



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

Tropical Cyclone Forecast Programme
Report Dated 28th October, 2023

Time of Issue: 1000 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/cm ²	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 ⁻⁶ s ⁻¹)	10-20 over southwest BoB, northeast BoB off southeast Bangladesh coast is seen at 500 hPa level.	10-20 over eastcentral AS AS, northwest AS. No significant zone in upper levels
Low Level convergence (X10 ⁻⁵ s ⁻¹)	5-10 over westcentral BoB	5-10 over central parts of south AS.
Upper Level divergence (X10 ⁻⁵ s ⁻¹)	-5 over major parts of BoB, 10 over eastcentral BoB.	5-10 over north AS, -10 over southeast AS.
Vertical Wind Shear (VWS knots) Low: 05-10 knots	Low to Moderate over south, central & adjoining North BoB and Andaman sea, 20-25 over Comorin area, Gulf	10-20 over south & adjoining eastcentral AS. High over westcentral and North AS.

Mod: 10-20 knots High: >20 knots	of Mannar	
Wind Shear Tendency (knots)	Decreasing tendency over North BoB, Andaman Sea & adjoining eastcentral BoB.	Decreasing tendency over northwest AS. Increasing over the major parts 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 south and central Bay of Bengal and Andaman Sea.

(b) Over the Arabian Sea:-

Scattered Low and Medium Clouds with Embedded Moderate to Intense Convection lay over South Arabian Sea. Scattered Low and Medium Clouds with Embedded isolated weak to moderate convection over Northwest Arabian Sea.

(c) Convection outside India:

Scattered Low And Medium Clouds With Embedded Moderate To Intense Convection lay Over Maldives, Pakistan, Tibet, South Myanmar, Thailand, Gulf of Thailand, Combodia, North Laos, North Vietnam, North Sumatra & adjoining West coast, Strait of Malacca, South Borneo, South China Sea, Phillipines, Madagascar and over Indian Ocean between Latitude 4.0S to 35.0S, Longitude 46.0E to 74.0E.

M.J.O. Index:

MJO index is in Phase 1 with amplitude less than 1 for next 6days & would move across phase 8 and 7 thereafter.

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.	No significant system.
IMD-GEFS	No significant system.	No significant system.
IMD-WRF	No significant system.	A cycir (cyclonic circulation) over southeast AS on 30 th with nearly westwards movement on 31 st Oct
NCMRWF-NCUM	No significant system.	A cycir over southeast AS on 31 st with nearly westwards movement towards Somalia coast as an LPA (low pressure area) on 3 rd Nov
NCMRWF-NEPS	No significant system.	No significant system.
NCMRWF-UM (Regional)	No significant system.	No significant system.
ECMWF	No significant system.	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.
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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:

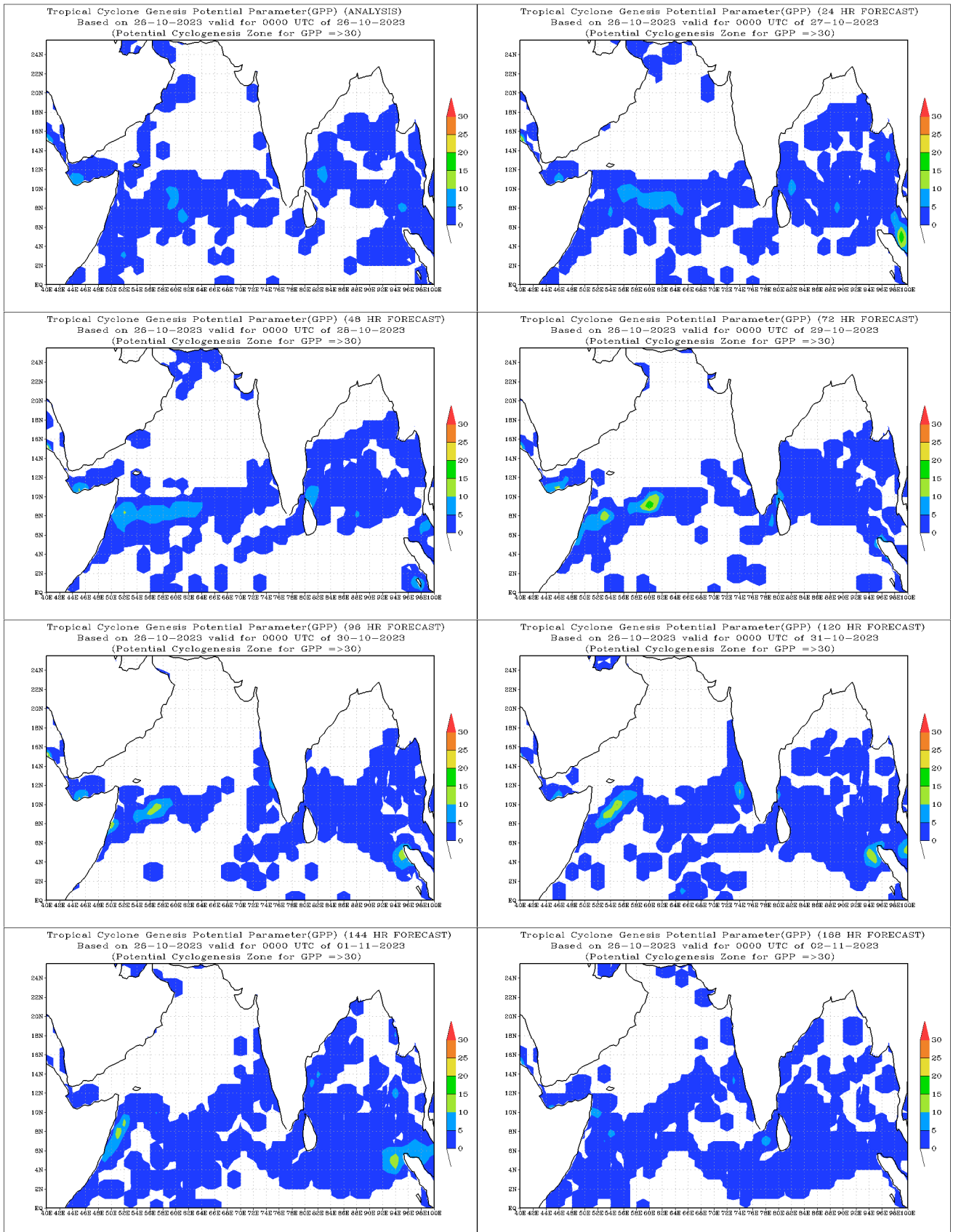
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

