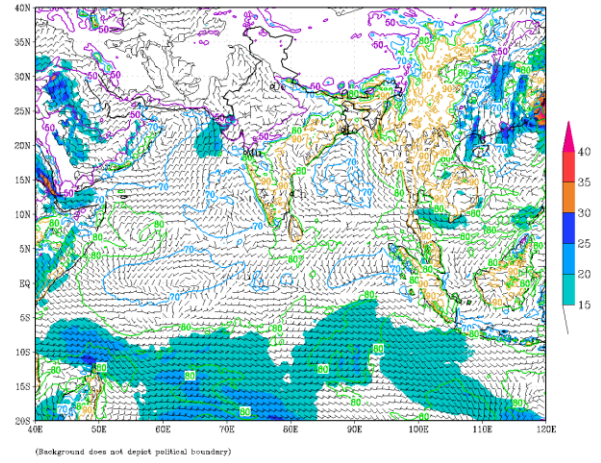




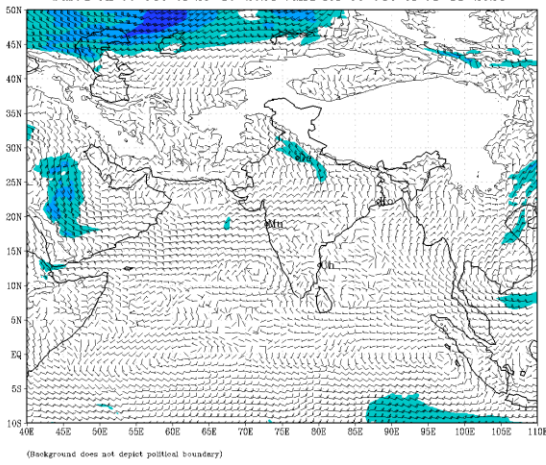
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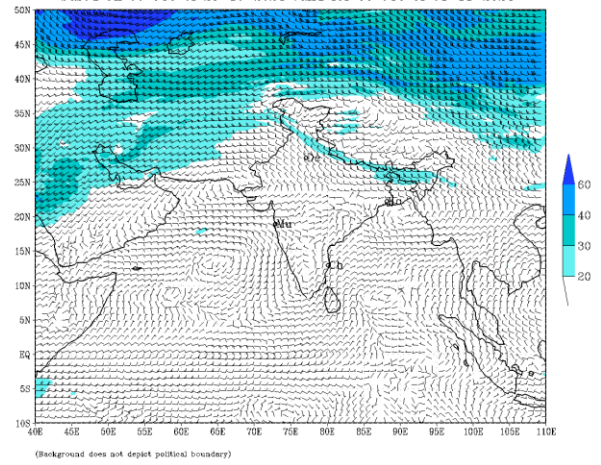
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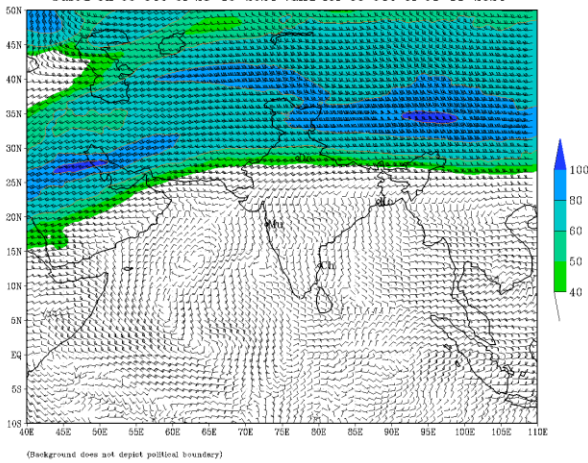
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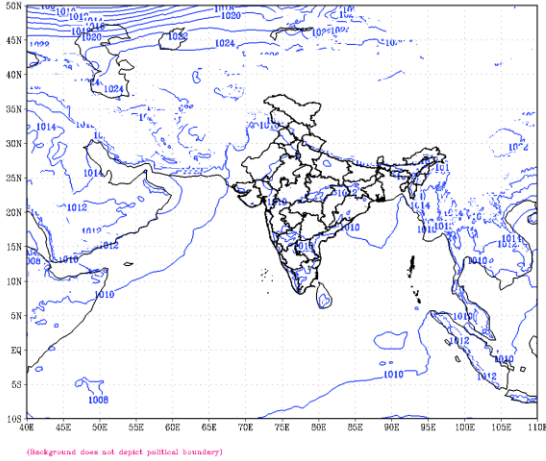
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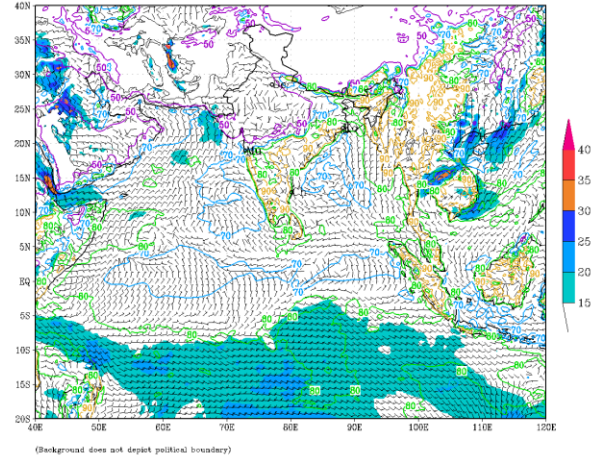
