



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

**Tropical Cyclone Forecast Programme
Report Dated 29th October, 2023**

Time of Issue: 0800 UTC

Synoptic features (based on 0300 UTC analysis):

No cyclonic circulation over the Bay of Bengal and the Arabian Sea

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) °C	29-30°C over major parts of BoB, Andaman Sea, 26-28 over some parts of southwest BoB and Gulf of Mannar and adjoining Comorin Area	29-30°C over southeast and adjoining eastcentral AS, north AS & along & off Pakista & Iran coasts, along and off Maharashtra coasts, 26-28°C over central and southwest AS, less than 24°C along and off Yemen-Oman and Somalia coast.
Tropical Cyclone Heat Potential (TCHP) kJ/cm²	100-120 over eastcentral BoB, southeast & adjoining Andaman Sea. 50-60 over most parts of BOB and north Andaman Sea. Less than 40 along Andhra Pradesh and Tamil Nadu coasts, adjoining sea areas, Gulf of Mannar and adjoining Comorin area and parts of southwest BoB.	70-80 over southeast and adjoining eastcentral AS, Less than 30 over northeast & adjoining eastcentral and northwest AS, along and off west coast of India, less than 10 over westcentral and southwest and north AS.
Cyclonic Relative vorticity (X10⁻⁶s⁻¹)	10-20 over southwest BoB, northeast BoB off southeast Bangladesh coast and eastcentral BoB & adjoining North Andaman Sea upto 500 hPa level.	10-20 over eastcentral AS, northwest AS and central parts of South AS upto 500 hPa levels.
Low Level convergence (X10⁻⁵ s⁻¹)	5-10 over southeast BoB	5-10 over south AS and adjoining West Equatorial Indian Ocean (WEIO).
Upper Level divergence (X10⁻⁵ s⁻¹)	5 over northwest BoB and southwest BoB & adjoining Gulf of Mannar &	5 over northwest AS, -10 over southeast AS.

	Comorin Area, 05-10 over East Equatorial Indian Ocean (EEIO) & adjoining southeast BoB & South Andaman Sea.	
Vertical Wind Shear (VWS knots) Low: 05-10 knots Mod: 10-20 knots High: >20 knots	Moderate over south BoB & adjoining EEIO, central BoB and Andaman Sea. High over North BoB. Moderate over Comorin Area & Gulf of Mannar.	Moderate over south AS & adjoining WEIO. High over Central and North AS.
Wind Shear Tendency (knots)	Decreasing tendency over south BoB & adjoining EEIO. Increasing tendency over central & North BoB.	Decreasing tendency over southeast AS, North AS and Comorin Area. Increasing over the central AS.
Upper tropospheric Ridge	Along 15°N over BoB in the 100-250 HPa layer	Along 5°N over AS in the 251-300 HPa layer

Satellite observations based on INSAT imagery (0600 UTC):

(a) Over the BoB & Andaman Sea:-

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

(b) Over the Arabian Sea:-

Scattered Low and Medium Clouds with Embedded Intense to Very Intense Convection lay over South Arabian Sea.

(c) Convection outside India:

Scattered Low And Medium Clouds With Embedded Moderate To Intense Convection lay Over Gulf of mannar, Maldives, Pakistan, Tibet, South Myanmar, Thailand, Gulf of Thailand, Cambodia, Laos, Vietnam, Sumatra, Strait of Malacca, Malaysia, Borneo, South China Sea, Phillipines, North Madagascar and over Indian Ocean between Equator & Latitude 5.0N, Longitude 48.0E to 100.0E and between Latitude 5.0S & 13.0S and Longitude 54.0E & 63.0E.

M.J.O. Index:

MJO index is in Phase 1 with amplitude close to 1 for 2 days. It would continue in same phase with amplitude gradually decreasing during next 5 days.

Storms and Depression over South China Sea/ South Indian Ocean: NIL

Input for FDP Cyclone based on 0000 UTC for the next 7 days

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	No significant system.	A cycir (cyclonic circulation) over southwest AS near Socotra Islands on 31 st becoming less marked thereafter.
IMD-GEFS	No significant system.	No significant system.
IMD-WRF	No significant system.	A cycir (cyclonic circulation) over southwest AS on 31 st Oct becoming less marked thereafter.
NCMRWF-NCUM	No significant system.	A cycir over southeast AS on 31 st with nearly westwards movement towards

		Somalia coast till 2 nd Nov
NCMRWF-NEPS	No significant system.	No significant system.
NCMRWF-UM (Regional)	No significant system.	No significant system.
ECMWF	A cyclonic circulation over southwest BoB on 2 nd November.	No significant system.
NCEP-GFS	No significant system.	No significant system.
IMD-Genesis Potential Parameter	No potential zone over Bay of Bengal for next 7 days.	No potential zone over Arabian Sea for next 7 days.

Summary and conclusion:

1. For the Bay of Bengal:

Most of the models are indicating no significant system over Bay of Bengal for the next seven days.

Probability of Cyclogenesis (formation of depression and above intensity systems) over the BAY OF BENGAL OF BENGAL of Bengal and Andaman Sea during next 168 hours:

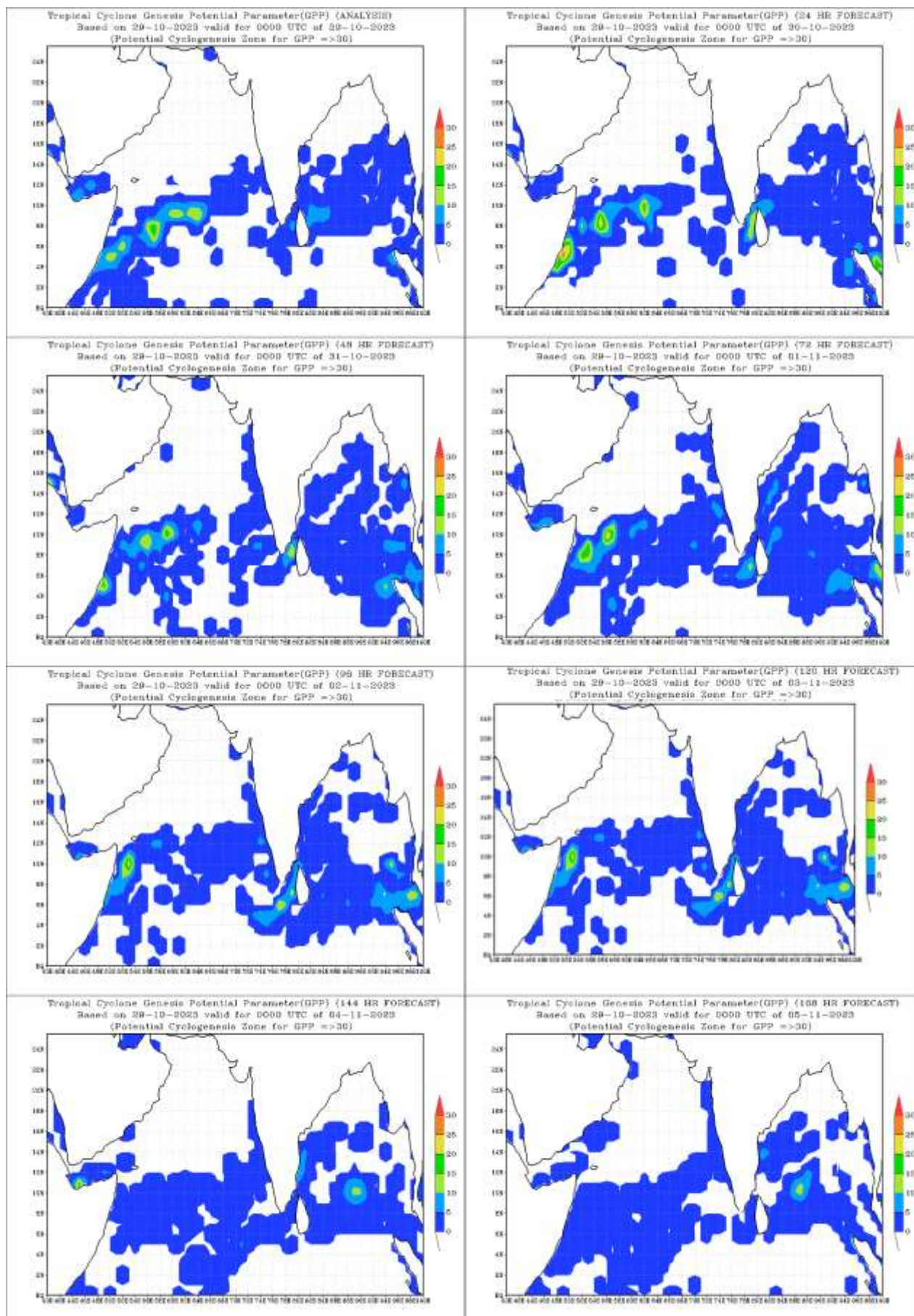
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

2. For the Arabian Sea:

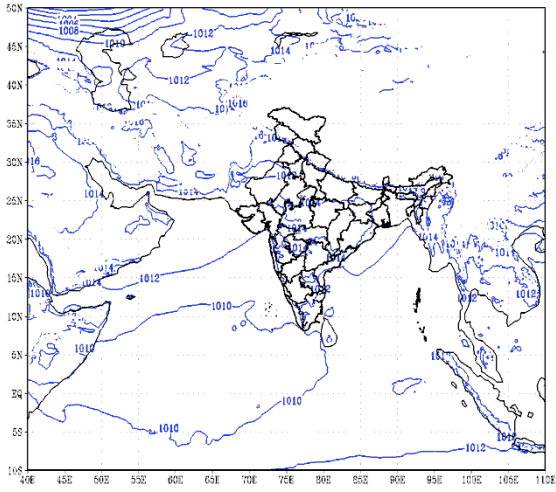
Most of the models are indicating that there will be no significant system over Arabian Sea for the next seven days. However, a cyclonic circulation is likely over southeast Arabian Sea around 31st October with nearly westwards movement towards Somalia coast (IMD GFS, NCUM and WRF).

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

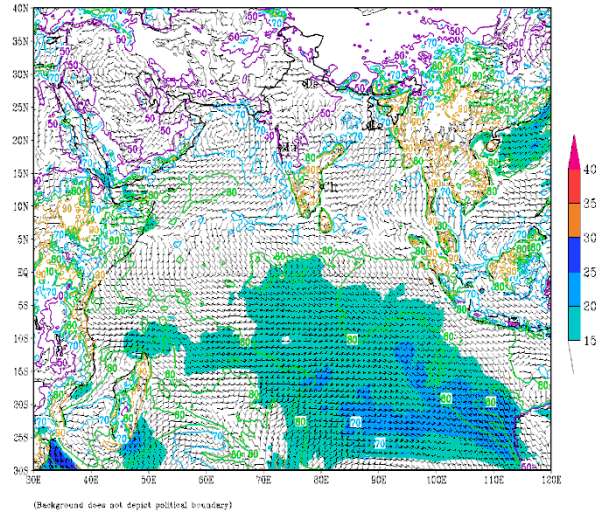
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL



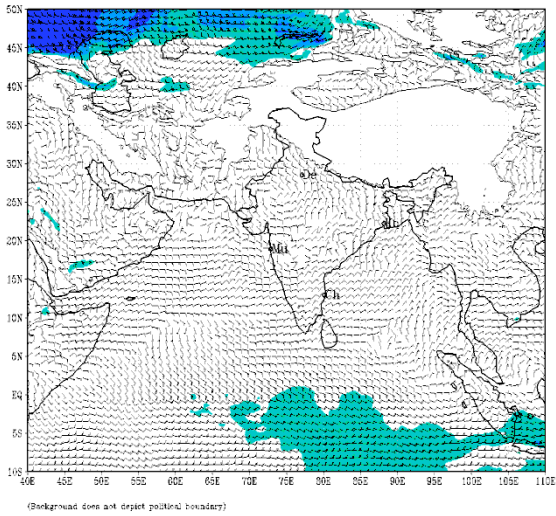
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based on 00 UTC of 29-10-2023 valid for 00 UTC of 29-10-2023