2. For the Arabian Sea:

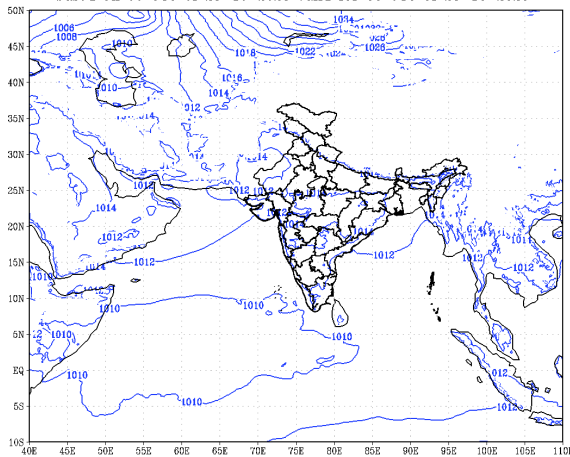
Most of the models are indicating that there will be no significant system over Arabian Sea for the next seven days. However, a cyclonic circulation is likely over southeast Arabian Sea around 31st October with nearly westwards movement towards Somalia coast (NCUM and WRF).

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

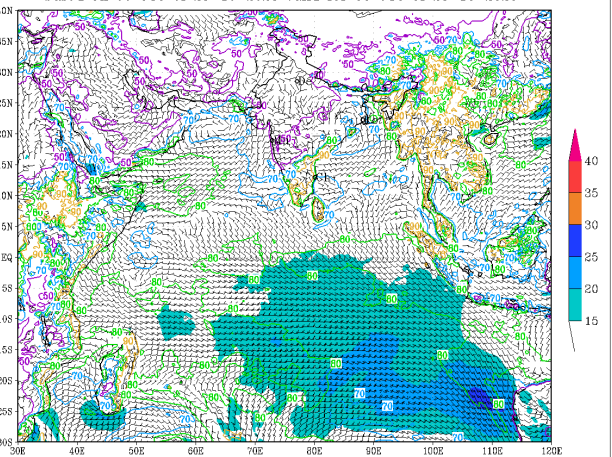


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (00 HR)
 based on 00 UTC of 28-10-2023 valid for 00 UTC of 28-10-2023



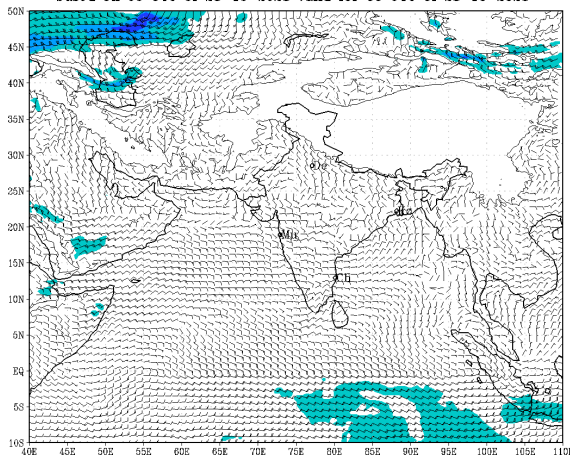
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IMD GFS (T1534) 10m WIND (kt) AND 2m RH (%) FORECAST (00 HR)
 based on 00 UTC of 28-10-2023 valid for 00 UTC of 28-10-2023



