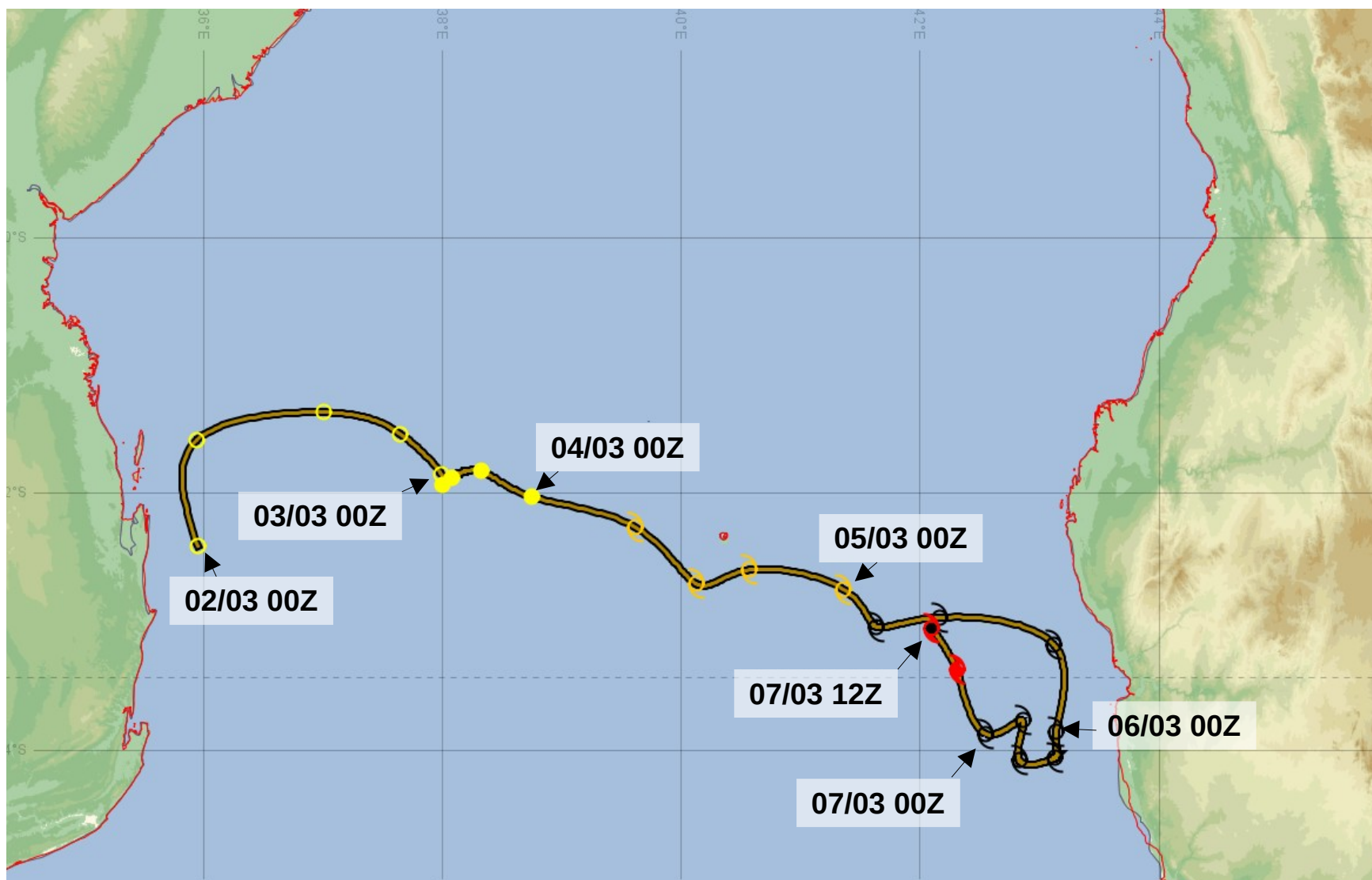


Exercise RSMC Forecast : FREDDY 07/03 12UTC

Tarik Kriat / Sébastien Langlade / Adrien Colomb
RAI Training Course on Tropical Cyclones – 11th session
September 2023