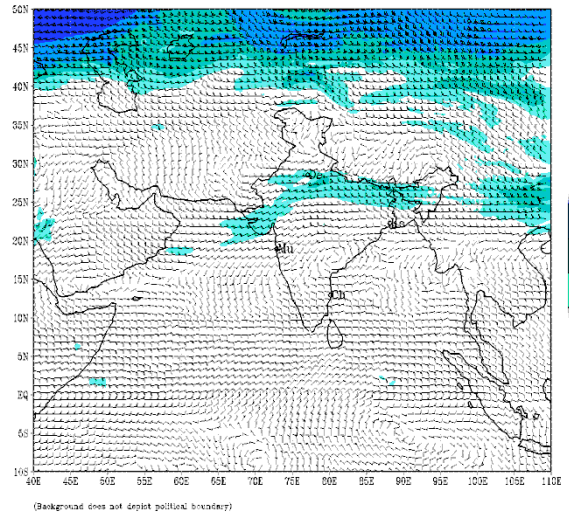
IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (00 HR)
based on 00 UTC of 29-10-2023 valid for 00 UTC of 29-10-2023



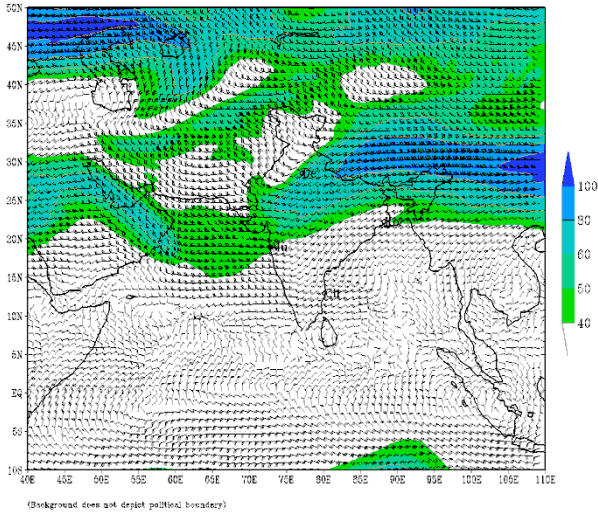
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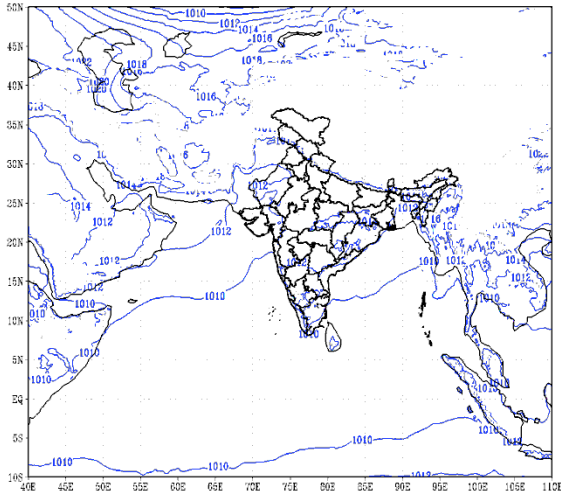
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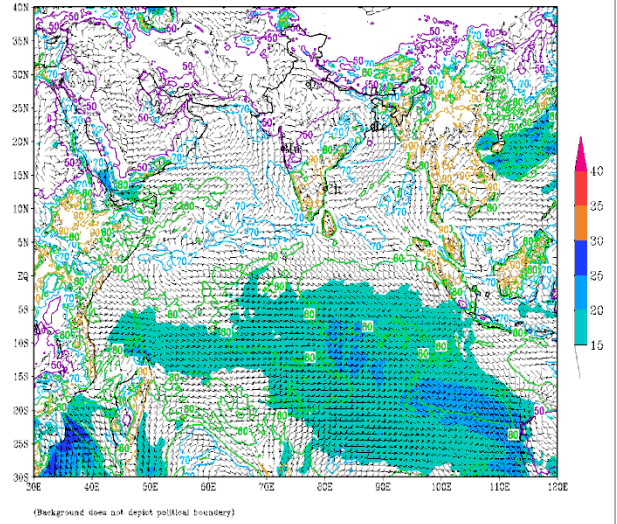
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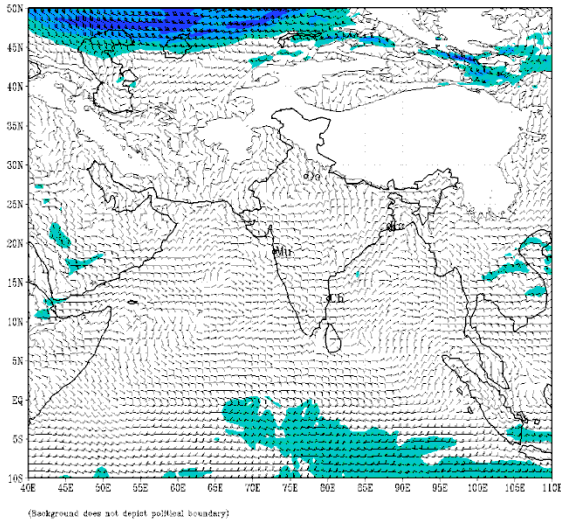
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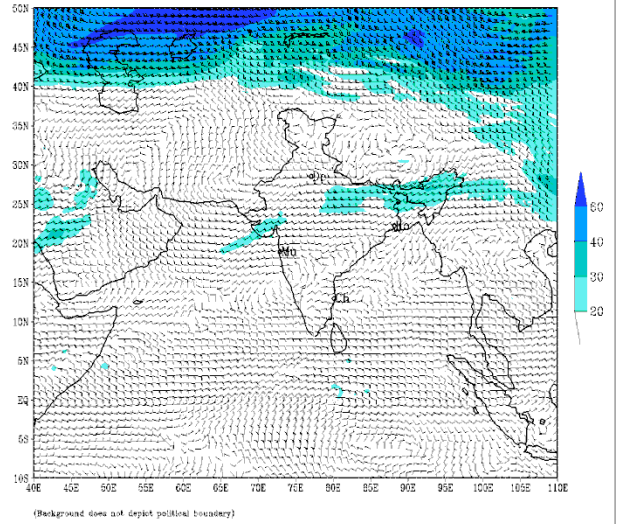
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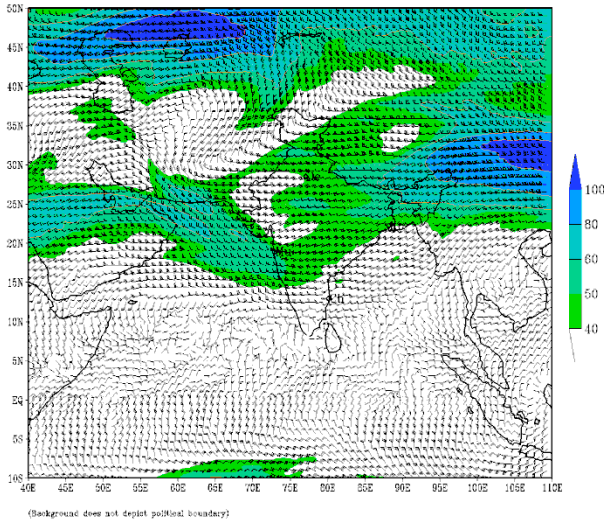