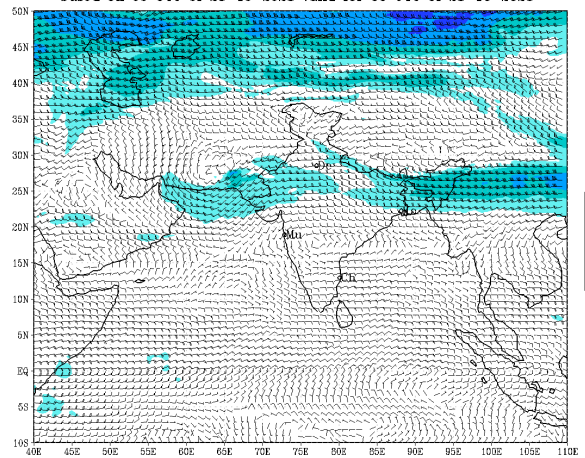
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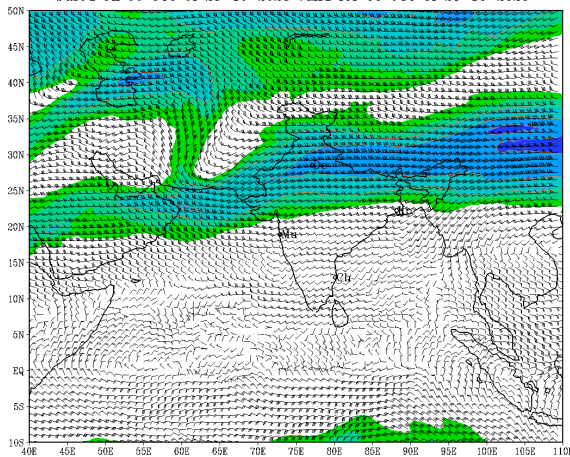
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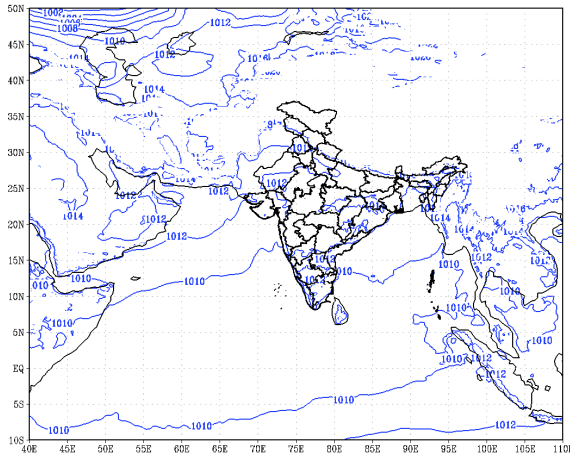
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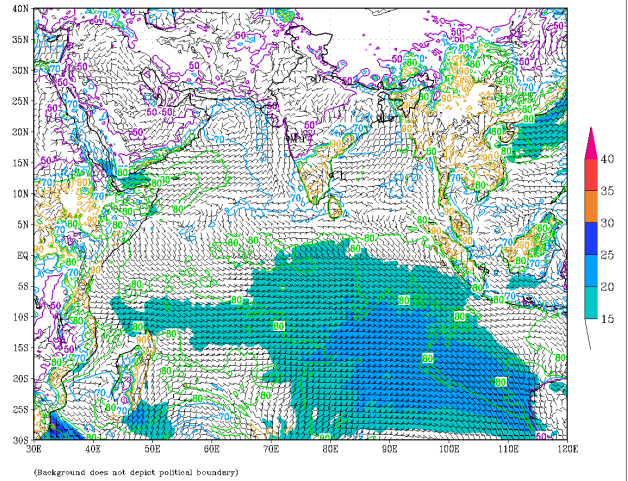


