



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

**Tropical Cyclone Forecast Programme
Report Dated 26th December 2022**

Time of Issue: 1200 UTC

Synoptic features (based on 0600 UTC analysis):

- Yesterday's depression over Sri Lanka emerged into Comorin Area at 0000 UTC and further weakened into a low pressure area at 0300 UTC of today the 26th December, 2022. It is likely to move west-northwestwards towards Southeast Arabian Sea.

Dynamical and thermo-dynamical features

Parameter	Bay of Bengal (BoB)	Arabian Sea (AS)
Sea Surface Temperature (SST) °C	About 27 around the system, 28 over the south Andaman Sea and adjoining southeast Bay of Bengal, eastcentral BoB, 29-30 over north Andaman Sea, less than 25 over north BoB.	About 29-30°C over the Comorin Area, southeast and adjoining southwest AS, 26-28°C over eastcentral and adjoining north AS..
Tropical Cyclone Heat Potential (TCHP) kJ/cm²	Not available	Not available
Cyclonic Relative vorticity (X10⁻⁶s⁻¹)	20-30 over southwest BoB off Southeast Sri Lanka coast	50 to the south of LPA over Comorin Area with vertical extension upto 200 hPa levels.
Low Level convergence (X10⁻⁵ s⁻¹)	05 over southwest BoB	10 around system centre.
Upper Level divergence (X10⁻⁵ s⁻¹)	05-10 over South Andaman Sea and 05 over southeast BoB	20 to the south of the system centre over Comorin and neighbourhood.
Vertical Wind Shear (VWS knots)	05-20 over southwest BoB.	05-20 over south and adjoining central AS.
Wind Shear Tendency (knots)	Decreasing over southwest BoB.	Decreasing over Comorin and south AS.
Upper tropospheric Ridge	Along 13°N over the BoB.	Along 14.0°N over the AS.
Trough in westerlies		

Satellite observations based on INSAT imagery (0600 UTC):

a) Over the BoB & Andaman Sea:-

Scattered to broken low/med clouds with embedded intense to very intense convection lay over South BoB and Andaman Sea and weak convection lay over central BoB.

b) Over the Arabian Sea:-

Scattered to broken low and medium clouds with embedded intense to very intense convection lay over Comorin Area, North Maldives and neighbourhood and isolated weak to moderate convection over northwest and extreme southwest Arabian Sea. Minimum cloud top temperature is -93degree Celsius.

M.J.O. Index:

The Madden Julian Oscillation (MJO) Index is currently in Phase 5 with amplitude greater than 1. Thereafter, it would move to phase 6 with amplitude greater than 1 from 26th December onwards.

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

Cyclonic Storm Darian over South Indian ocean centered near 16.6S/85.1E. Intensity of the system is T 5.5/5.5.

Model guidance based on 0000 UTC for the next 7 days

MODEL GUIDANCE	Bay of Bengal (BoB)	Arabian Sea (AS)
IMD-GFS	No significant system	Low pressure area over Comorin Area on 26/0000 UTC to move west-northwestwards and become less marked on 28/0000 UTC.
IMD-GEFS	No significant system	Low pressure area over Comorin Area on 26/0000 UTC to move west-northwestwards and become less marked on 28/0000 UTC.
GEFS Probabilistic guidance	NA	NA
IMD WRF	No significant system	Low pressure area over Comorin Area on 26/0000 UTC to move west-northwestwards and become less marked on 28/0000 UTC.
NCMRWF-NCUM (G)	No significant system	Low pressure area over Comorin Area on 26 th , LPA over Lakshadweep on 27 th , to move westwards and become less marked on 29 th Dec.
NCMRWF-NEPS	No significant system	Low pressure area over Comorin Area on 26 th , LPA over Lakshadweep on 27 th , to move westwards and become less marked on 29 th Dec.
NCMRWF-UM (Regional)	No significant system	Low pressure area over Comorin Area on 26 th , LPA over Lakshadweep on 27 th , to move westwards and become less marked on 29 th Dec.
ECMWF	No significant system	Cyclonic circulation over Comorin on 26 th /0000 UTC to move nearly westwards with no intensification.
ECMWF	Not available	Formation of depression over Arabian

ensemble		Sea during next 2-3 days.
NCEP-GFS	No significant system	Low pressure area over Comorin Area on 26/0000 UTC to move west-northwestwards and become less marked on 28/0000 UTC.
IMD MME	No significant system	Low pressure area over Comorin Area on 26/0000 UTC to move west-northwestwards and become less marked on 28/0000 UTC.
IMD HWRF	No guidance	No guidance
IMD-Genesis Potential Parameter (GPP)	No significant zone over BoB	No significant zone over AS

Summary and conclusion:

Model guidance: Most of the models are indicating that the low pressure area over Comorin Area on 26th morning would move west-northwestwards and become less marked during next 3-4 days.

In view of all the above, it is inferred that

1. For the Bay of Bengal:

No significant system is likely over the Bay of Bengal during next 7 days.