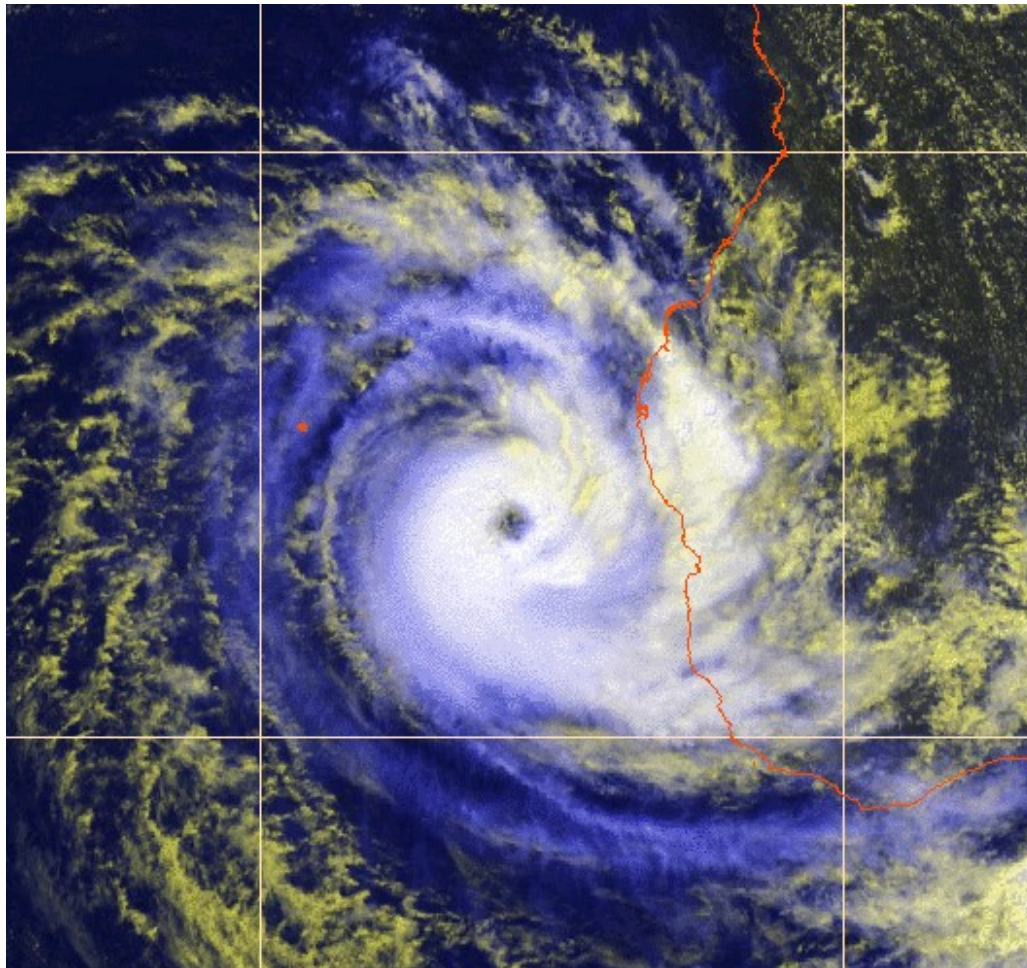
Bestrack



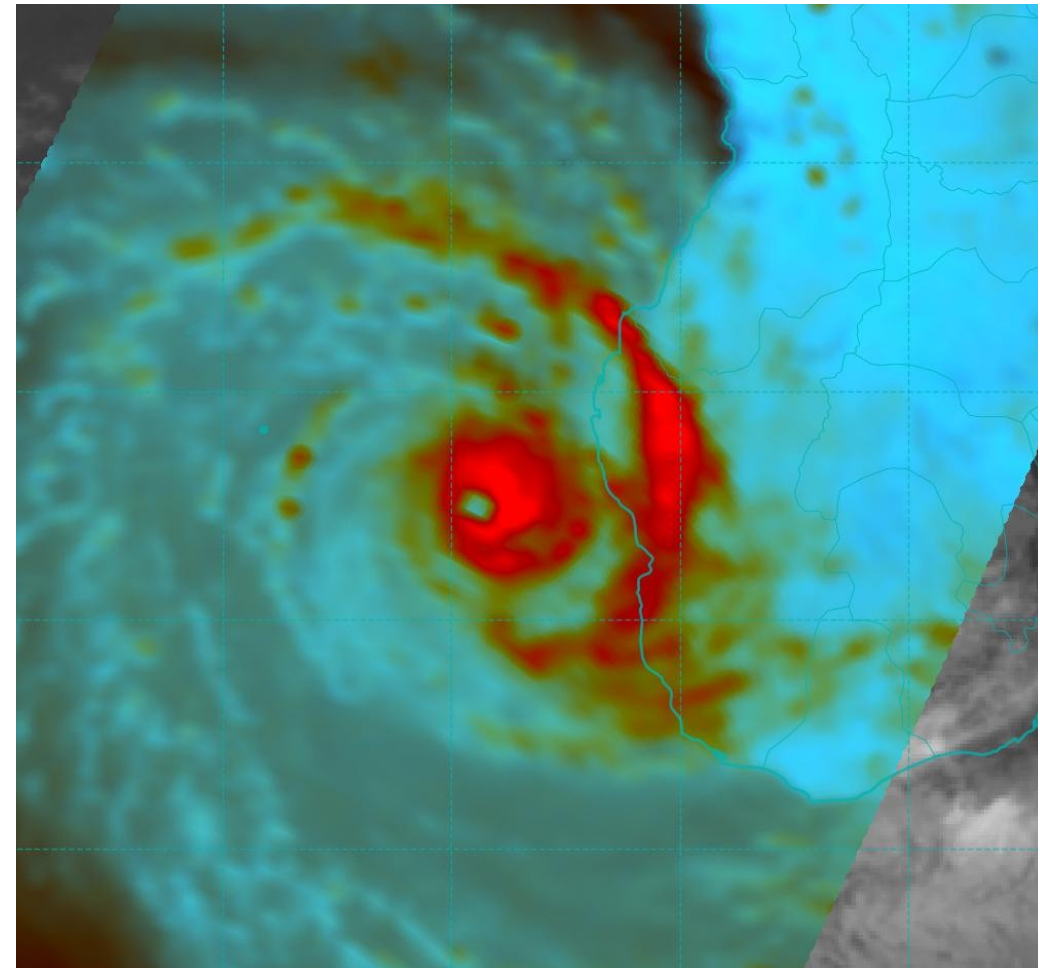
Analysis

Tropical Cyclone FREDDY 965hPa 75kt moving NW 4kt at 12Z

IR+HRV MSG2 10Z



GPM Color 1016Z

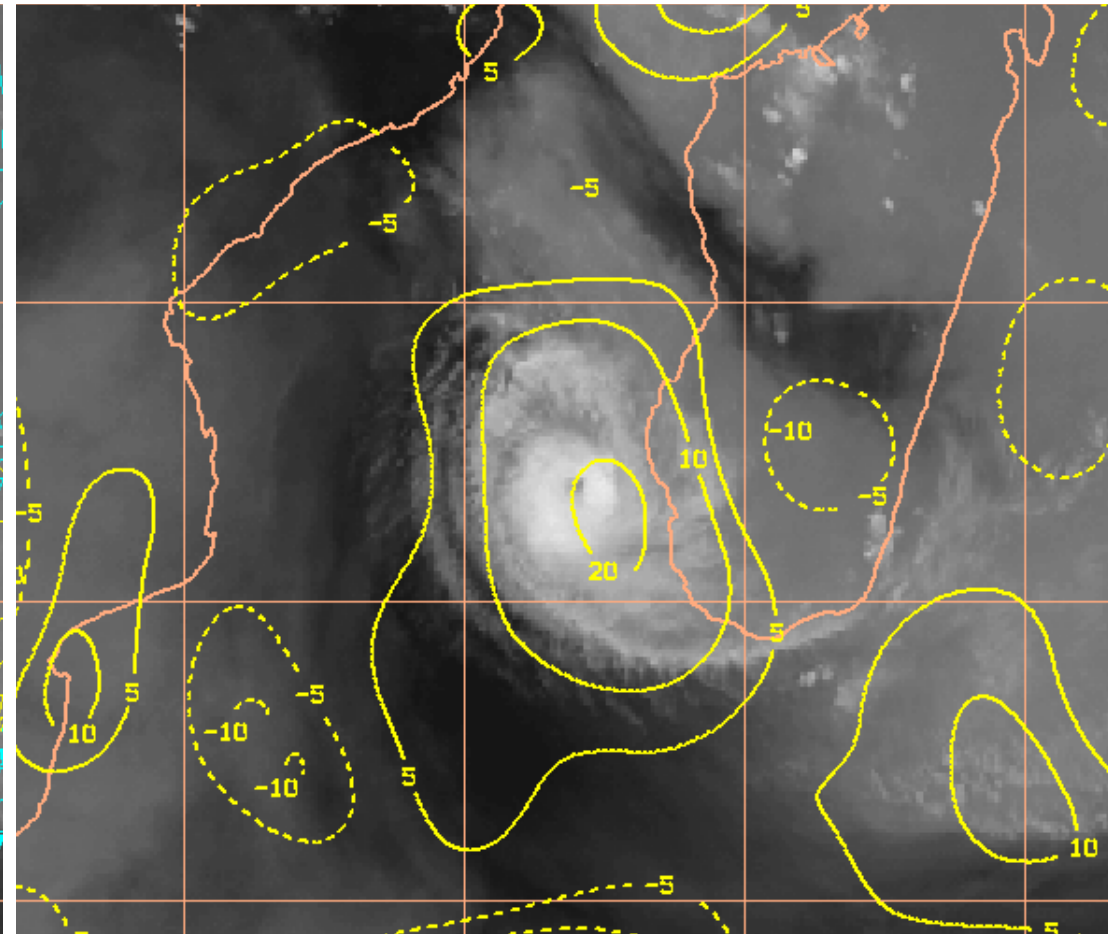


Analysis

Tropical Cyclone FREDDY 965hPa 75kt moving NW 4kt at 12Z