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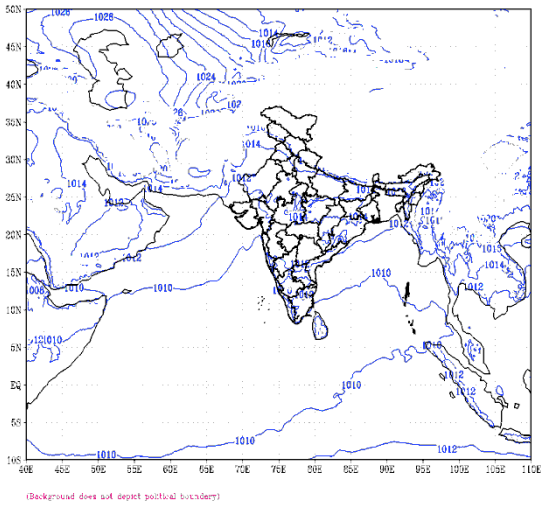
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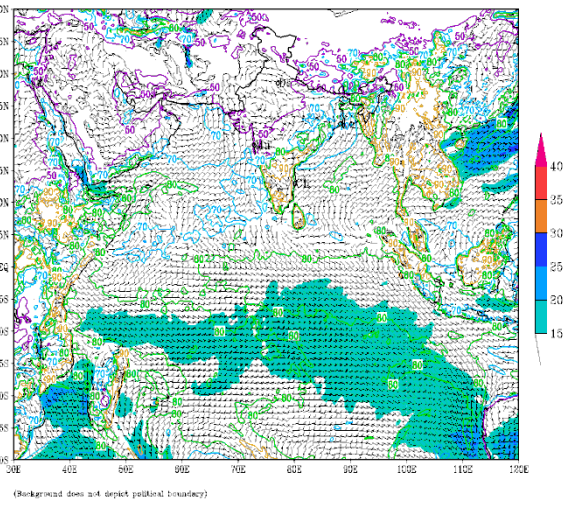
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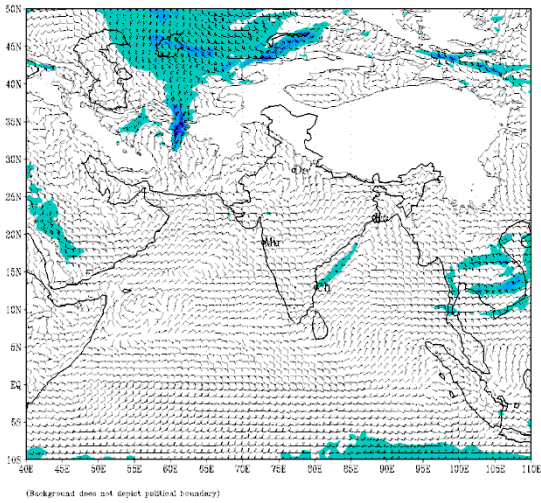
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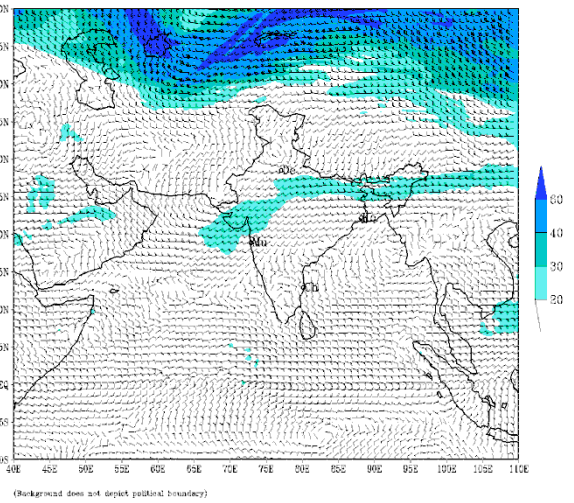
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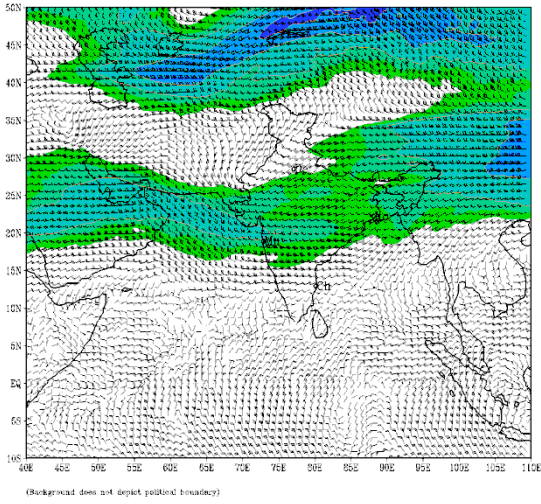
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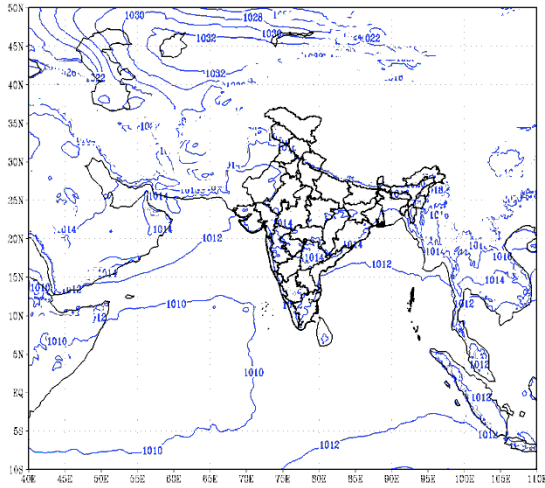
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IMD :GFS MODEL(12 Km) 200 hPa WIND (kt) FORECAST (48 HR)
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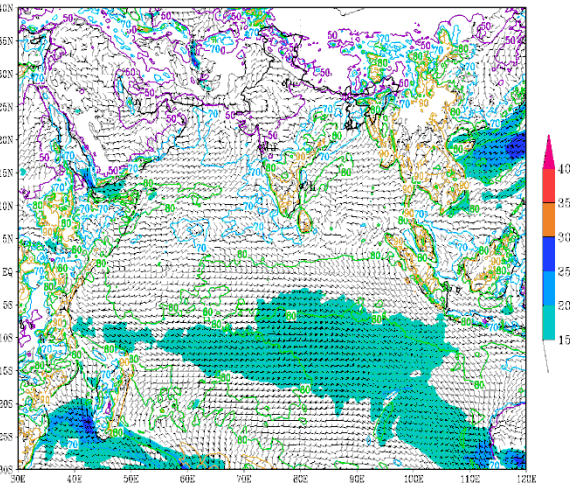