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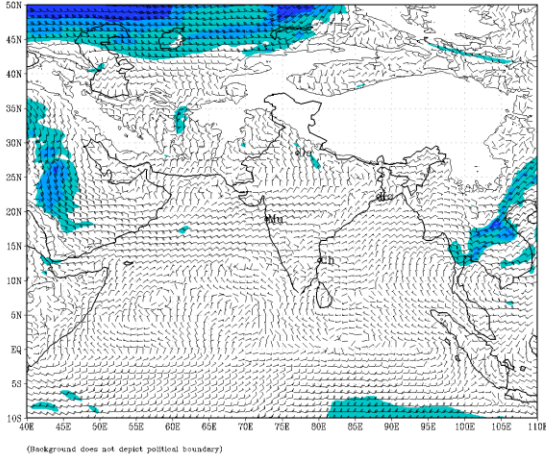
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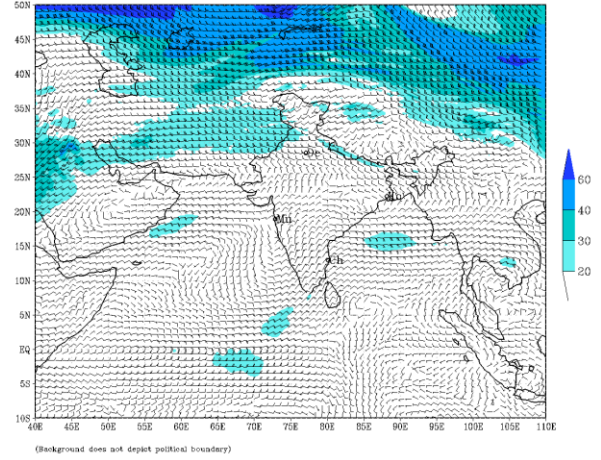
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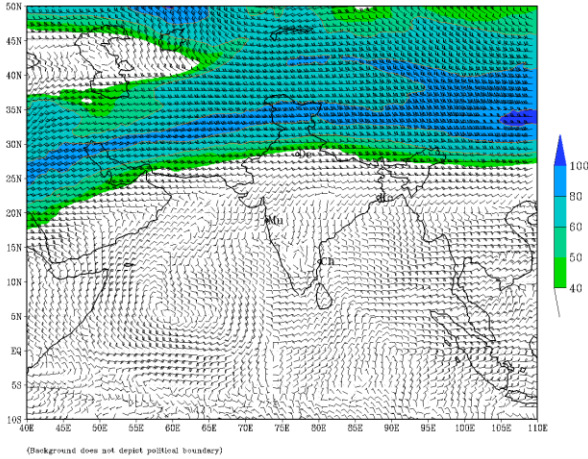
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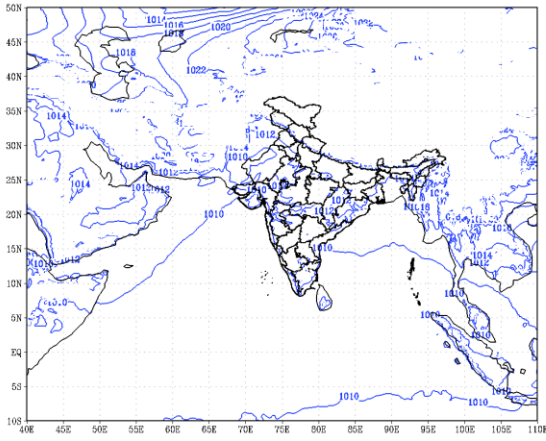


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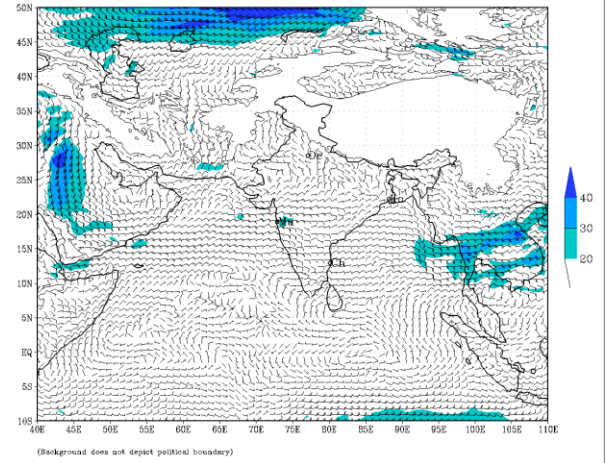