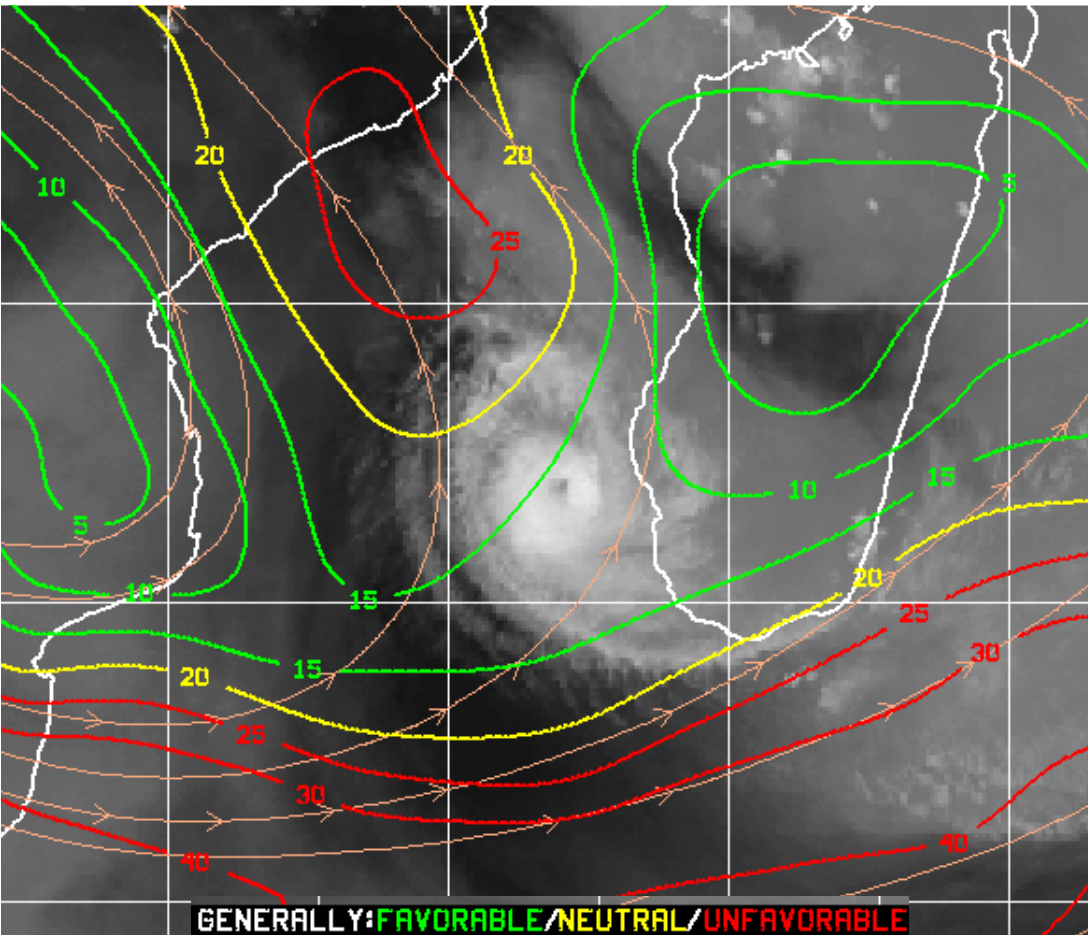
Upper winds



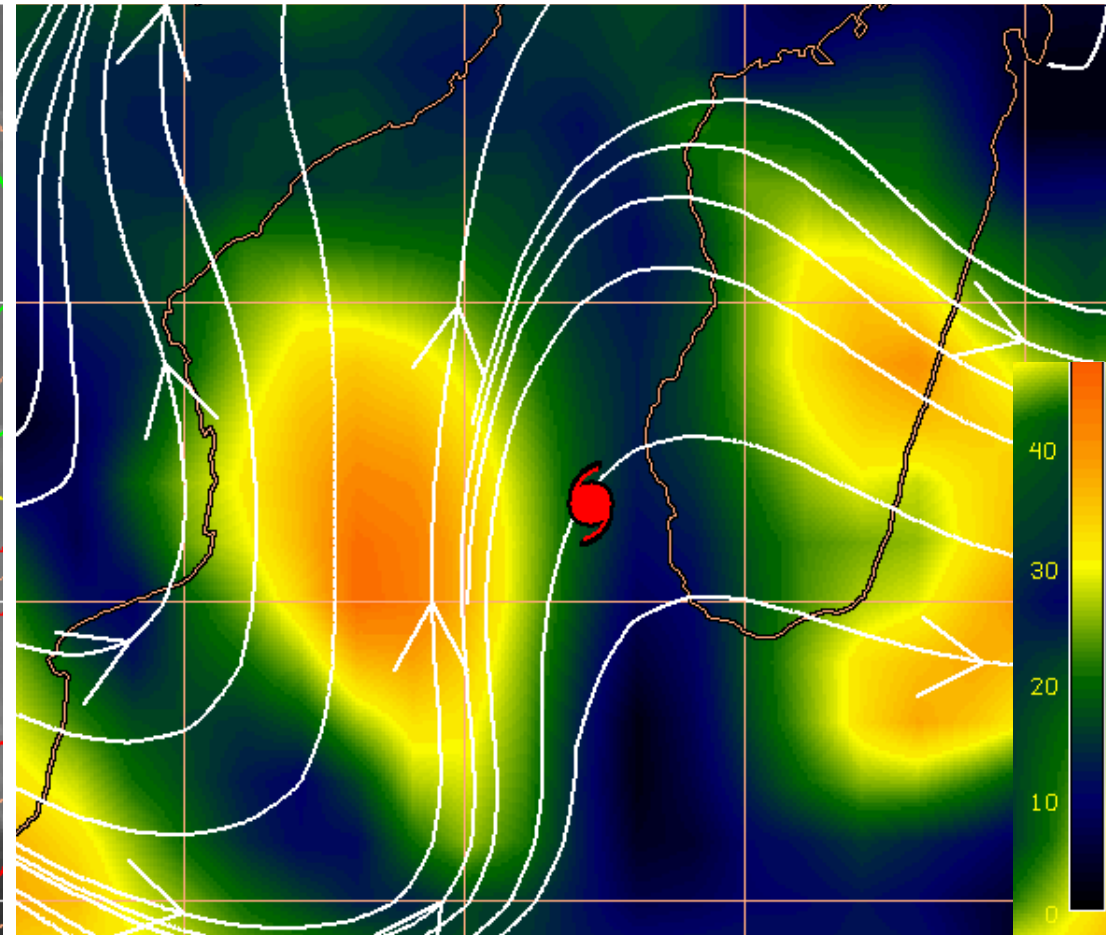
Upper Divergence

Analysis

Tropical Cyclone FREDDY 965hPa 75kt moving NW 4kt at 12Z

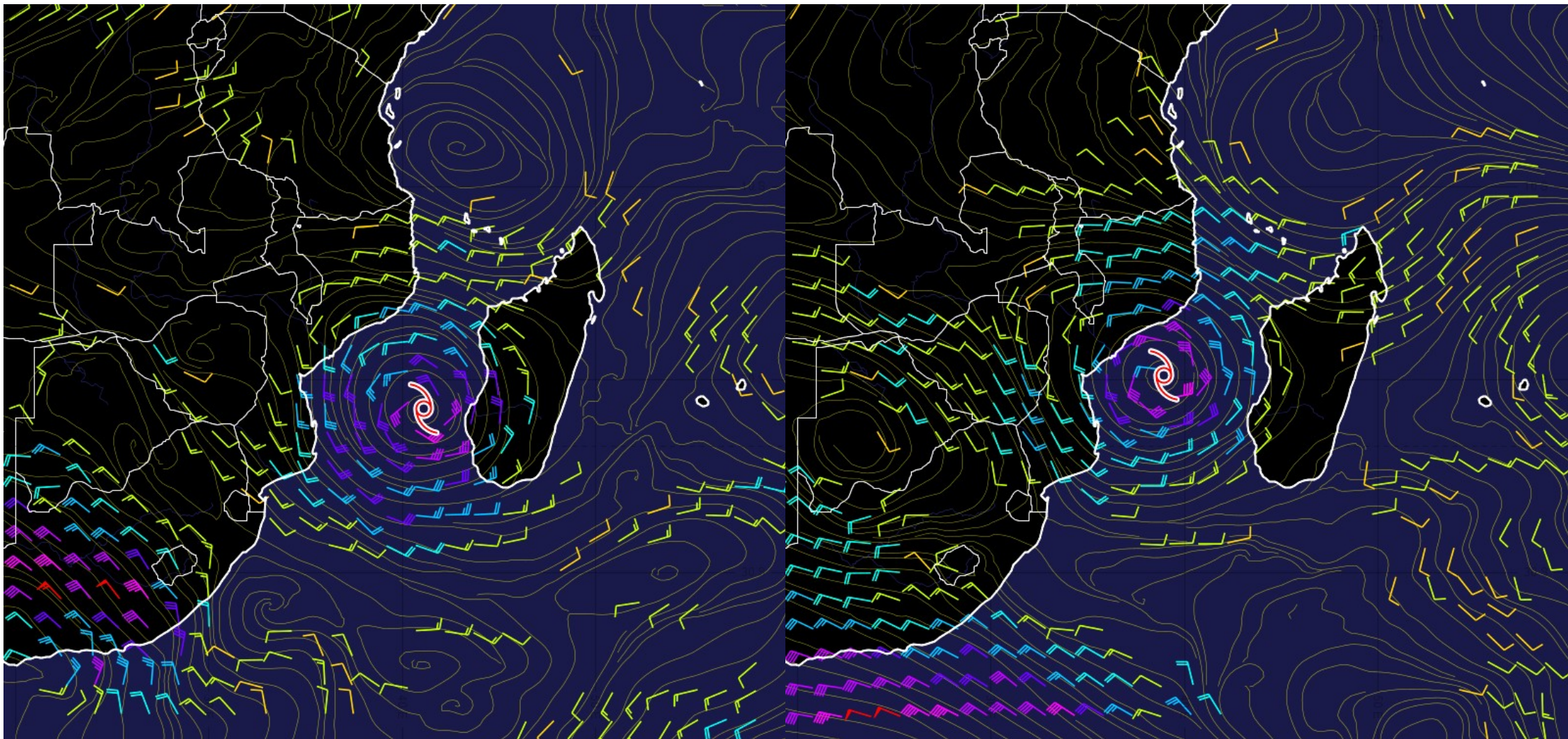


Deep Shear (kt)



Mid Shear (kt)