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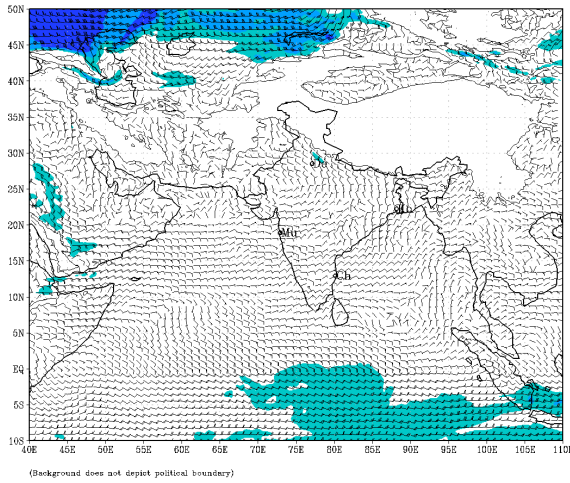
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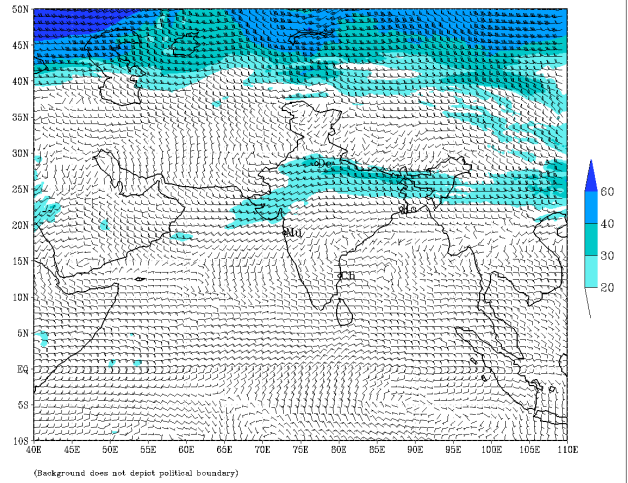
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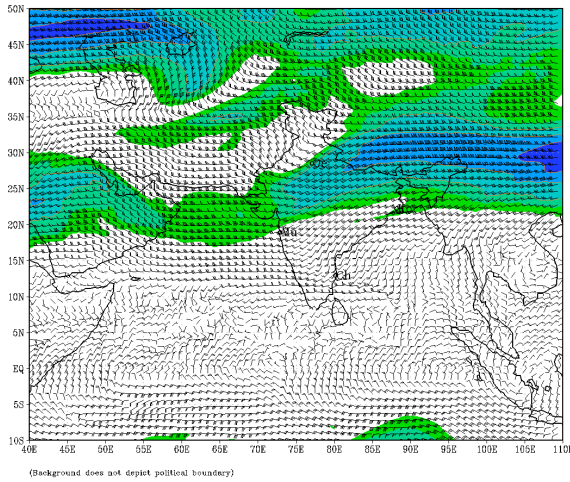
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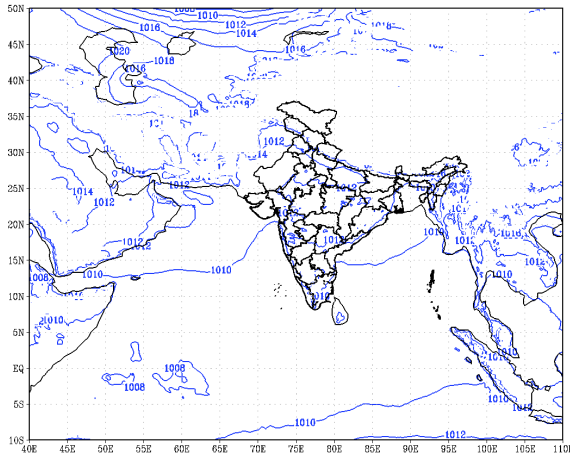
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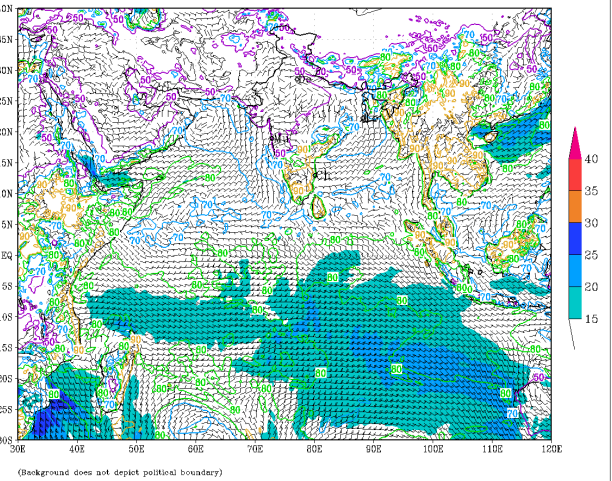