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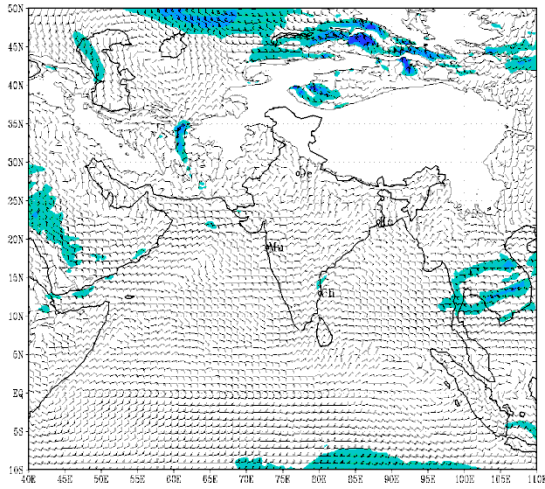
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based on 00 UTC of 29-10-2023 valid for 00 UTC of 01-11-2023



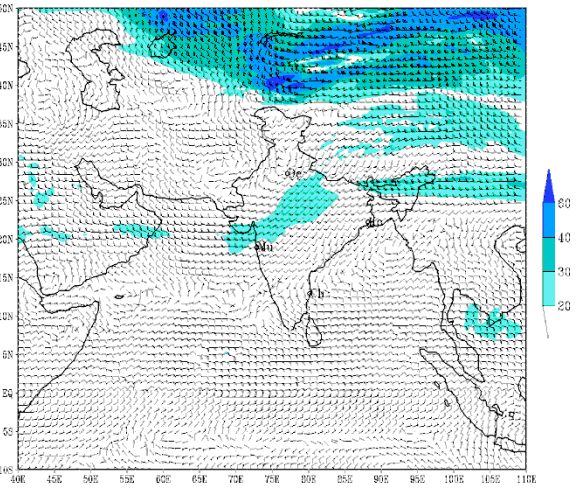
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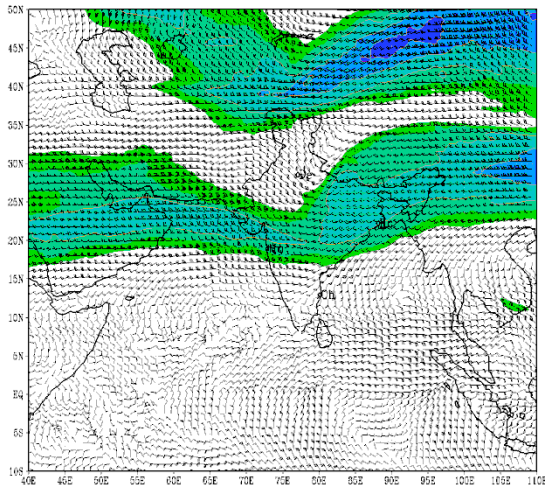
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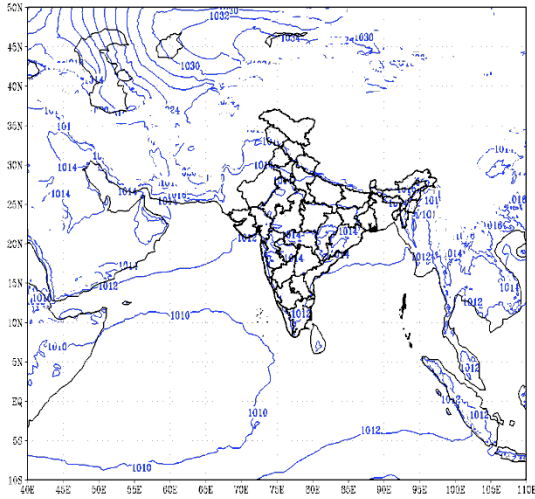
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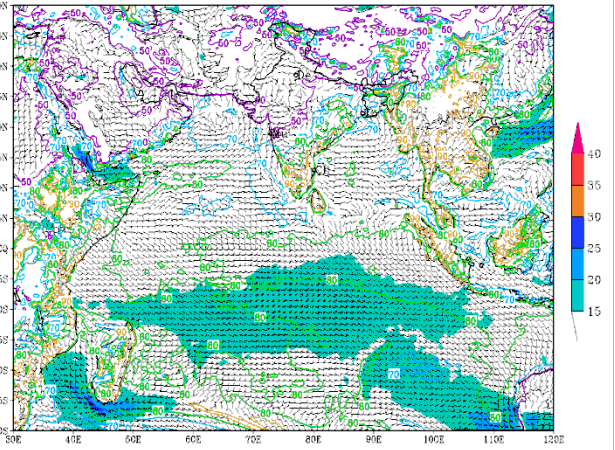