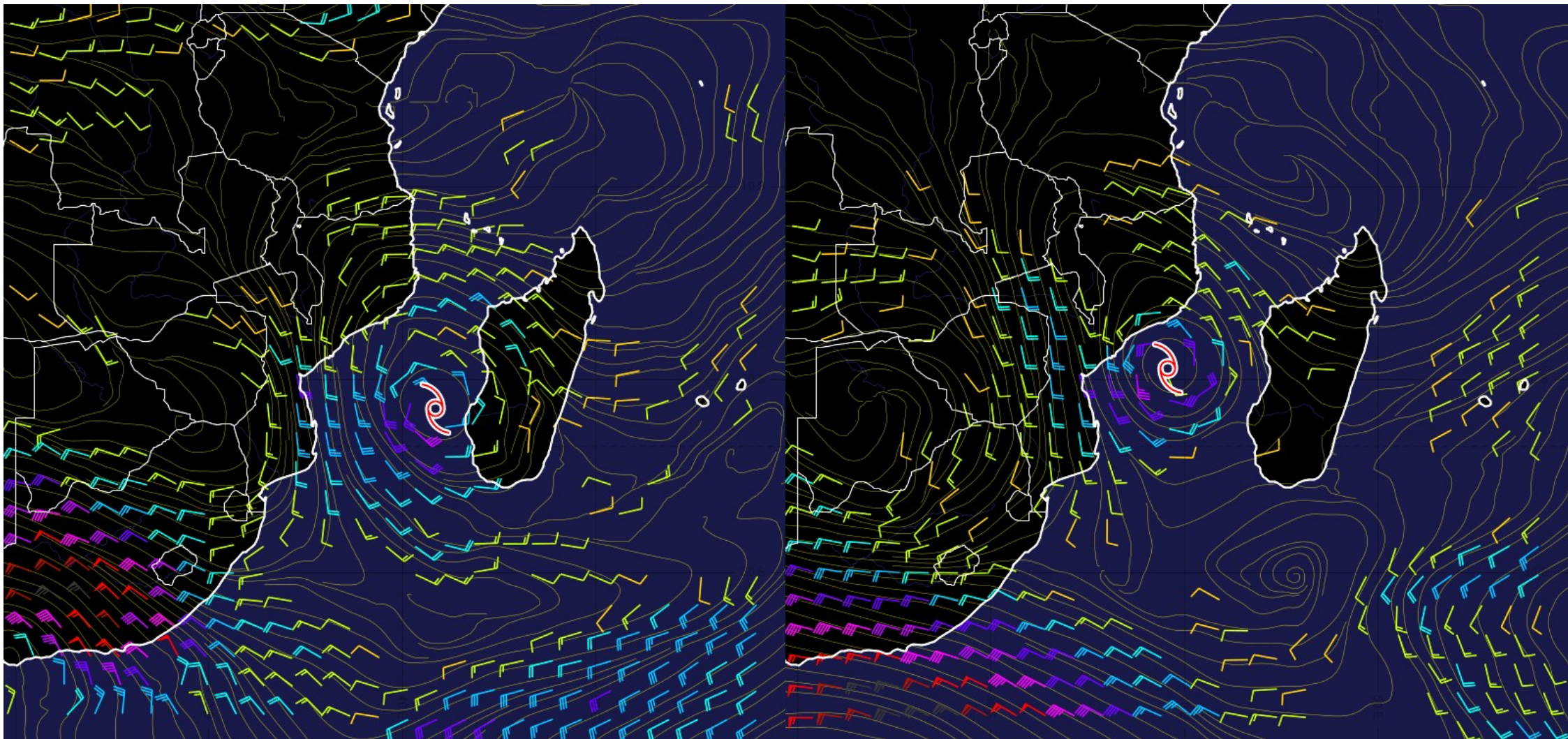
Forecast : Environment



Steering flow 700hPa at 08/03 00Z

Steering flow 700hPa at 09/03 12Z

Forecast : Environment

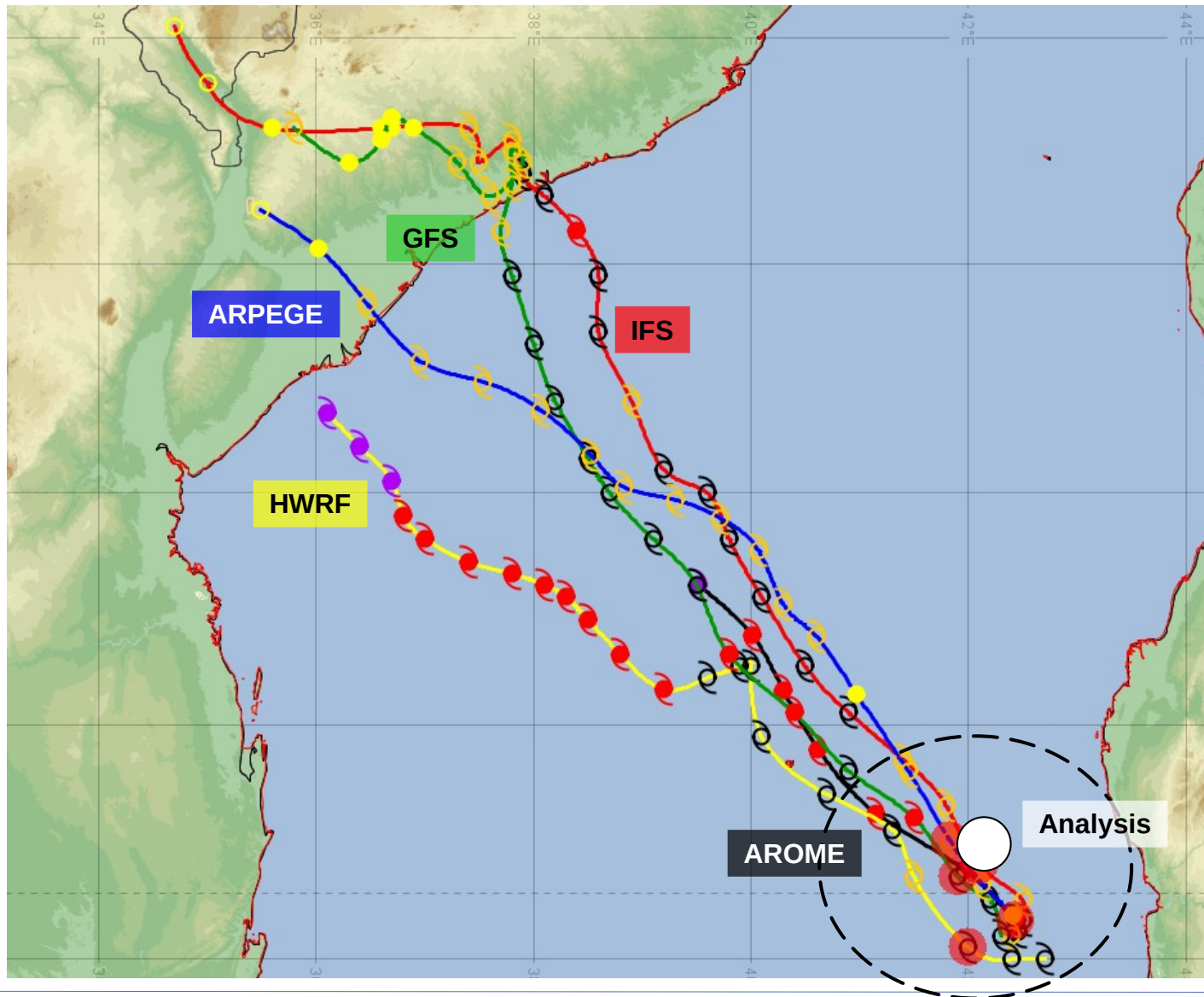


Steering flow 500hPa at 08/03 00Z

Steering flow 500hPa at 09/03 12Z

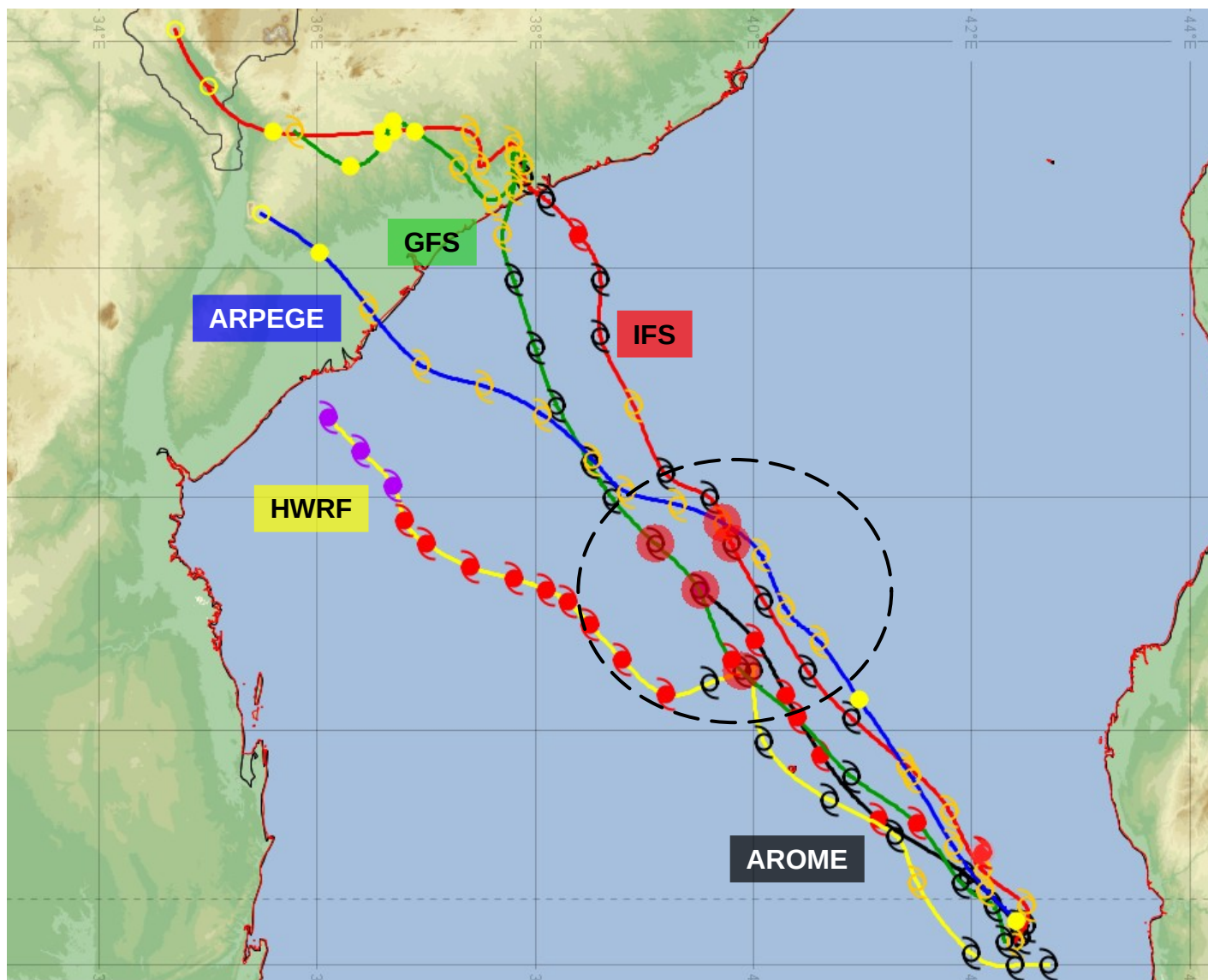
Forecast