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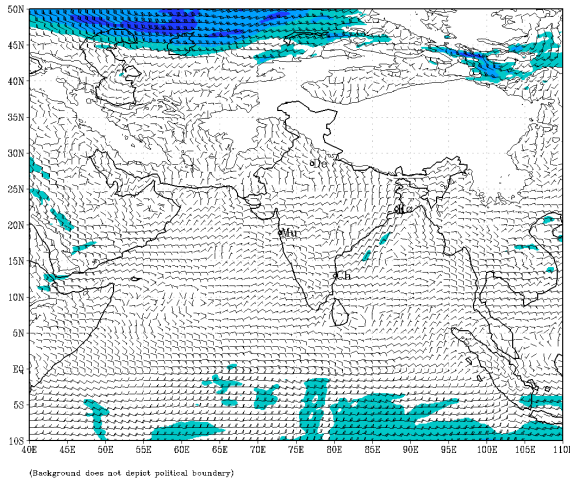
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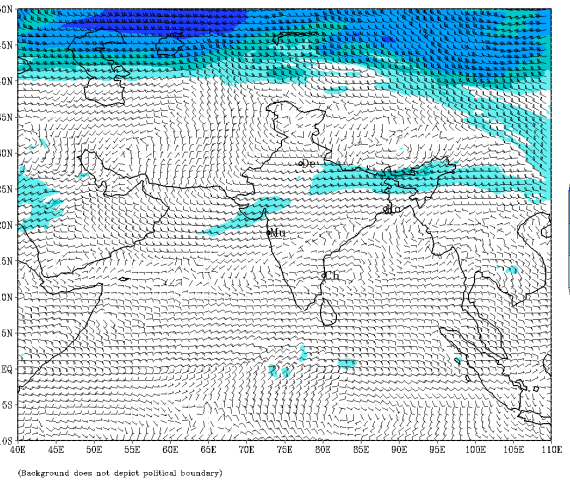
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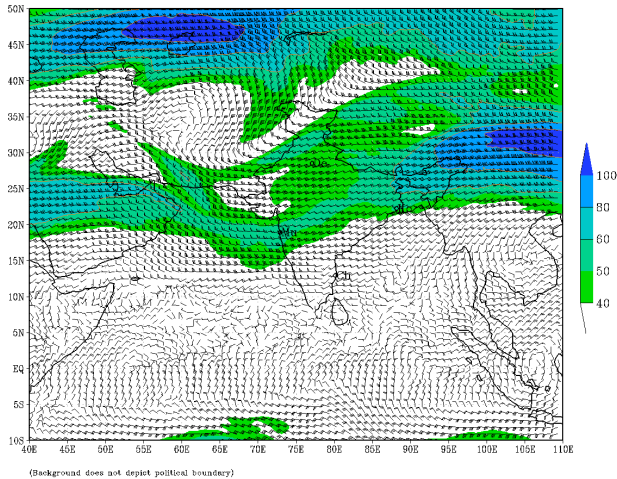
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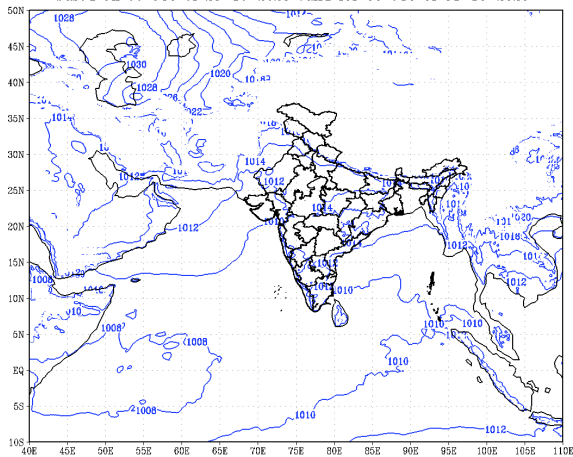
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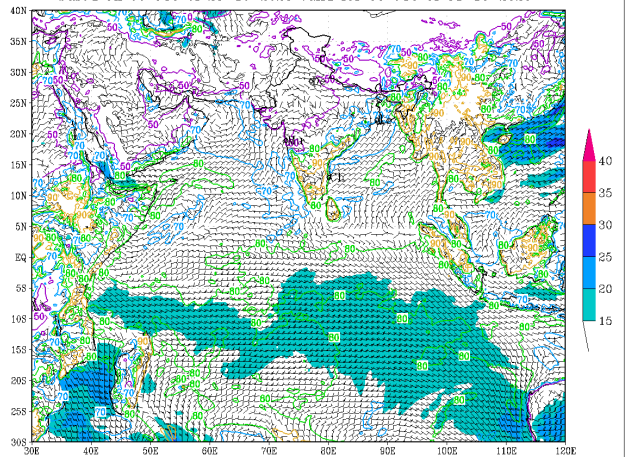