Probability of cyclogenesis (formation of depression and above intensity systems) over the BAY 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 Arabian Sea:

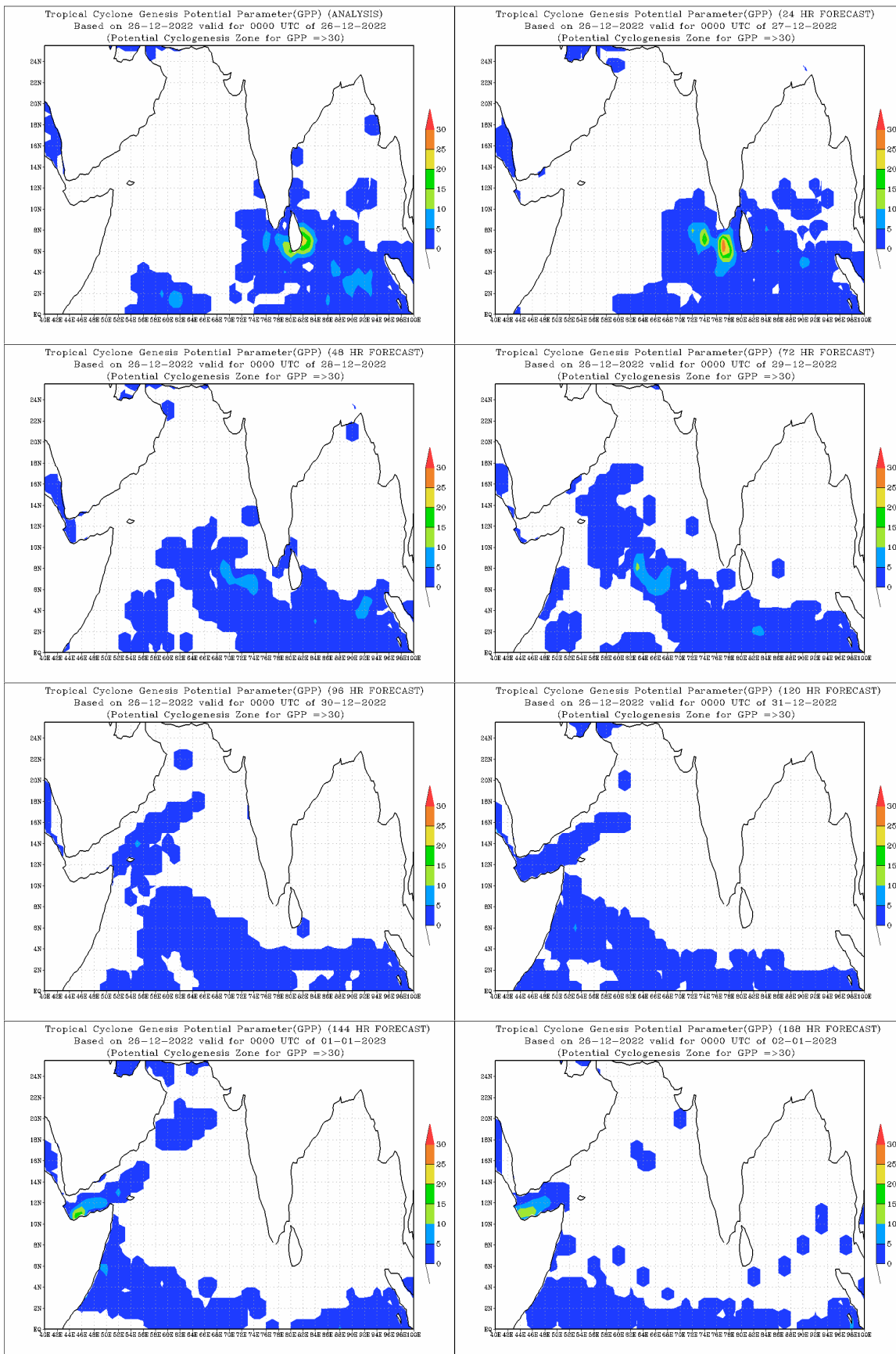
The low pressure area over Comorin Area is likely to move west-northwestwards towards southeast Arabian Sea.

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

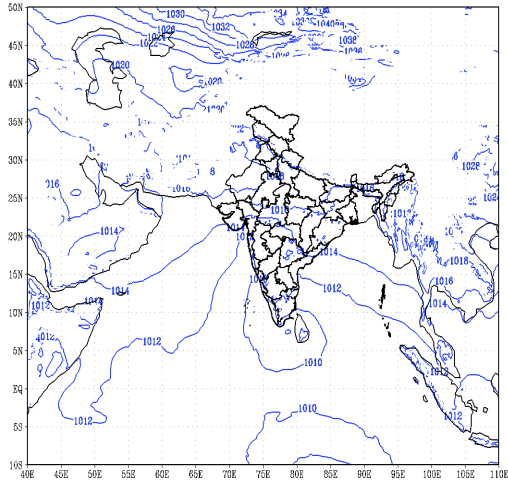
24 HOURS	24-48 HOURS	48-72 HOURS	72-96 HOURS	96-120 HOURS	120-144 HOURS	144-168 HOURS
NIL	NIL	NIL	NIL	NIL	NIL	NIL

Advisory: NIL

IOP: NIL

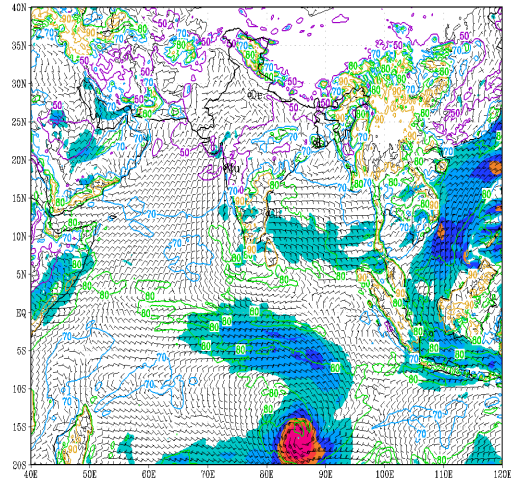


IMD :GFS MODEL(12 Km) MSL Pressure (hPa) FORECAST (00 HR)
based on 00 UTC of 26-12-2022 valid for 00 UTC of 26-12-2022