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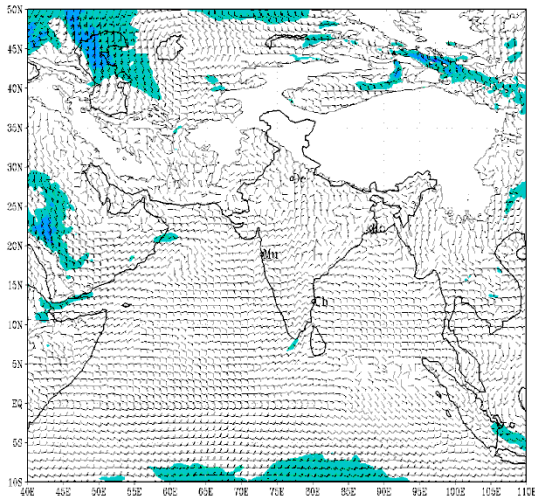
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based on 00 UTC of 29-10-2023 valid for 00 UTC of 02-11-2023



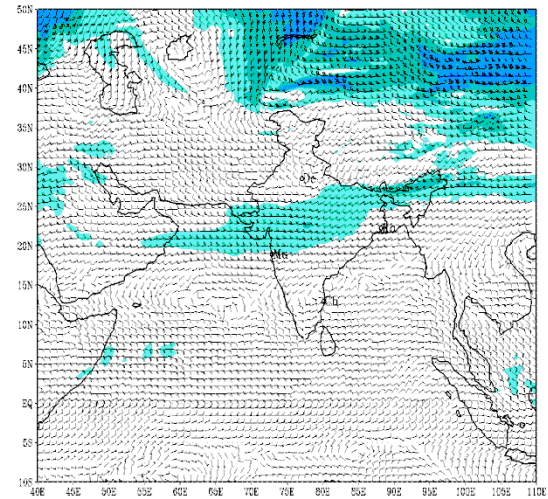
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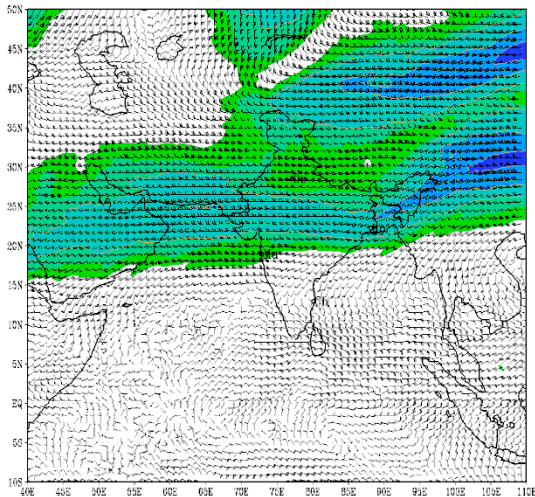
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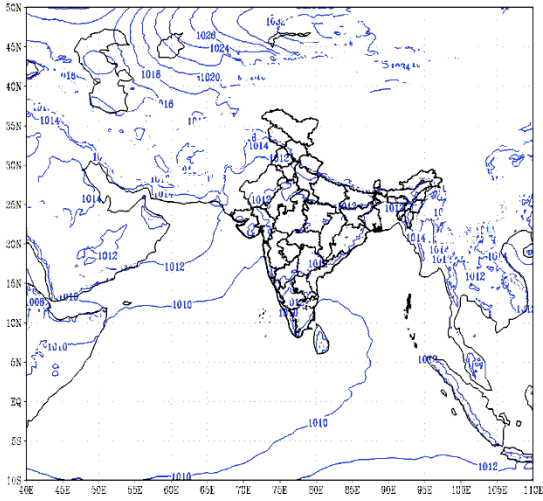
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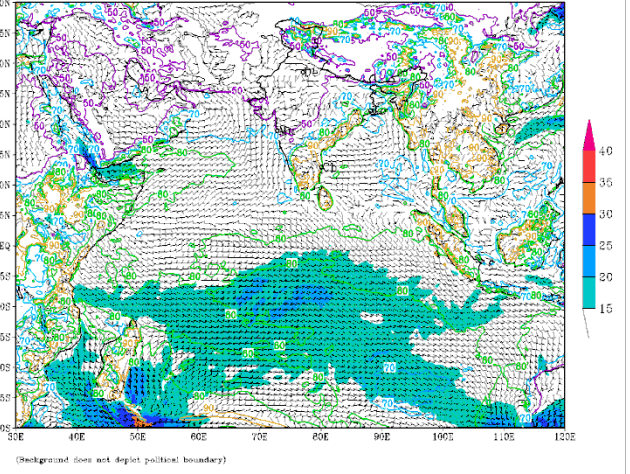