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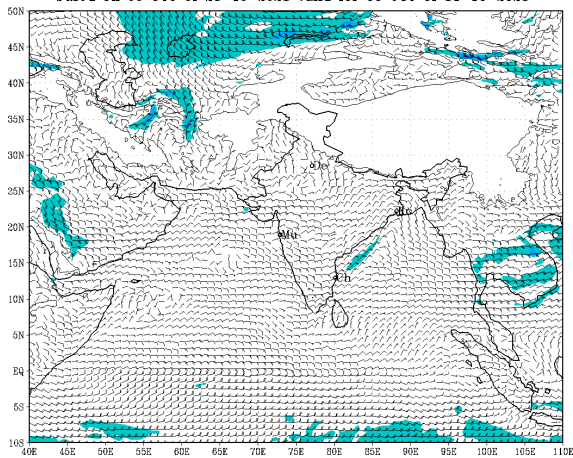
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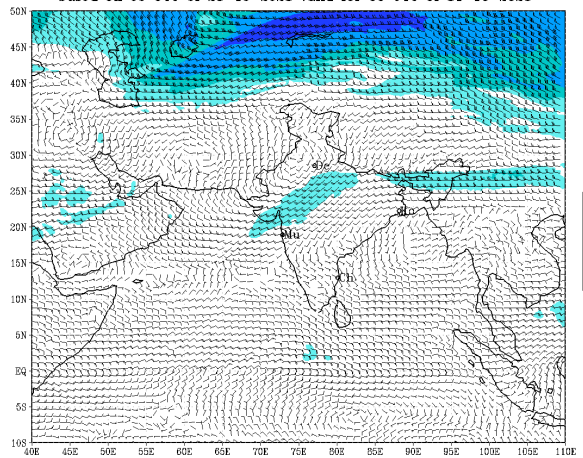
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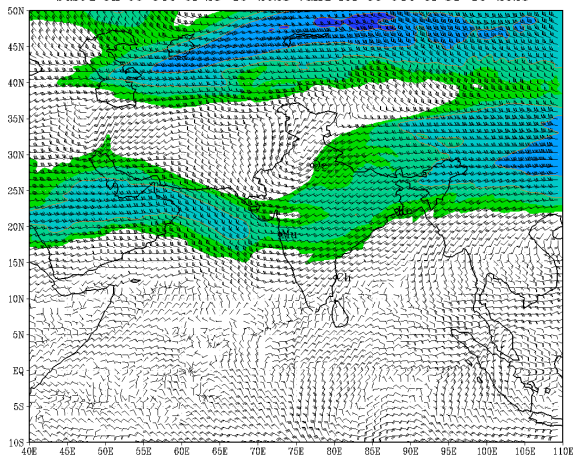
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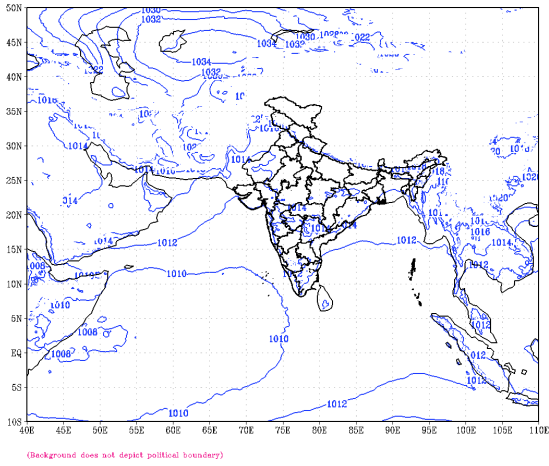
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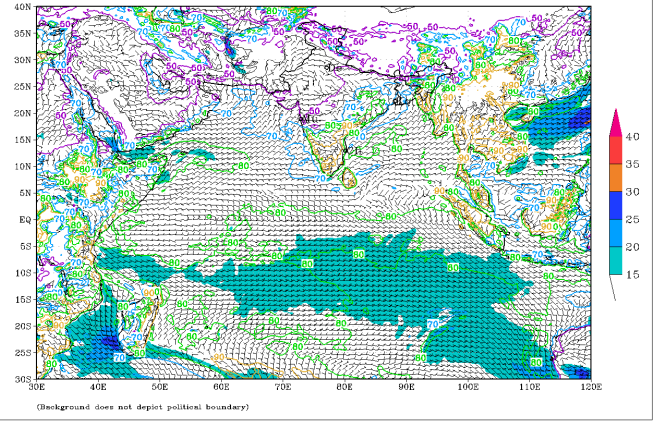