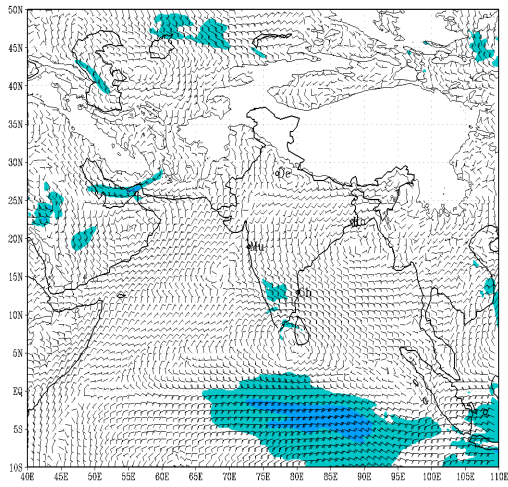
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IMD: GFS(12Km) 10m WIND (barb)& GUST (shaded:kt) FORECAST (00 HR)
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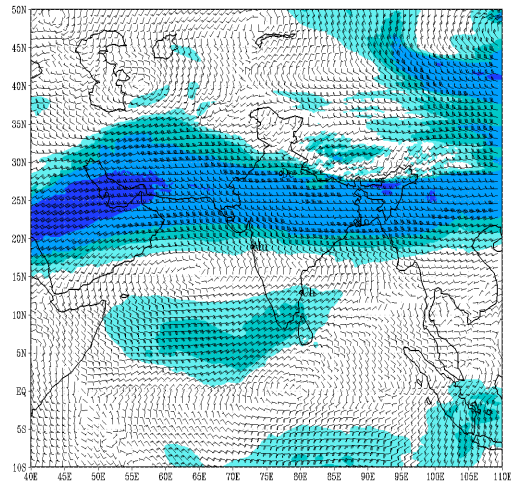
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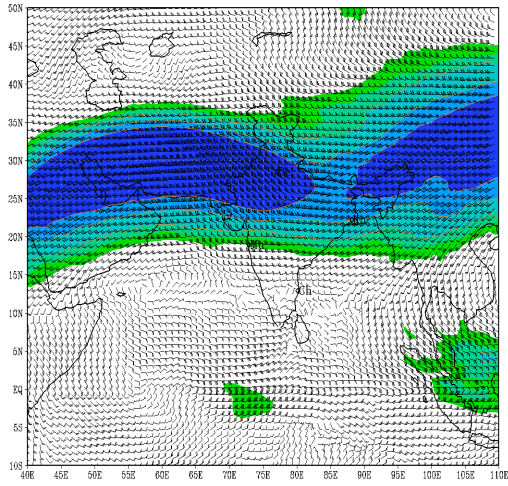
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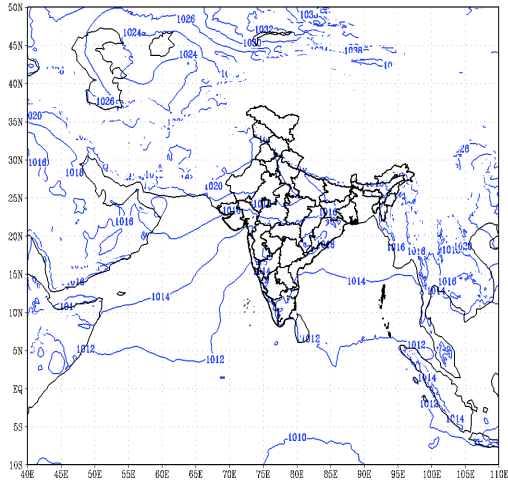
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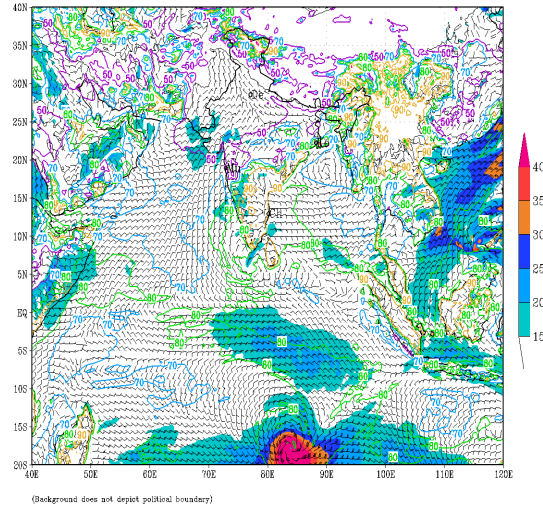