Forecast tracks + Position (red dots) at 07/03 12Z / 00h



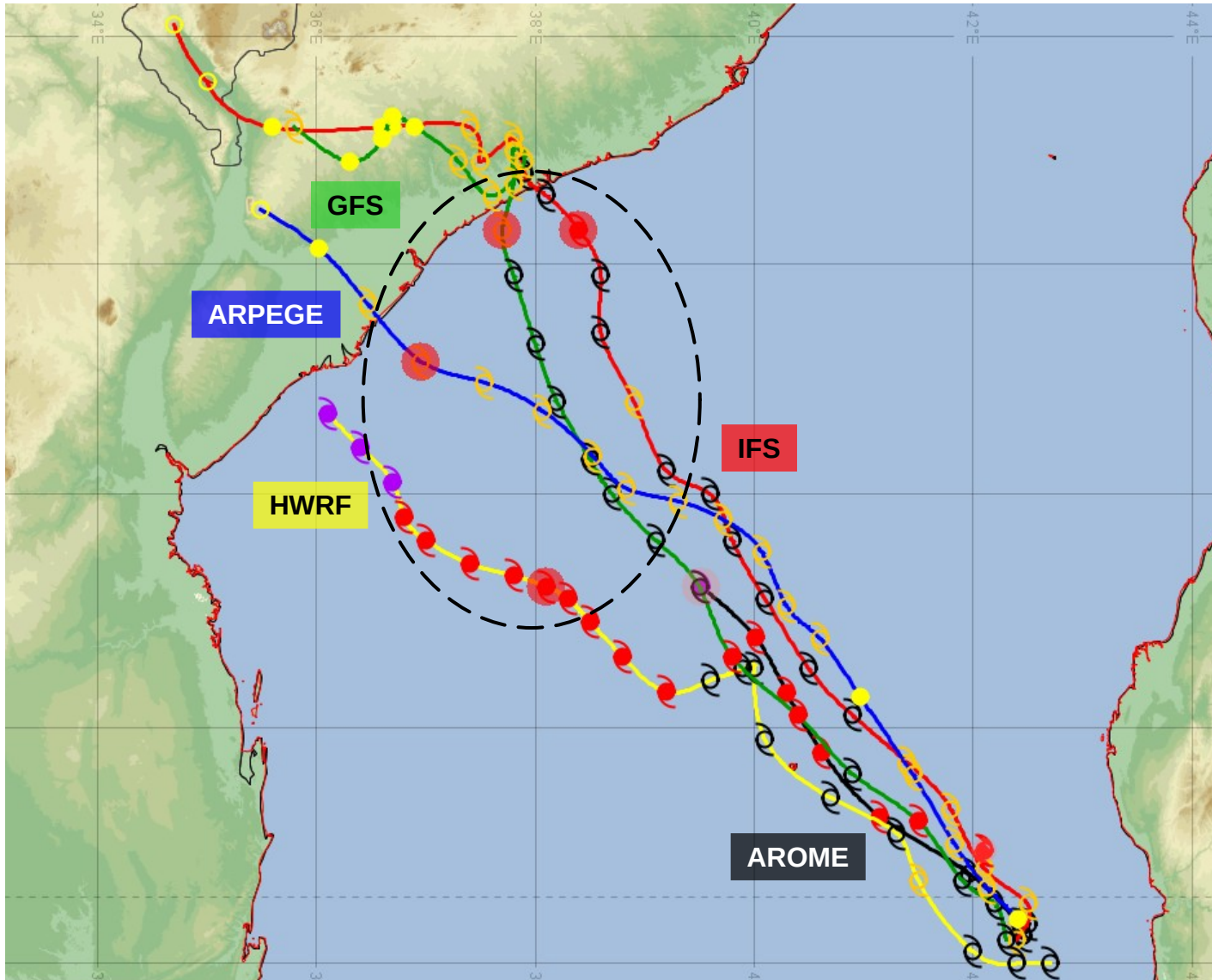
Forecast

Forecast tracks + Position (red dots) at 09/03 00Z / 36h



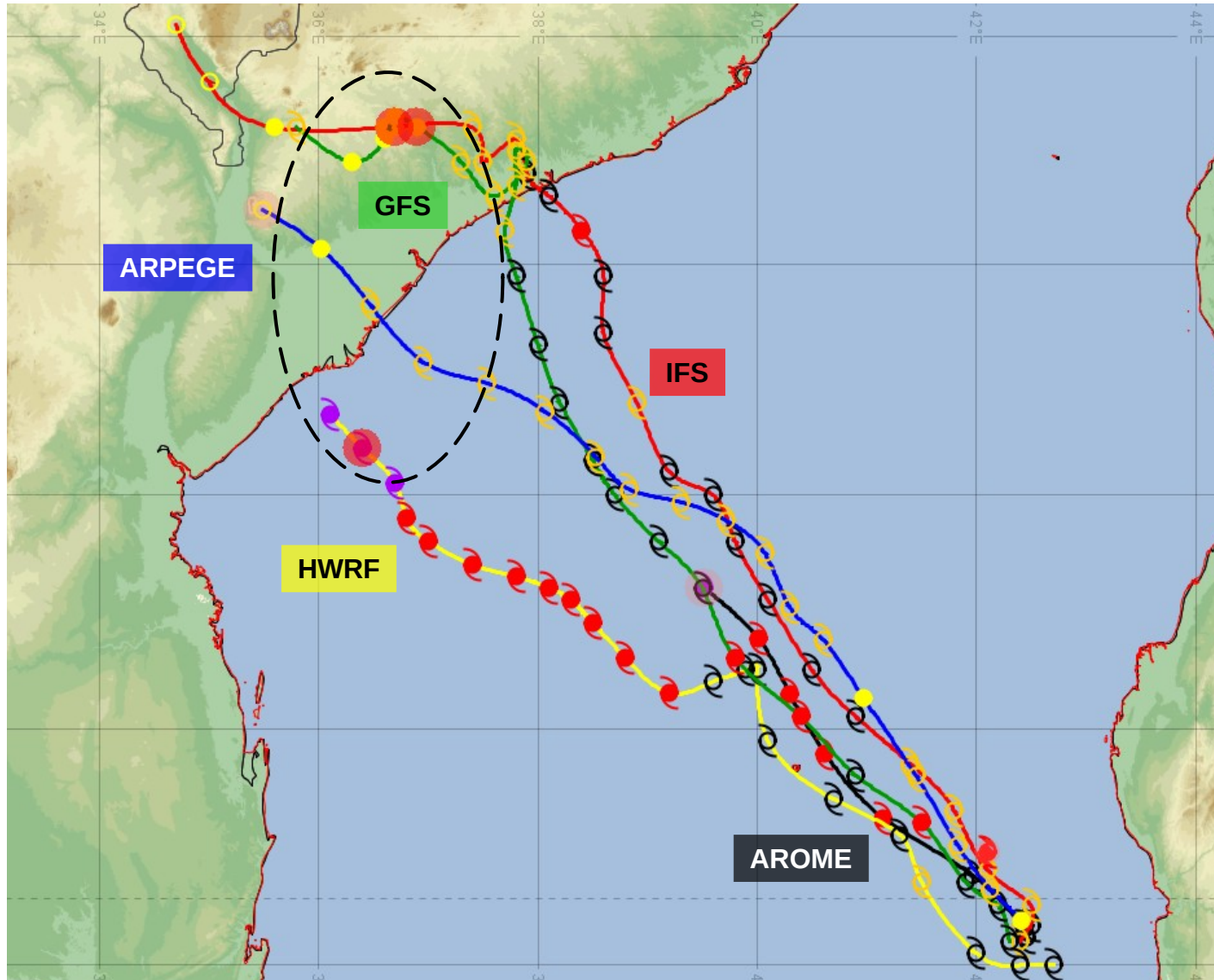
Forecast

Forecast tracks + Position (red dots) at 10/03 12Z / 72h



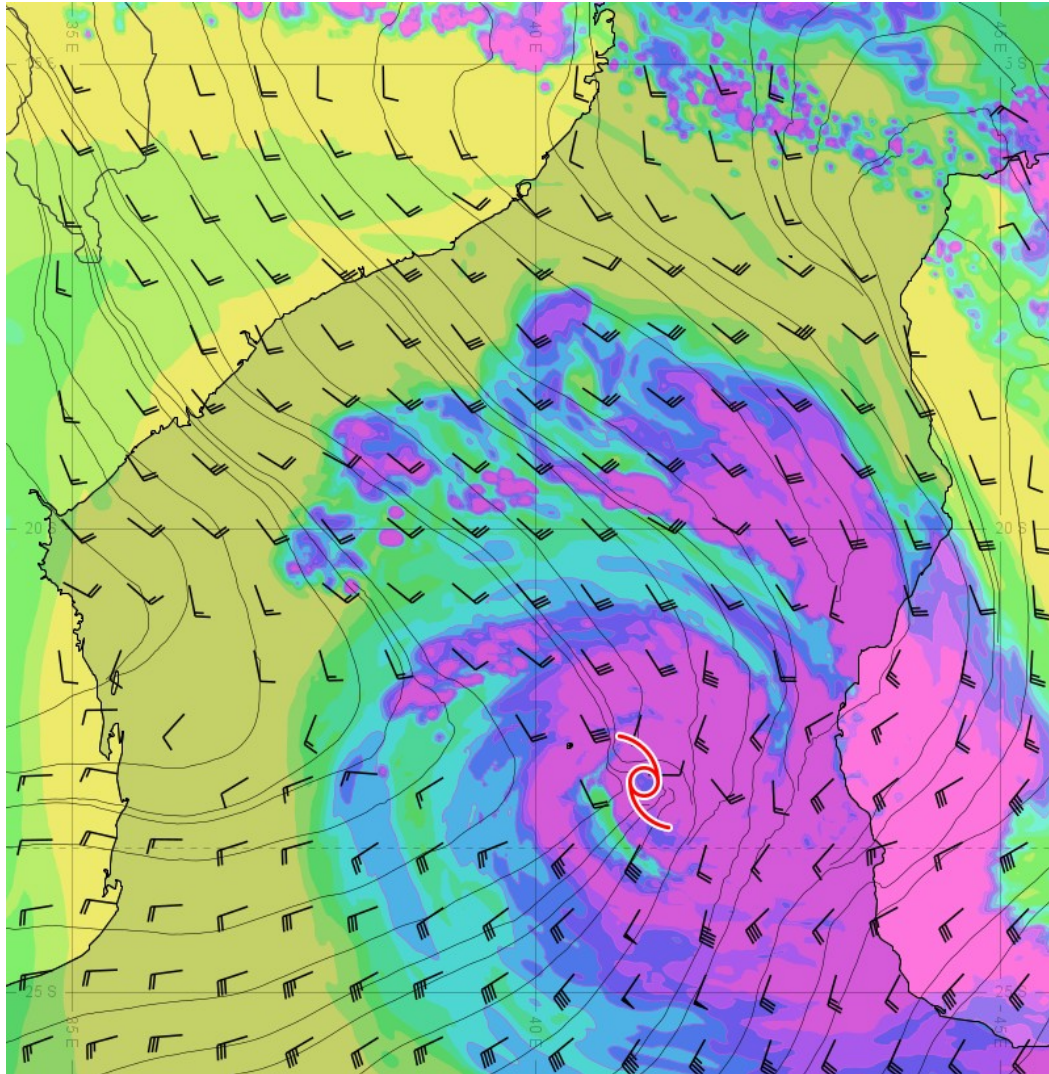