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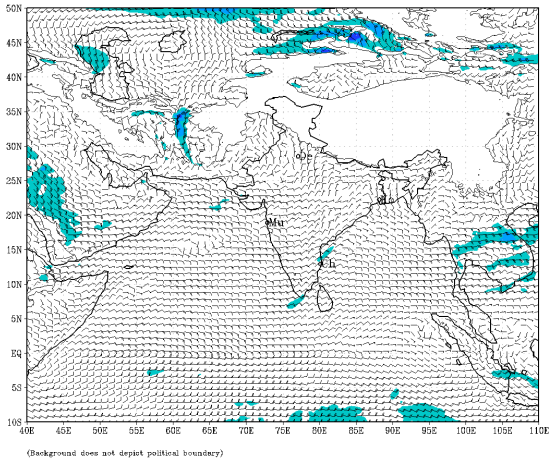
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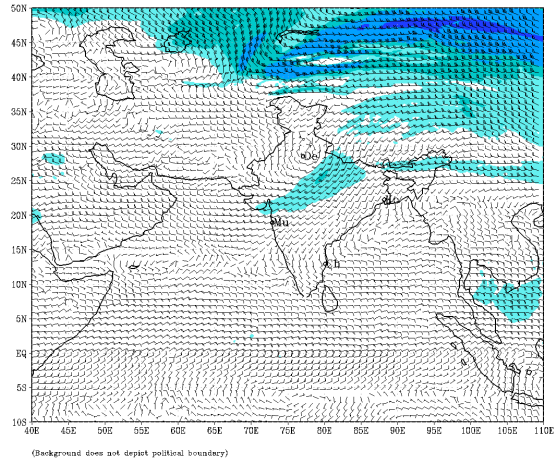
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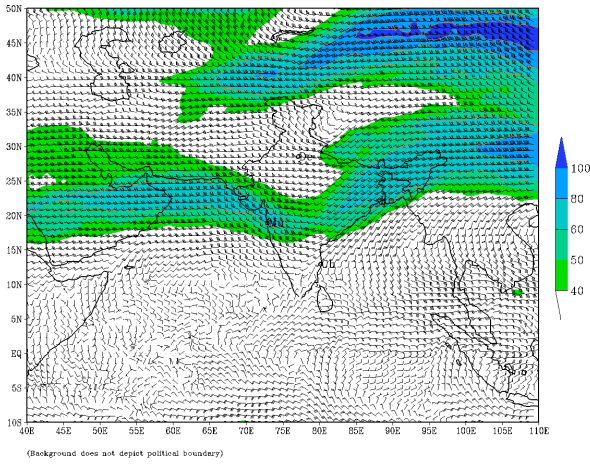
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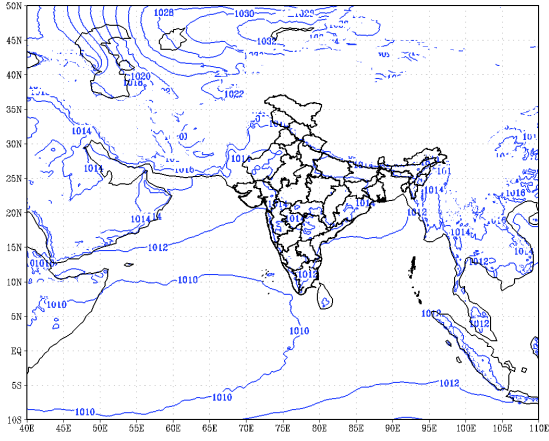
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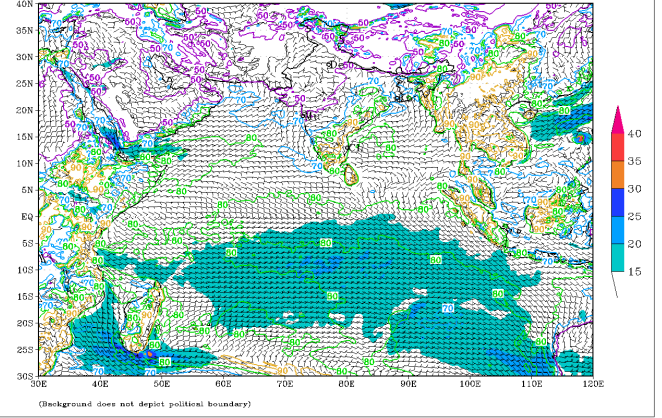
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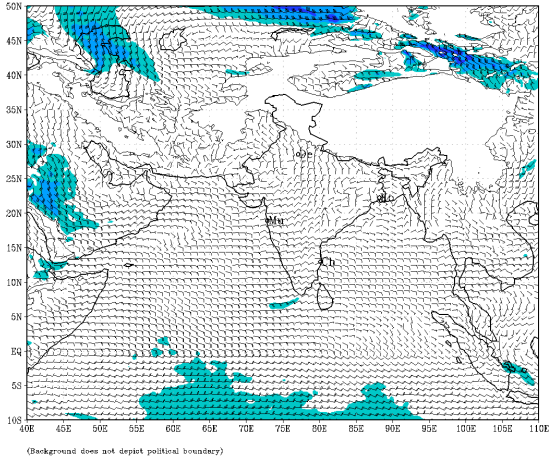
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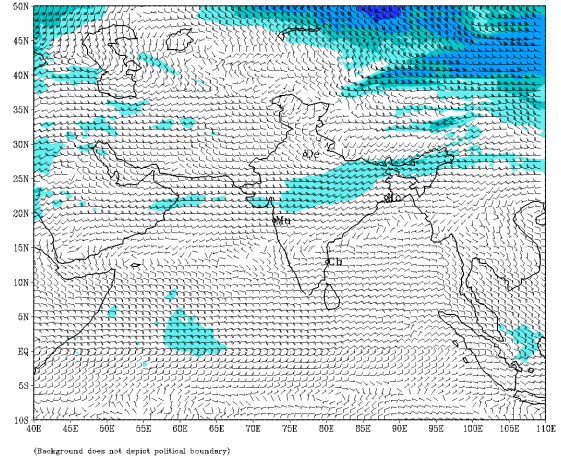
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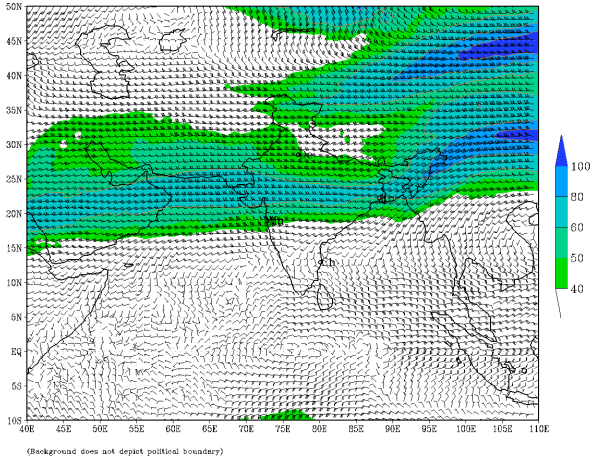
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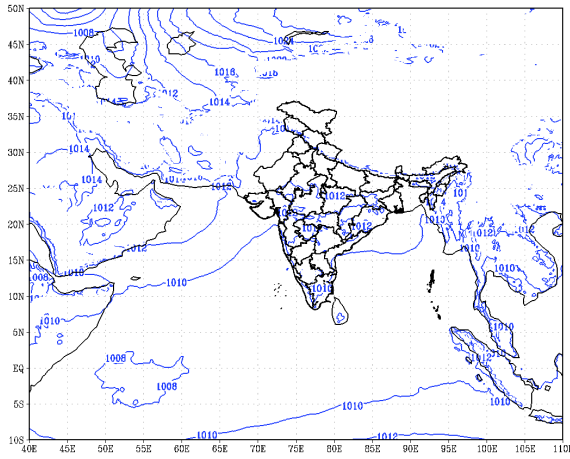
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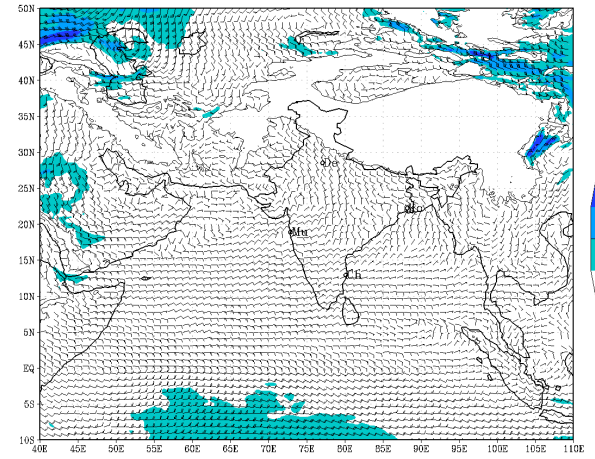