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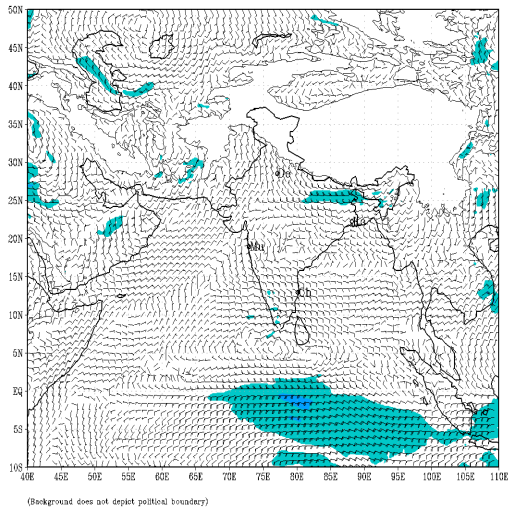
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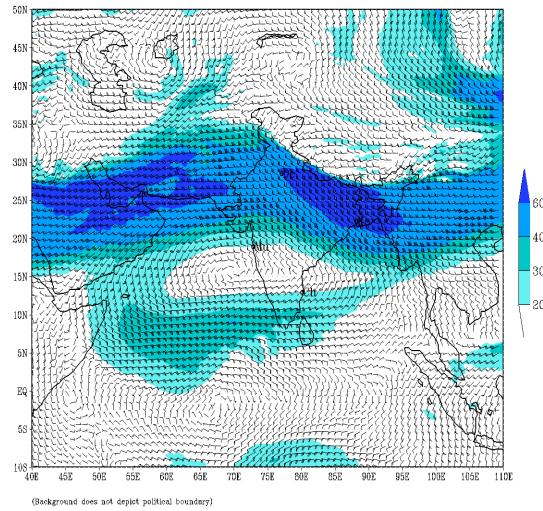
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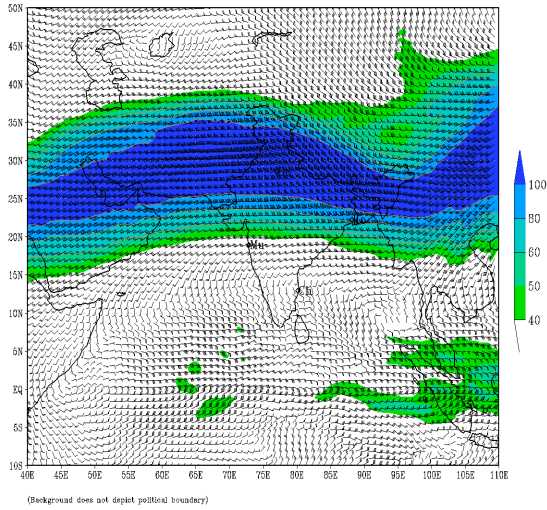
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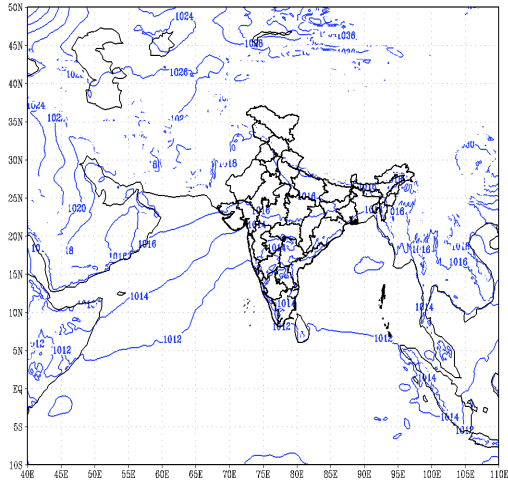
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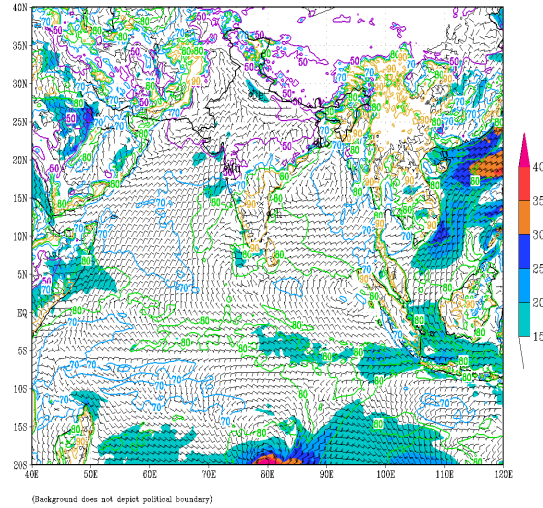
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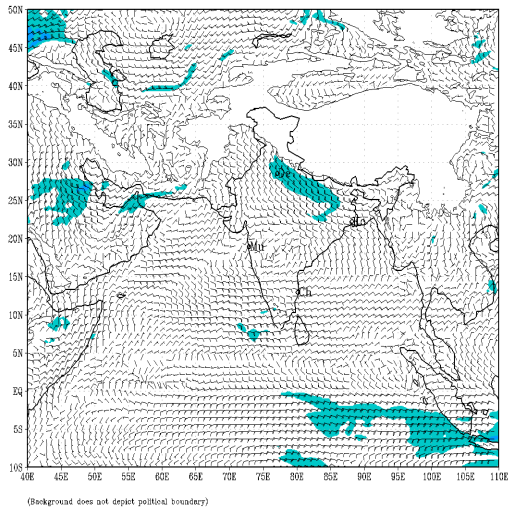
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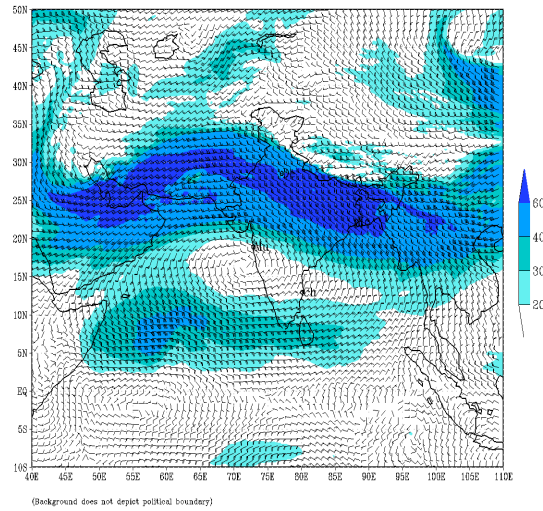
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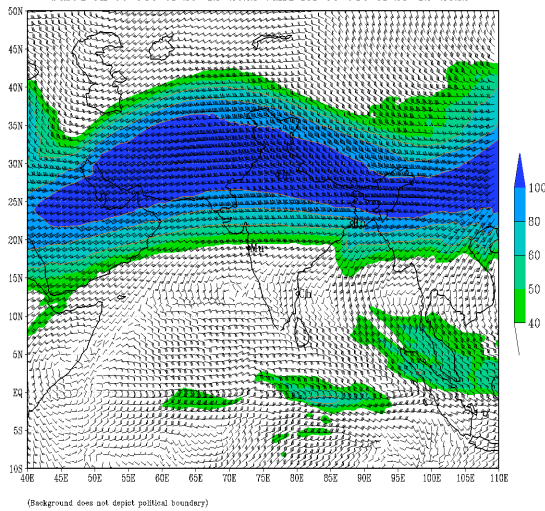