Forecast

Forecast tracks + Position (red dots) at 12/03 00Z / 108h

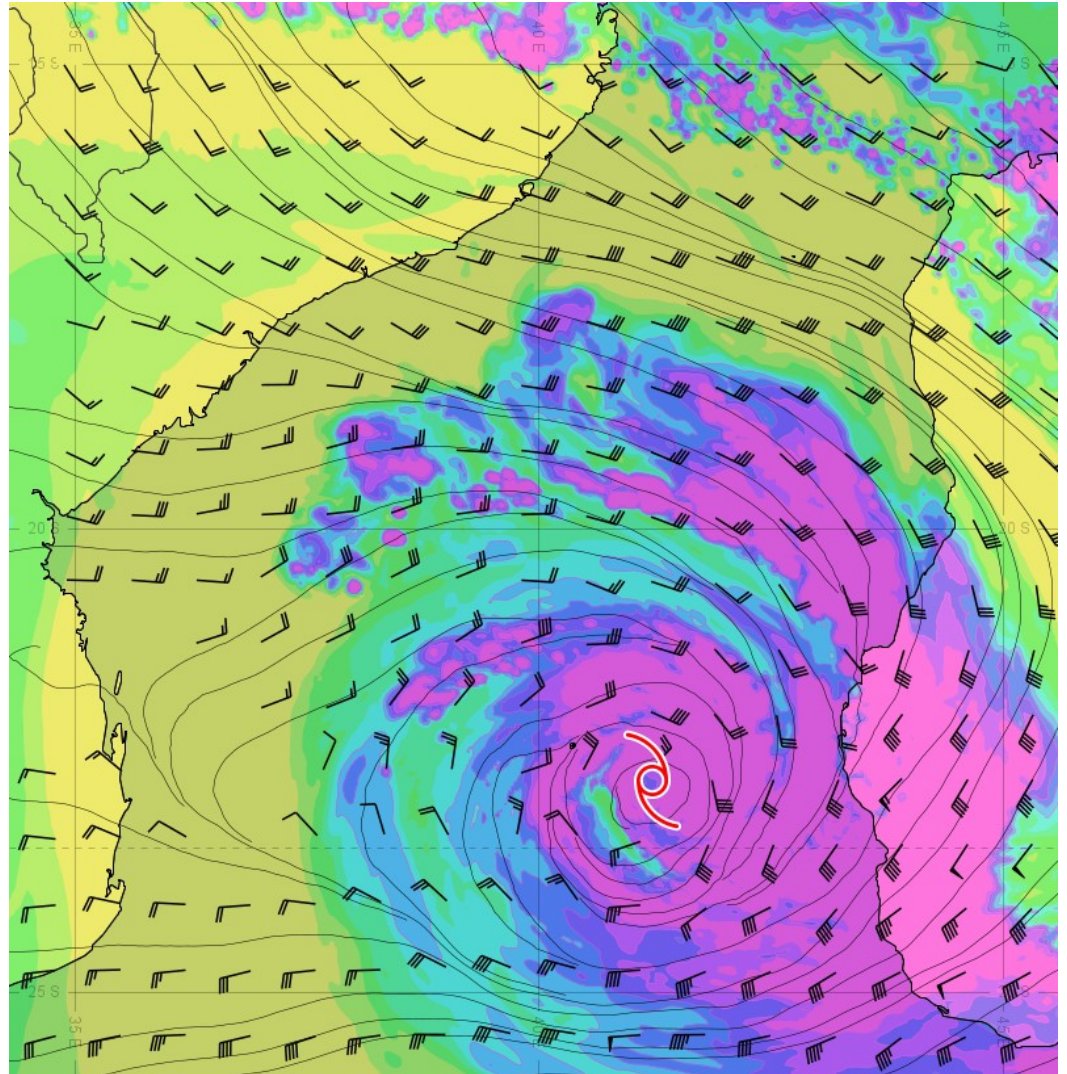


Forecast : Environment

08/03 00Z with Arome



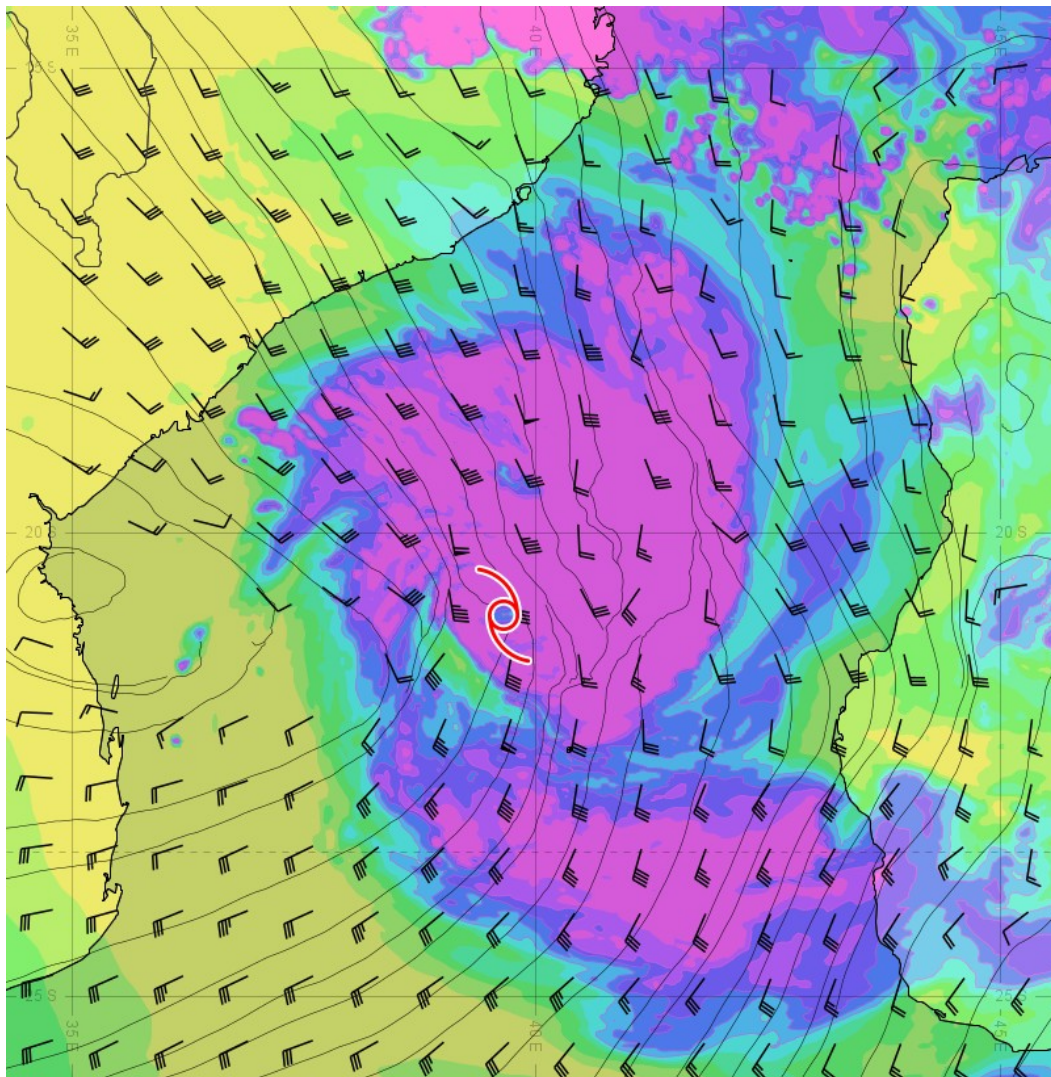
400-850hPa Shear and 500hPa humidity



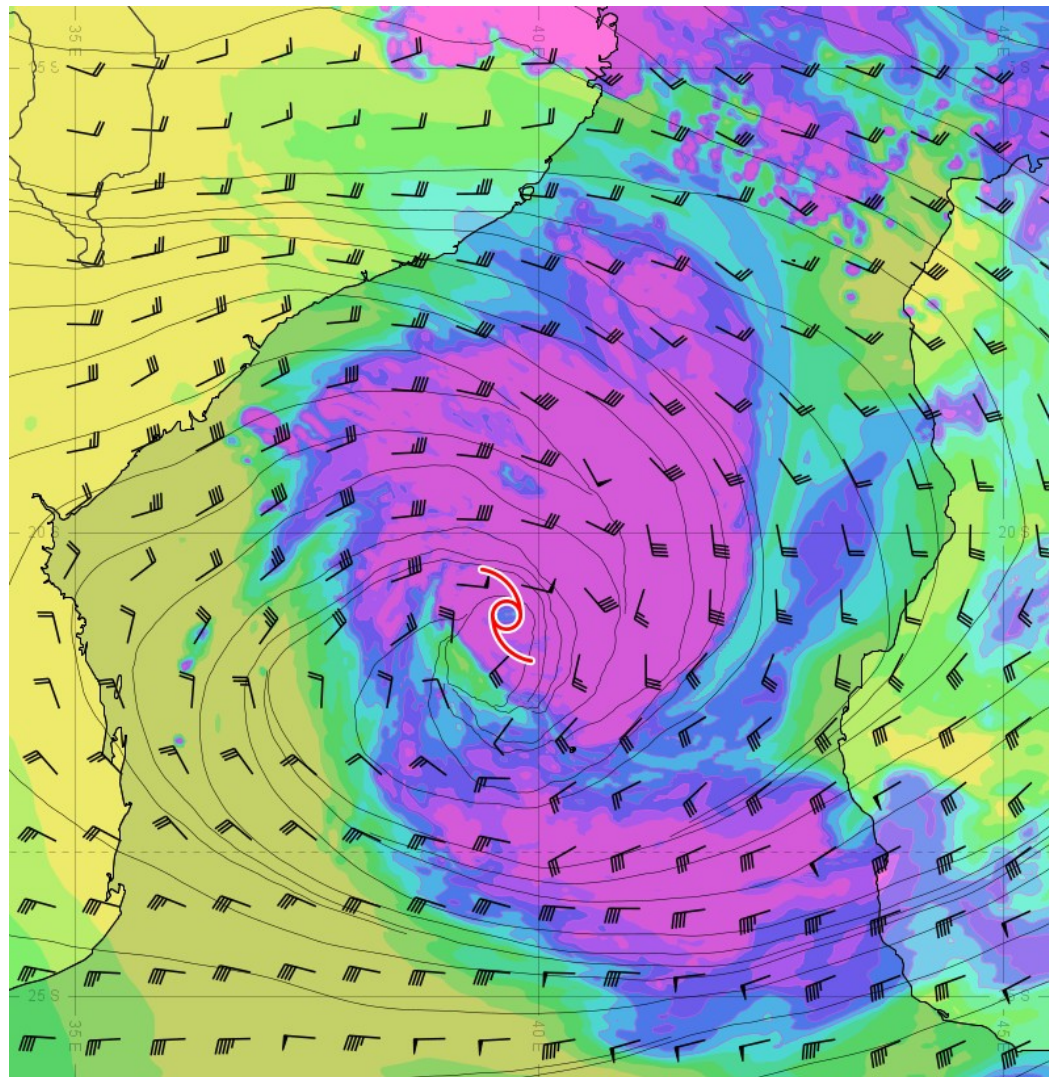
200-850hPa Shear and 500hPa humidity