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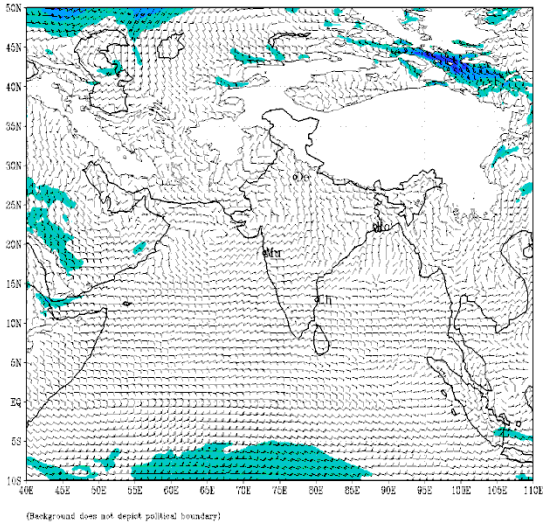
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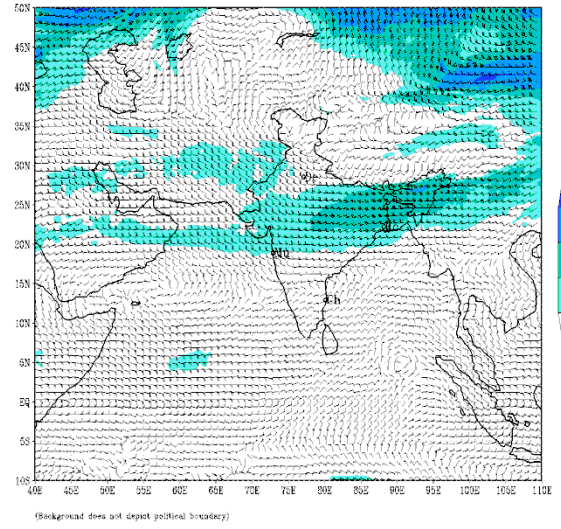
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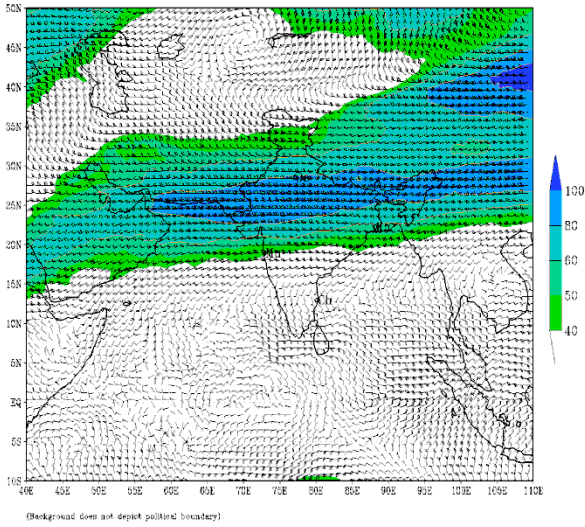
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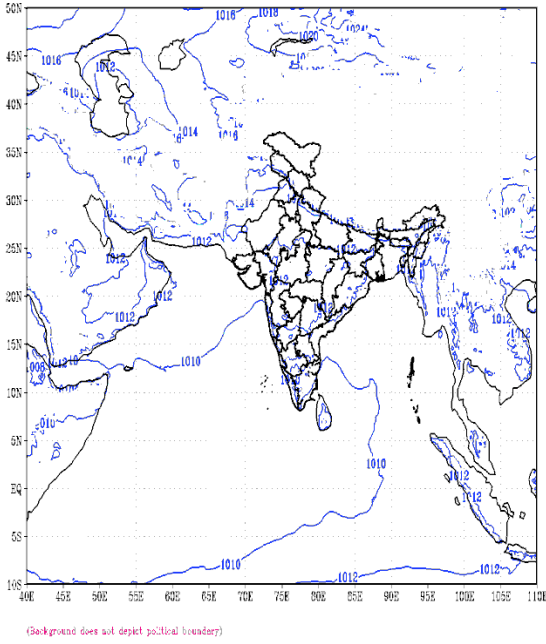
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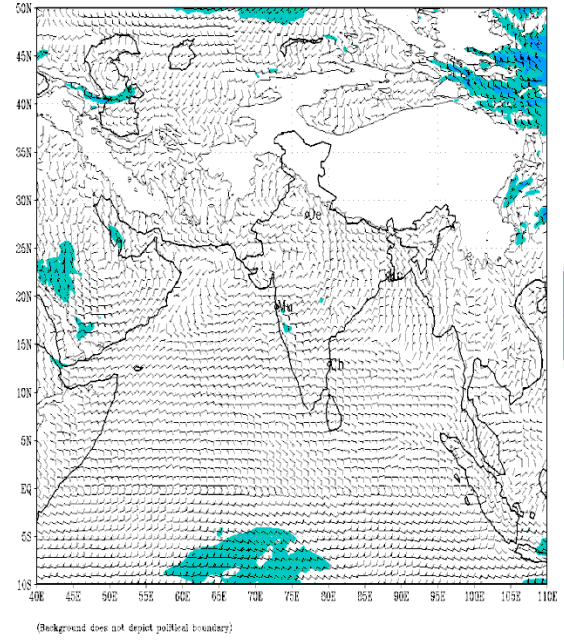
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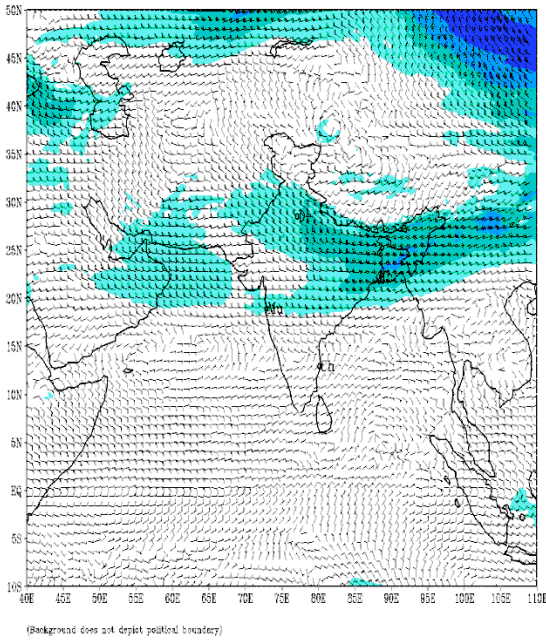