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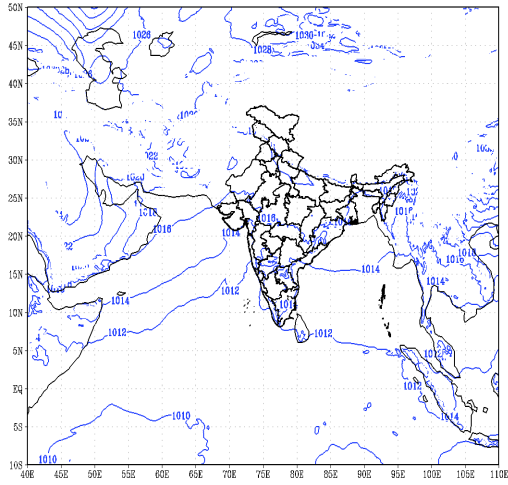
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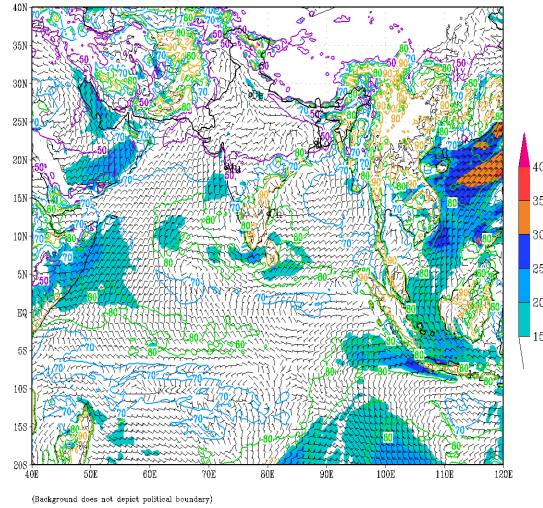
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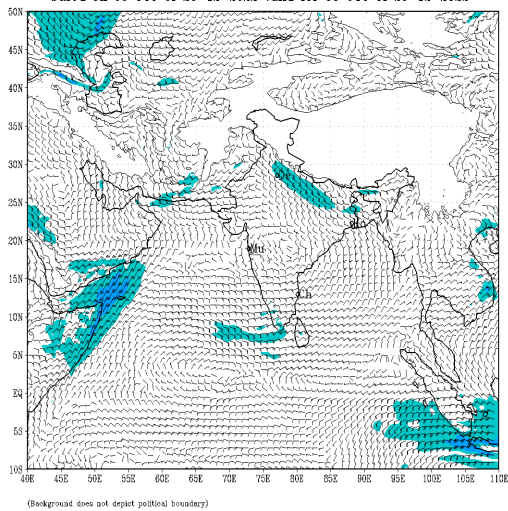
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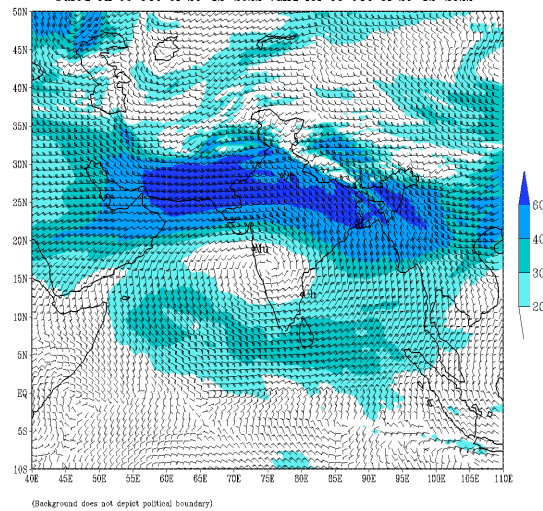
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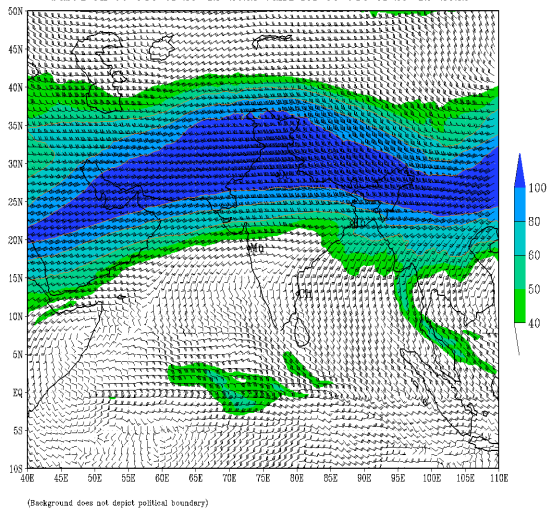
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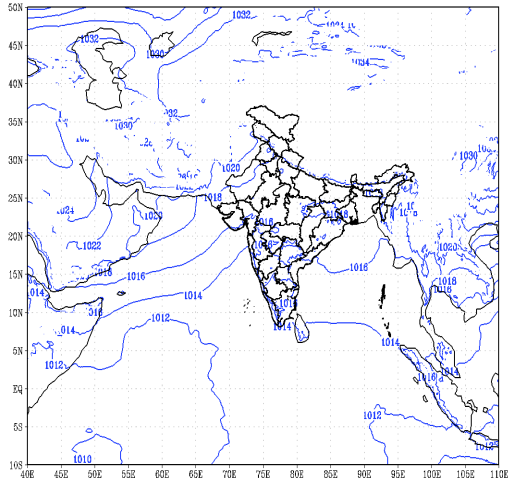
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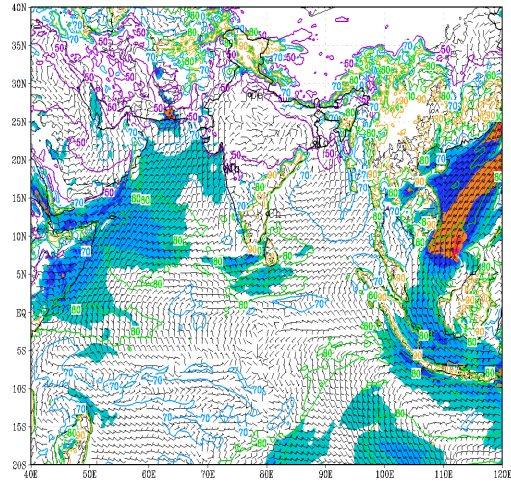