Forecast : Environment

09/03 00Z with Arome



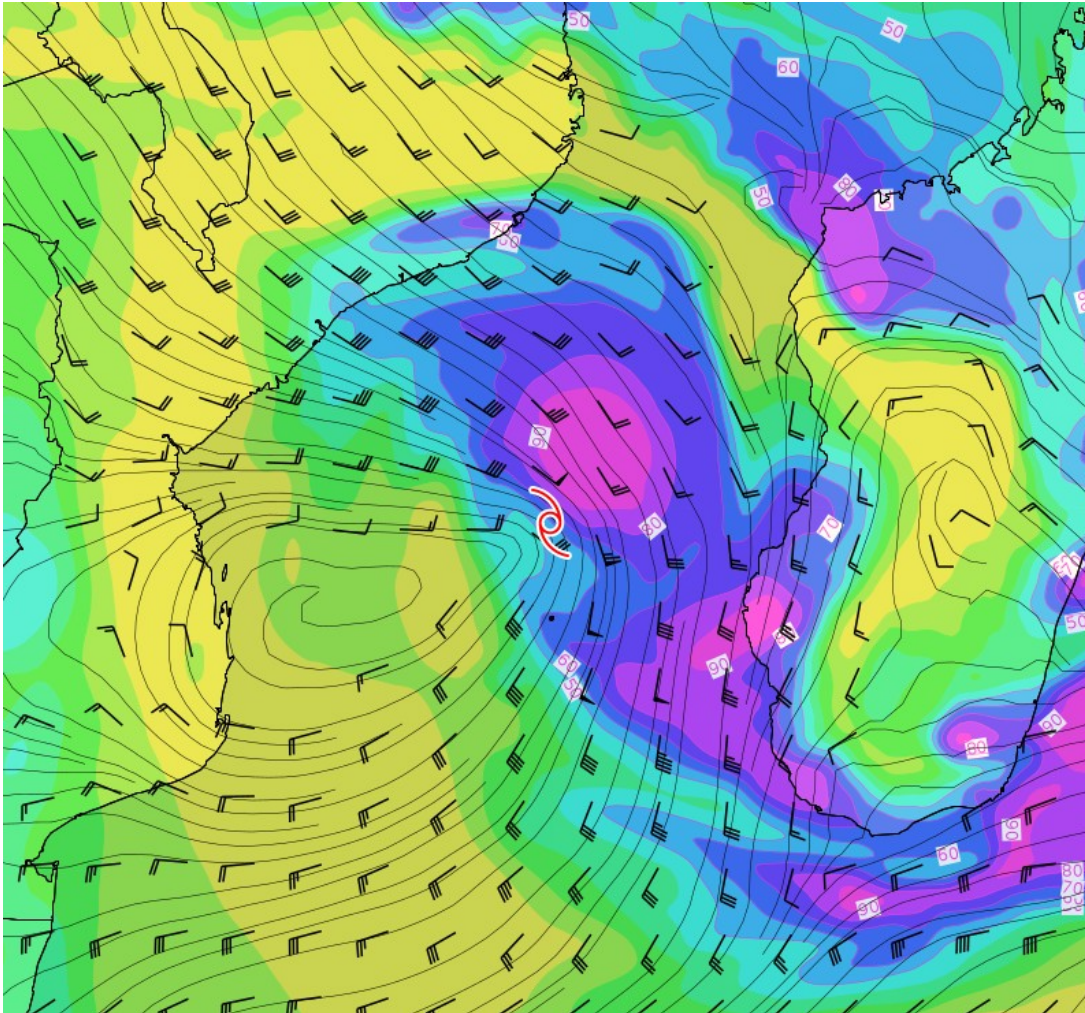
400-850hPa Shear and 500hPa humidity



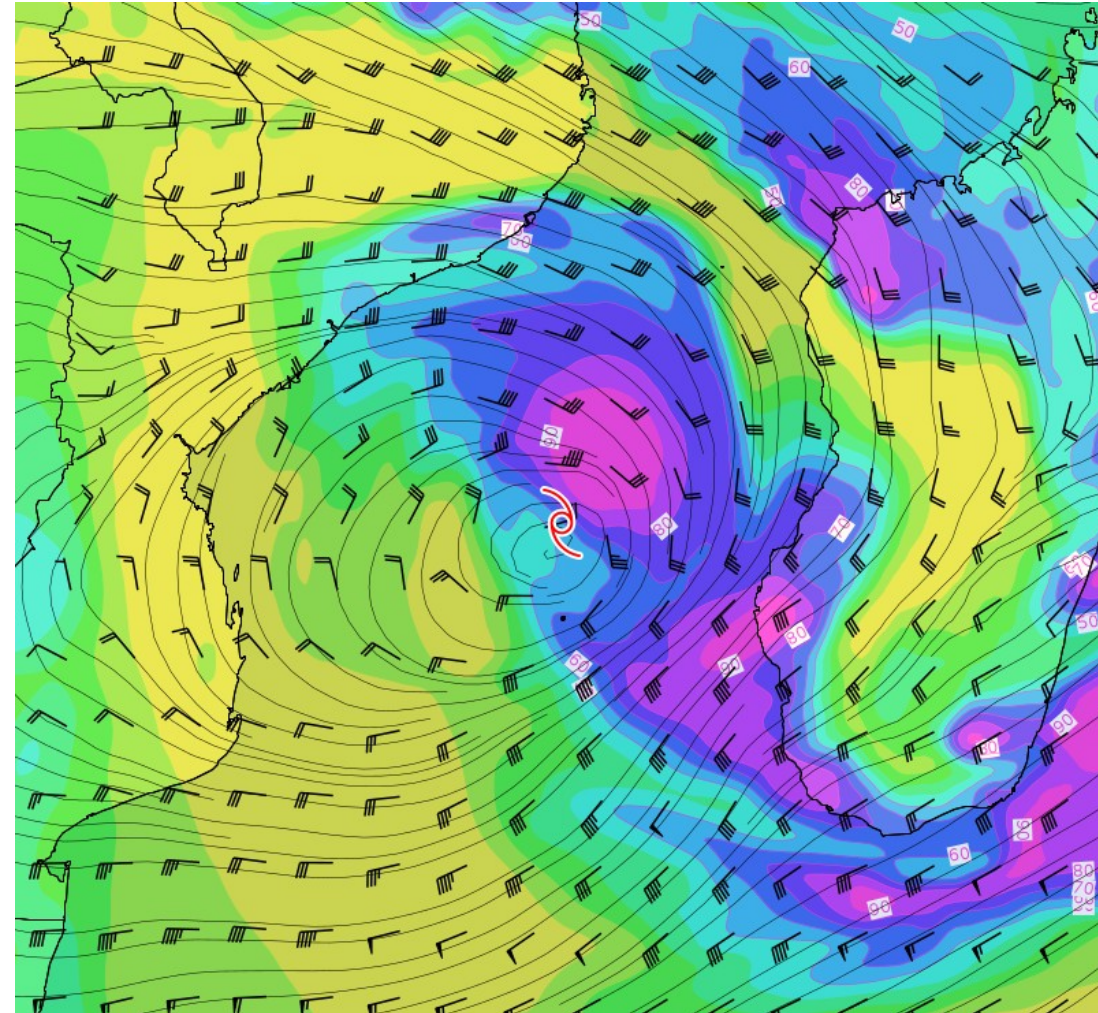
200-850hPa Shear and 500hPa humidity

Forecast : Environment

08/03 12Z with ARPEGE



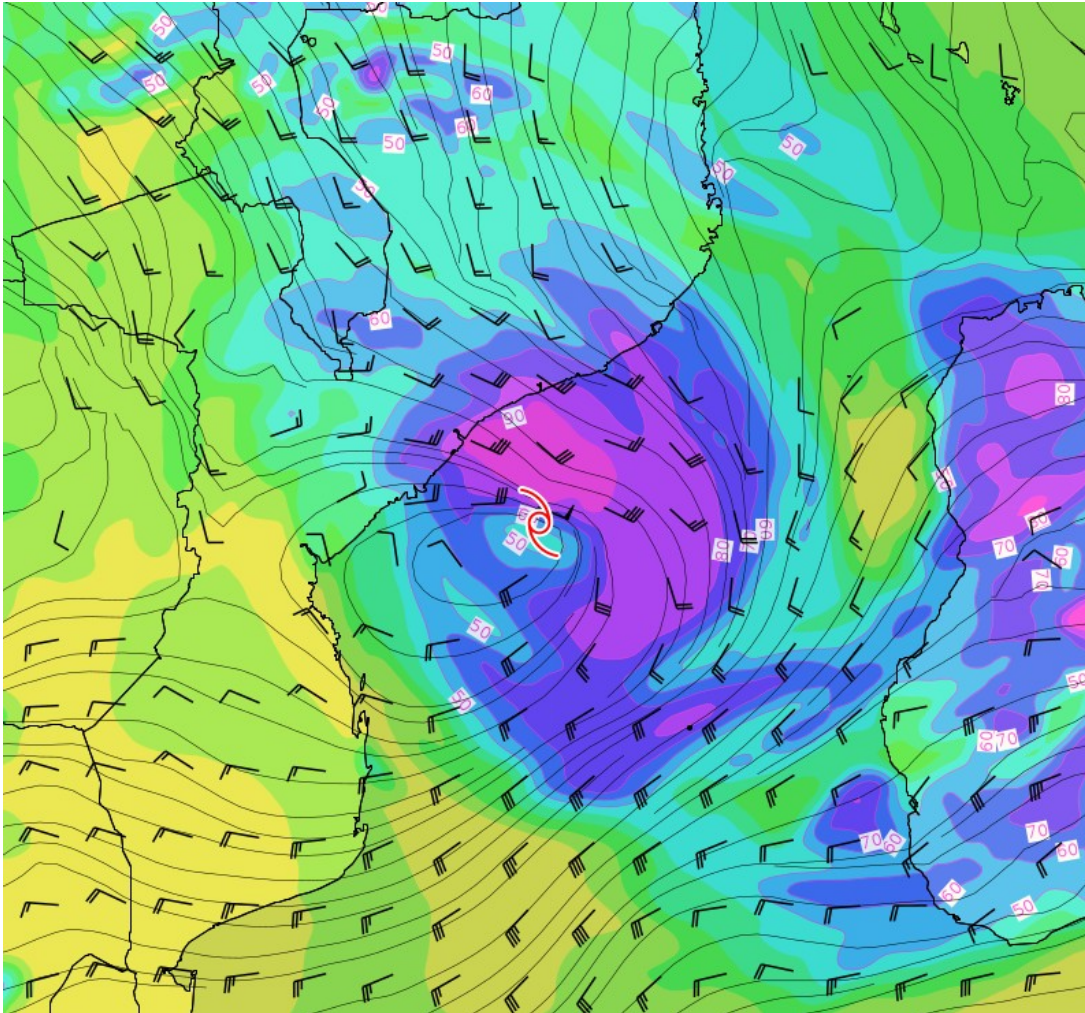
400-850hPa Shear and 500hPa humidity