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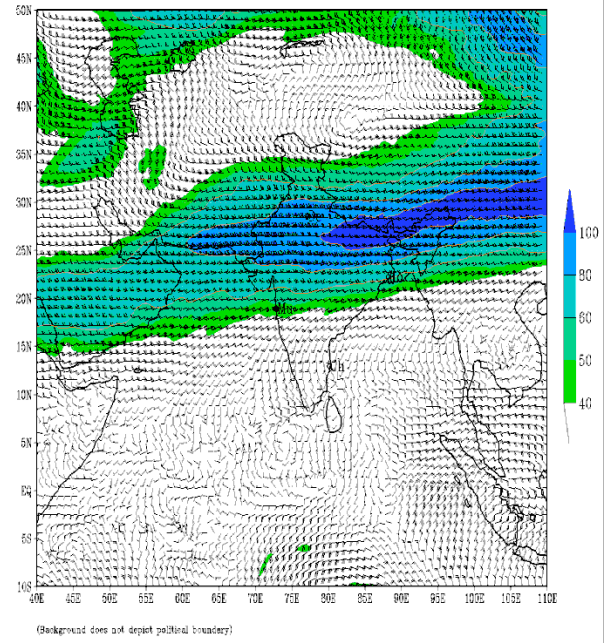
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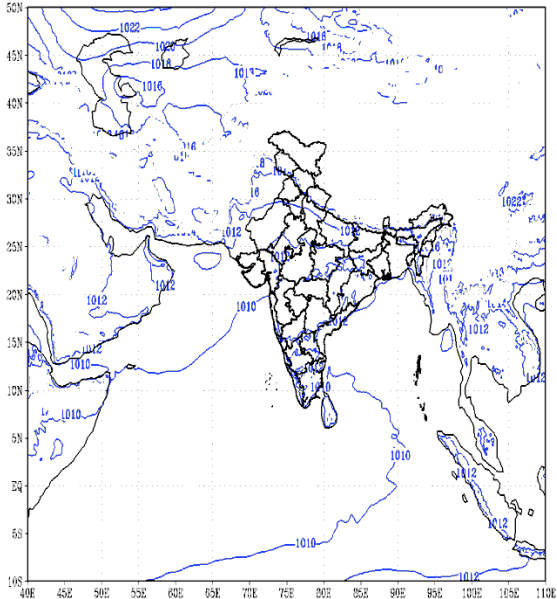
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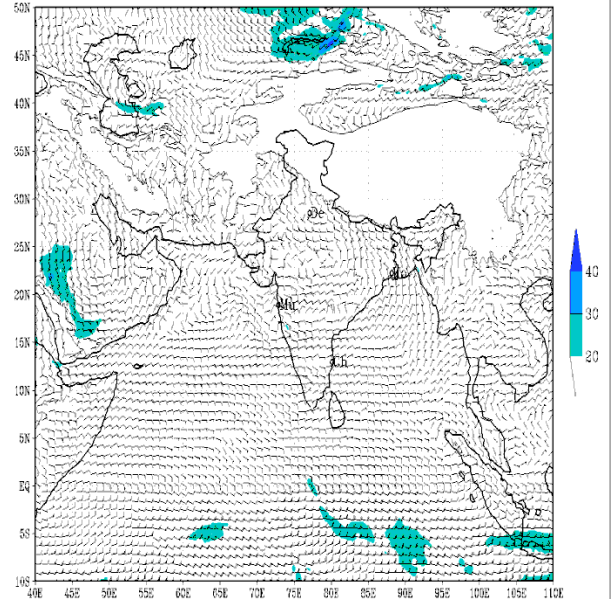
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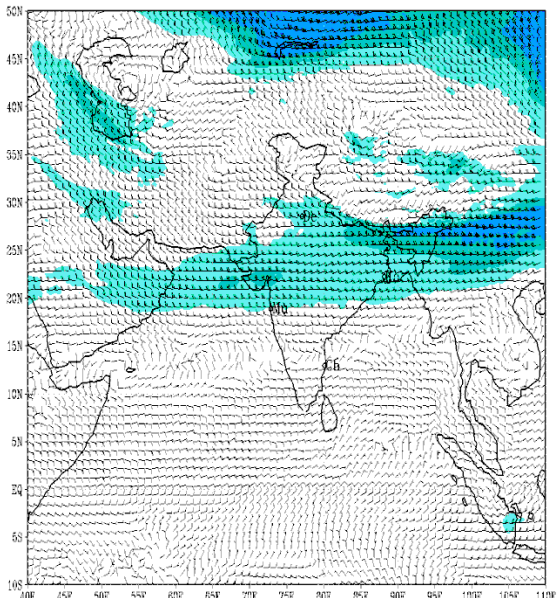
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based on 00 UTC of 29-10-2023 valid for 00 UTC of 05-11-2023



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