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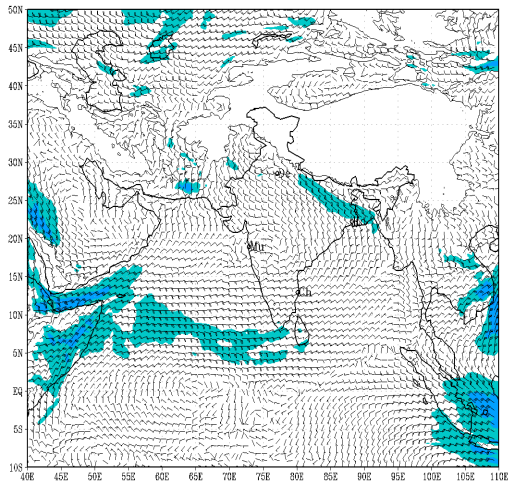
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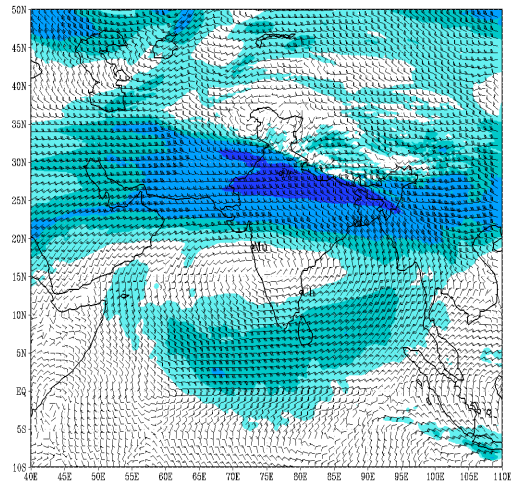
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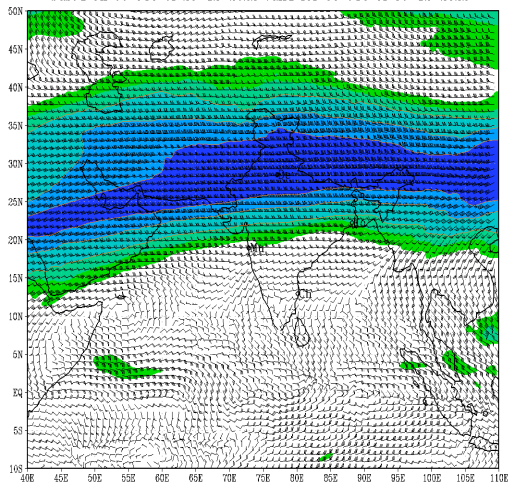
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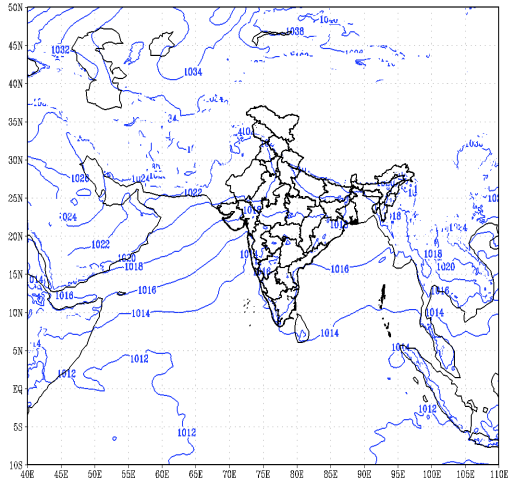
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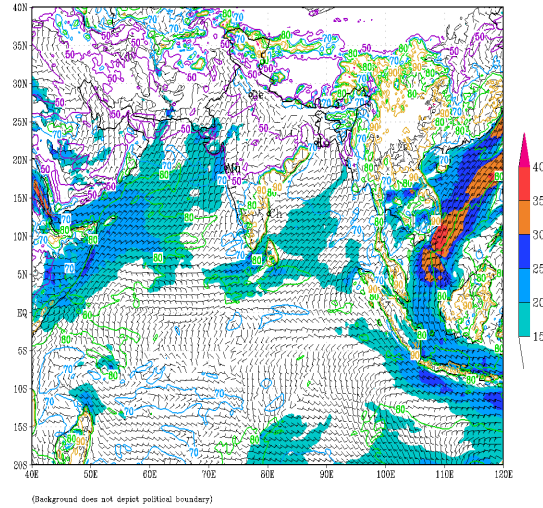