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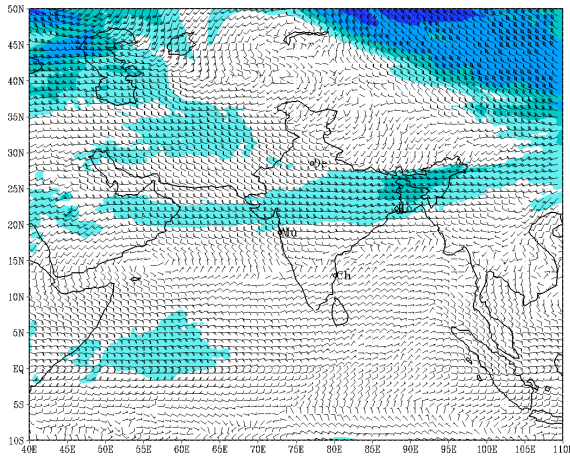
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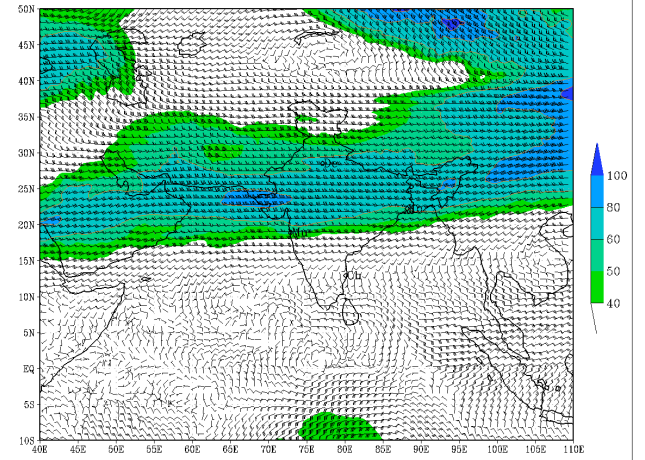
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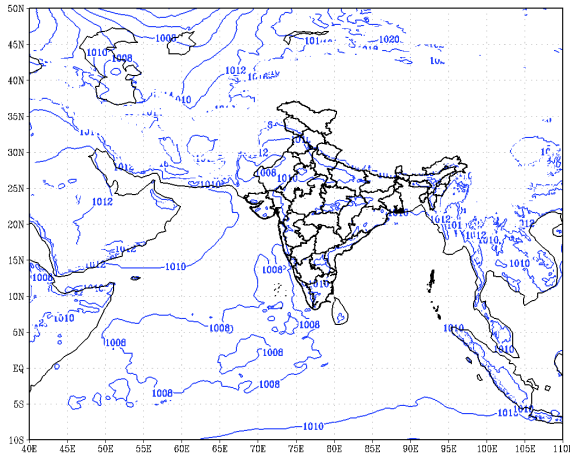
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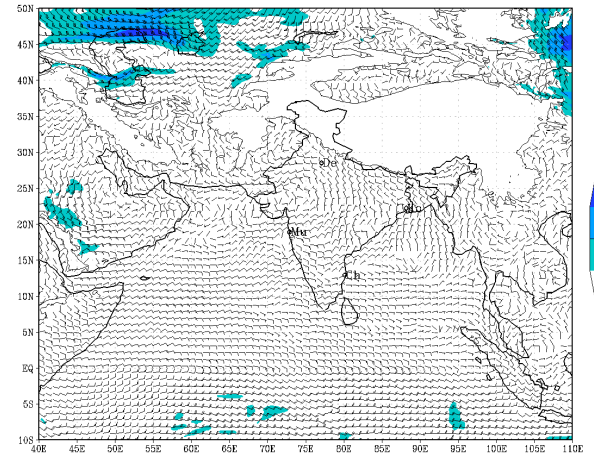
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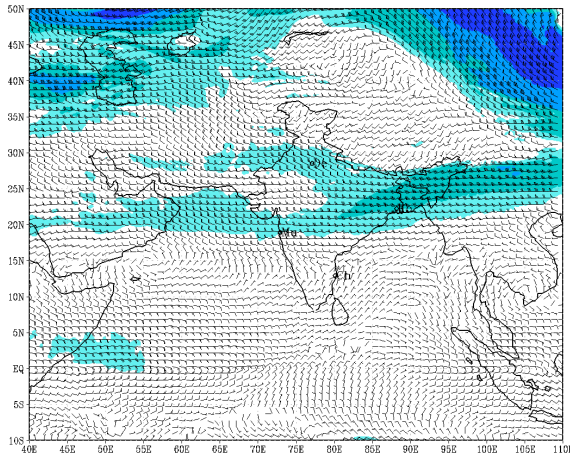
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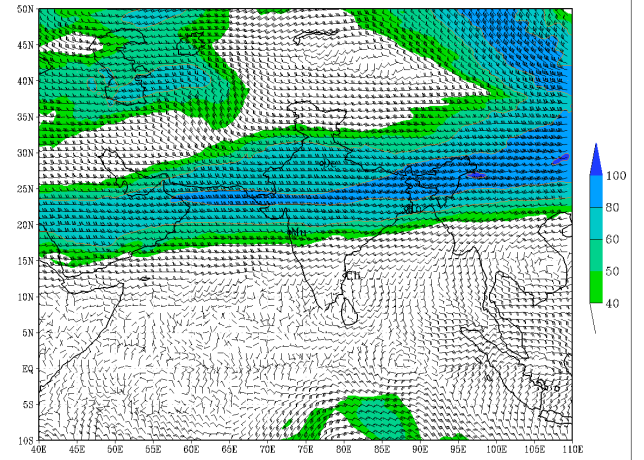
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