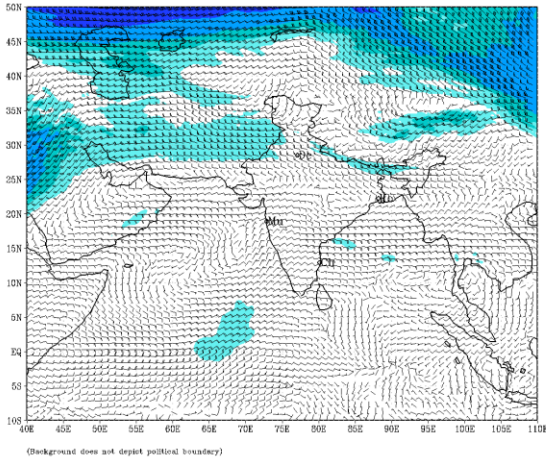
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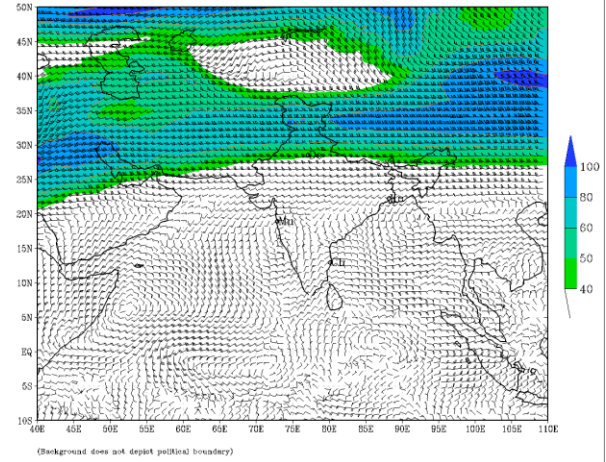
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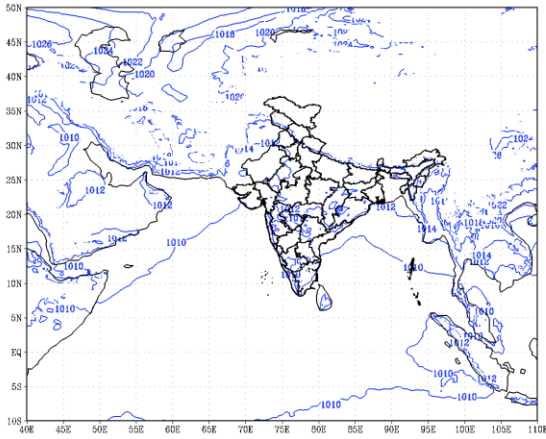
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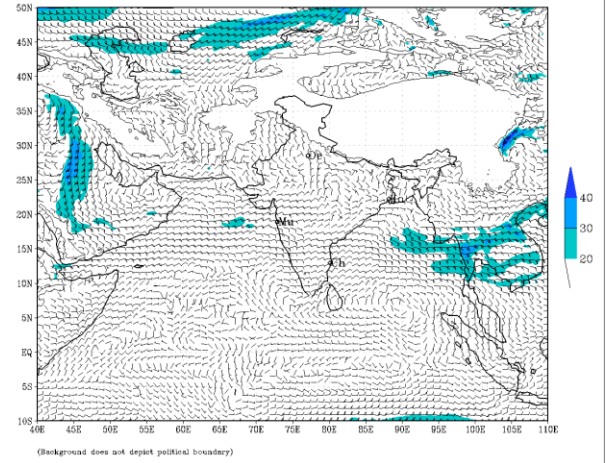
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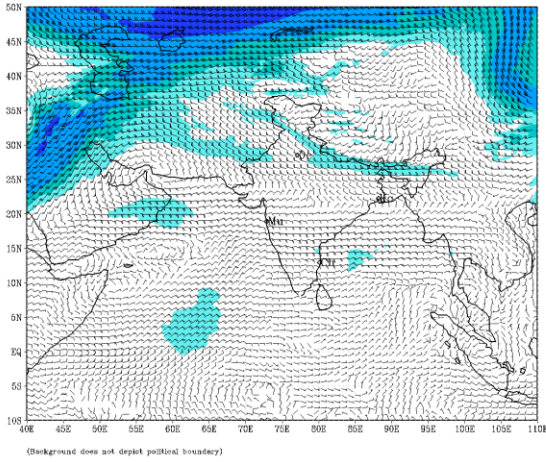
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based on 00 UTC of 28-10-2024 valid for 00 UTC of 04-11-2024



IMD:GFS MODEL(12 Km) 500 hPa WIND (kt) FORECAST (168 HR)  
based on 00 UTC of 28-10-2024 valid for 00 UTC of 04-11-2024



IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (168 HR)  
based on 00 UTC of 28-10-2024 valid for 00 UTC of 04-11-2024