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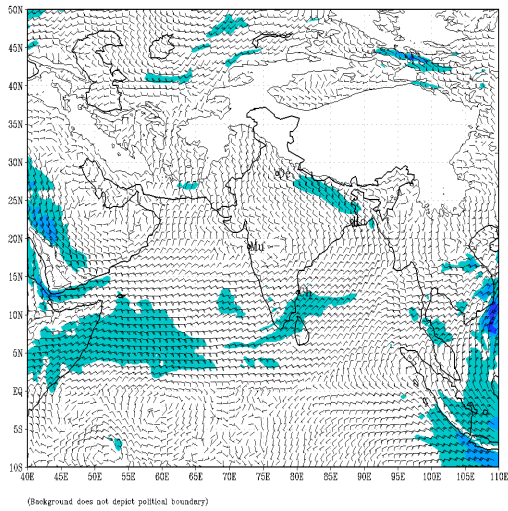
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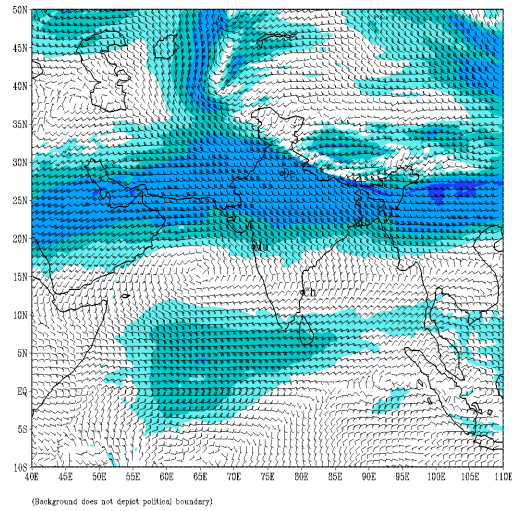
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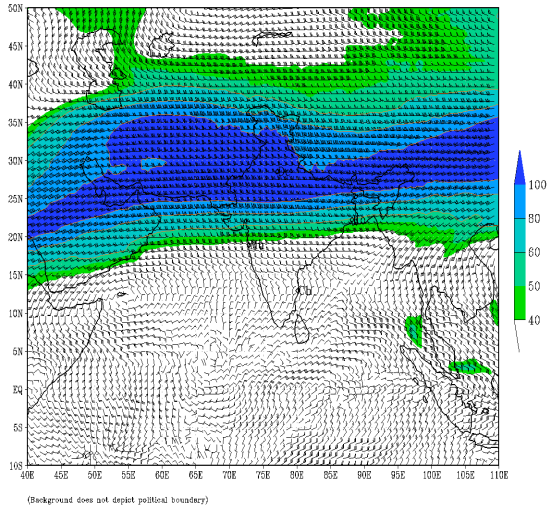
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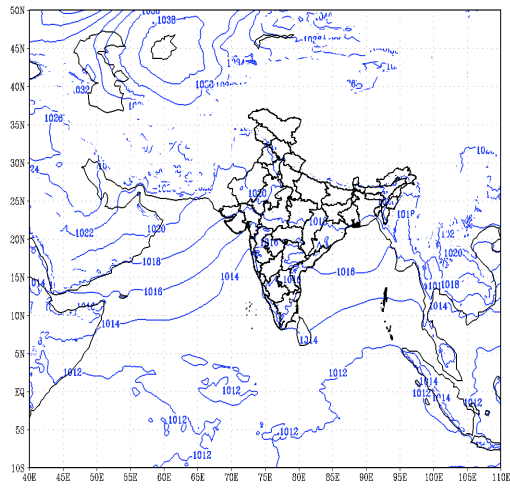
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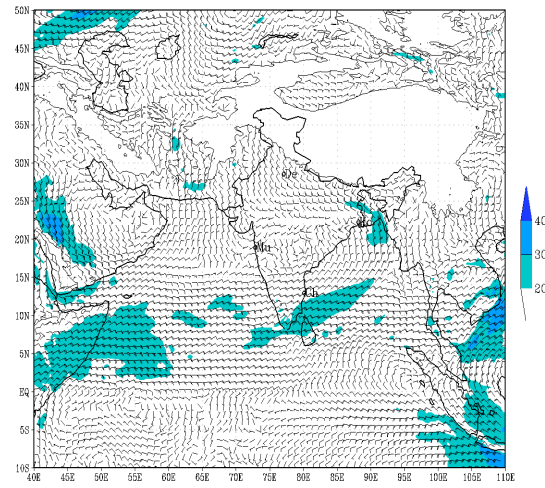


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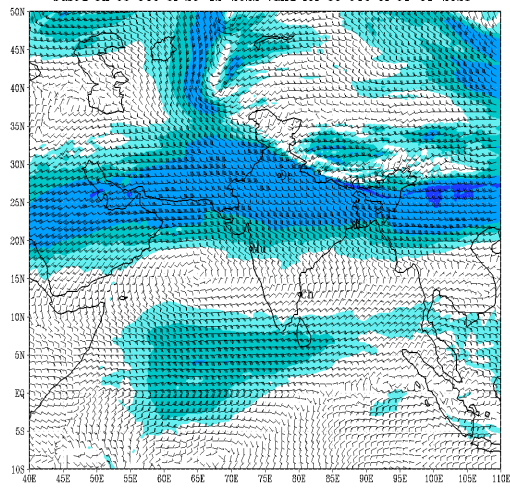
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based on 00 UTC of 28-12-2022 valid for 00 UTC of 01-01-2023



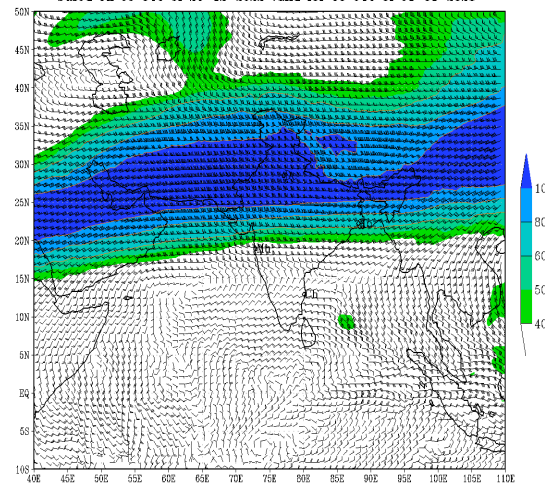
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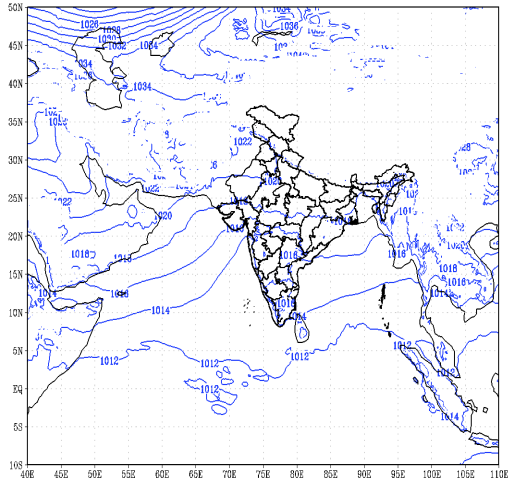
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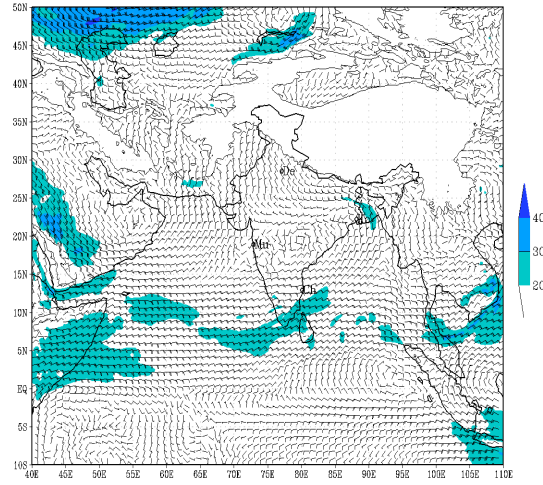
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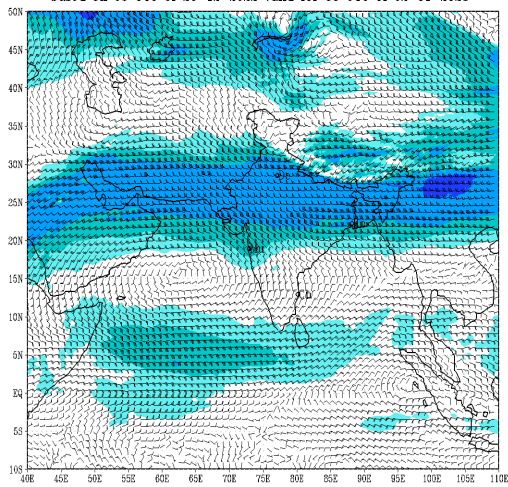
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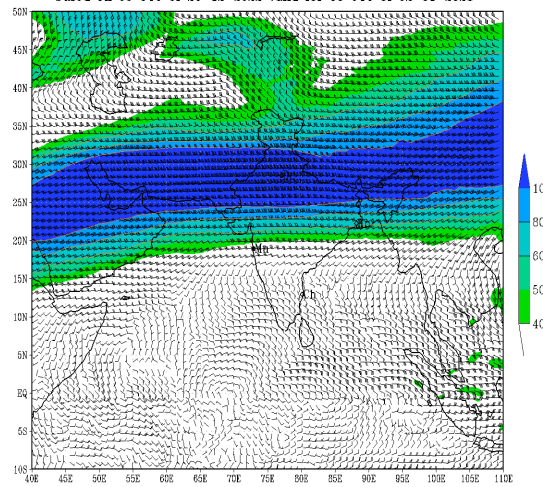
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based on 00 UTC of 28-12-2022 valid for 00 UTC of 02-01-2023



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