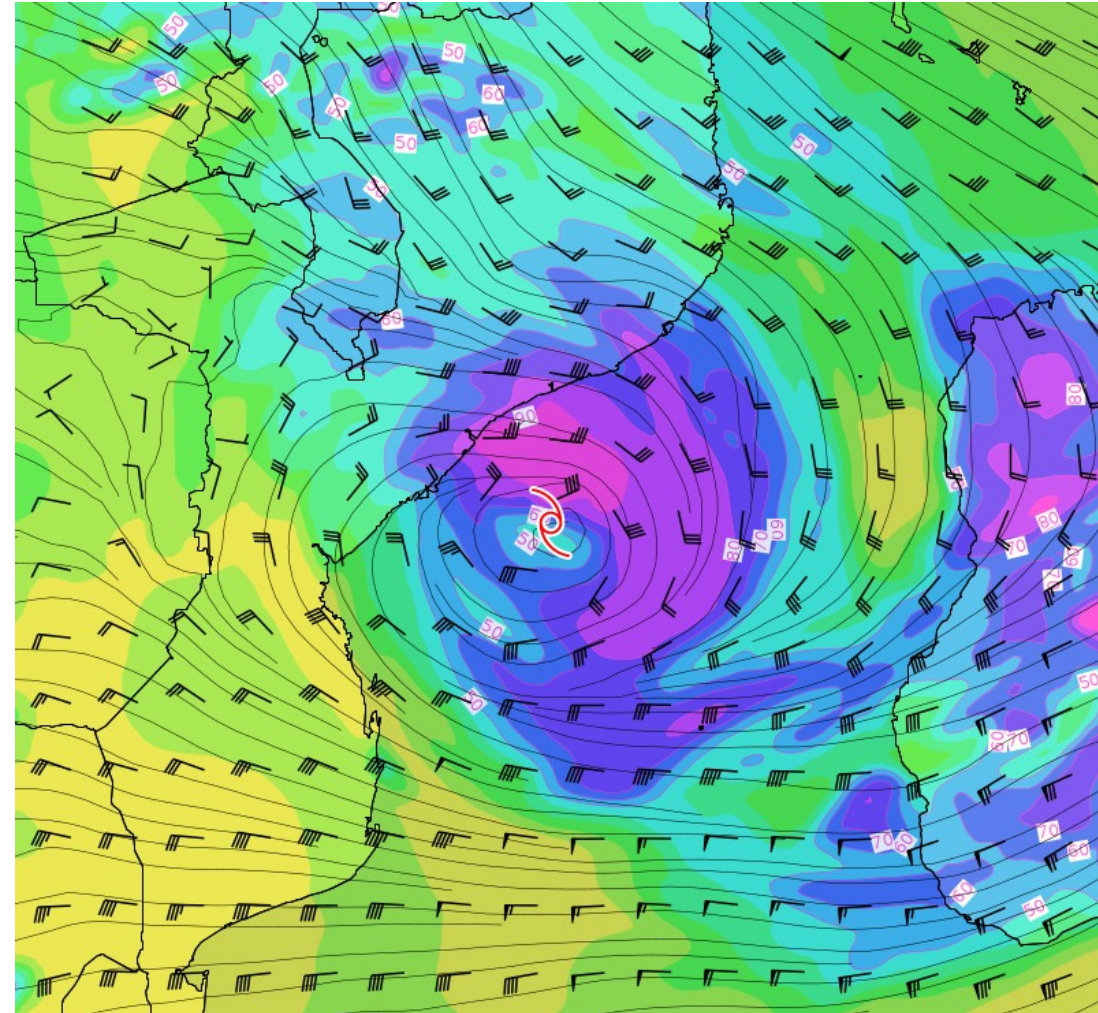
200-850hPa Shear and 500hPa humidity

Forecast : Environment

10/03 00Z with ARPEGE

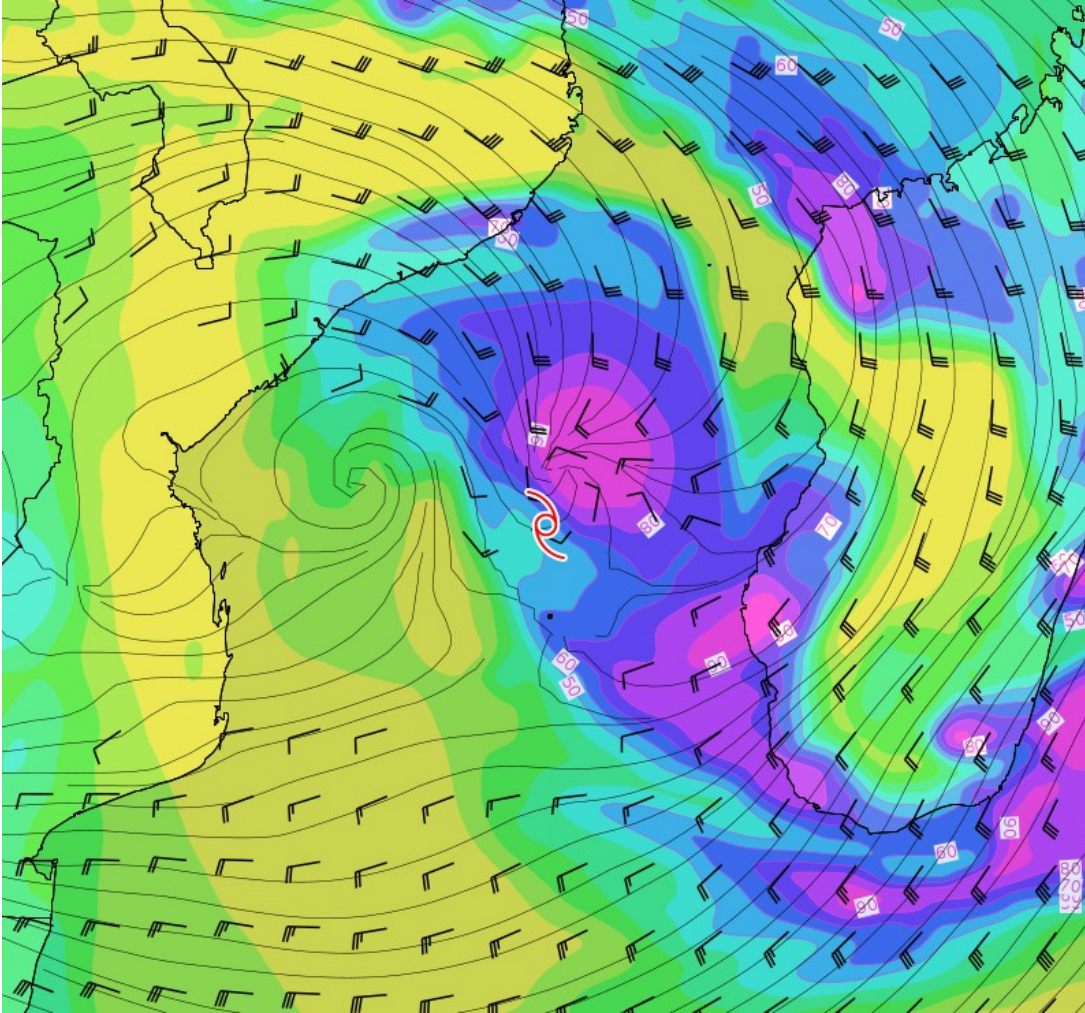


400-850hPa Shear and 500hPa humidity

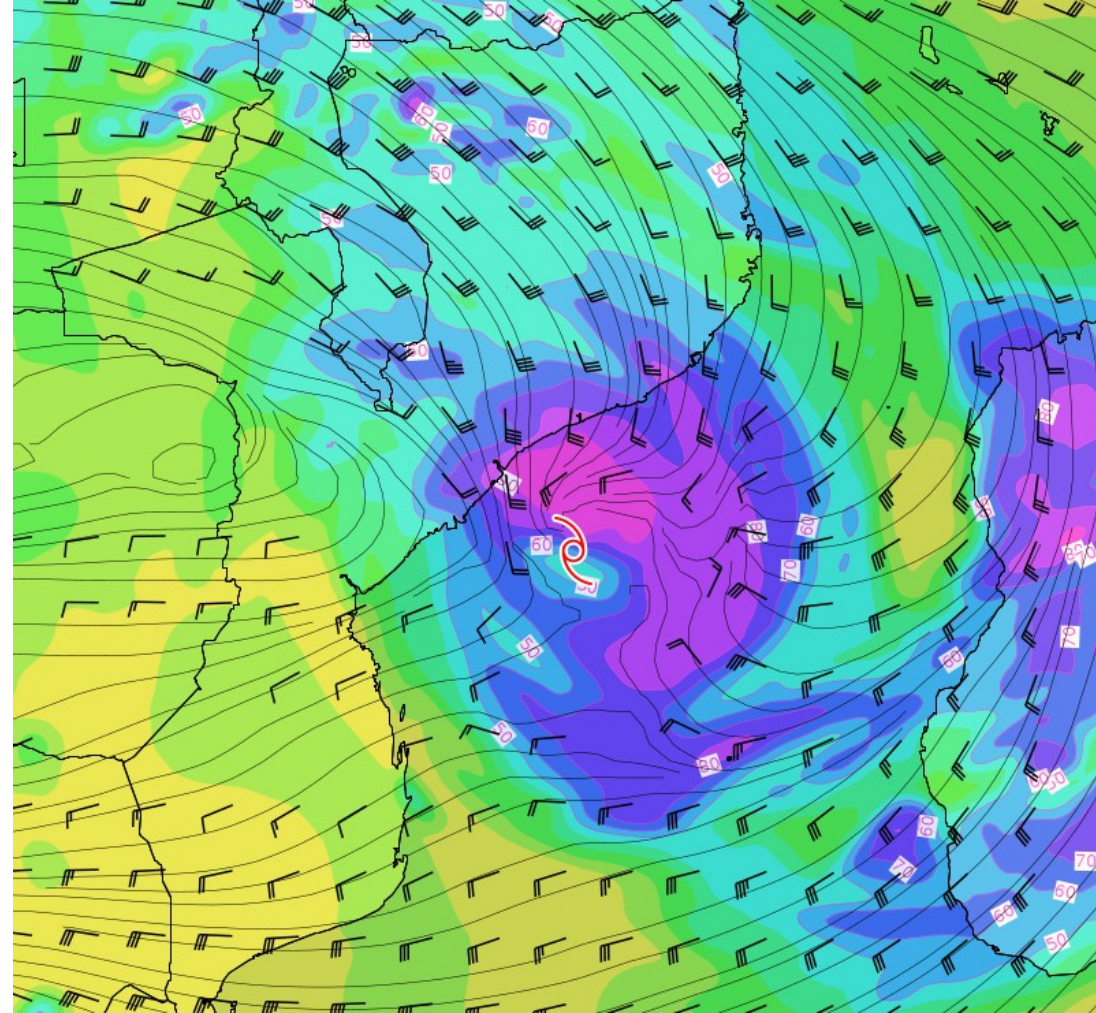


200-850hPa Shear and 500hPa humidity

Forecast : Environment



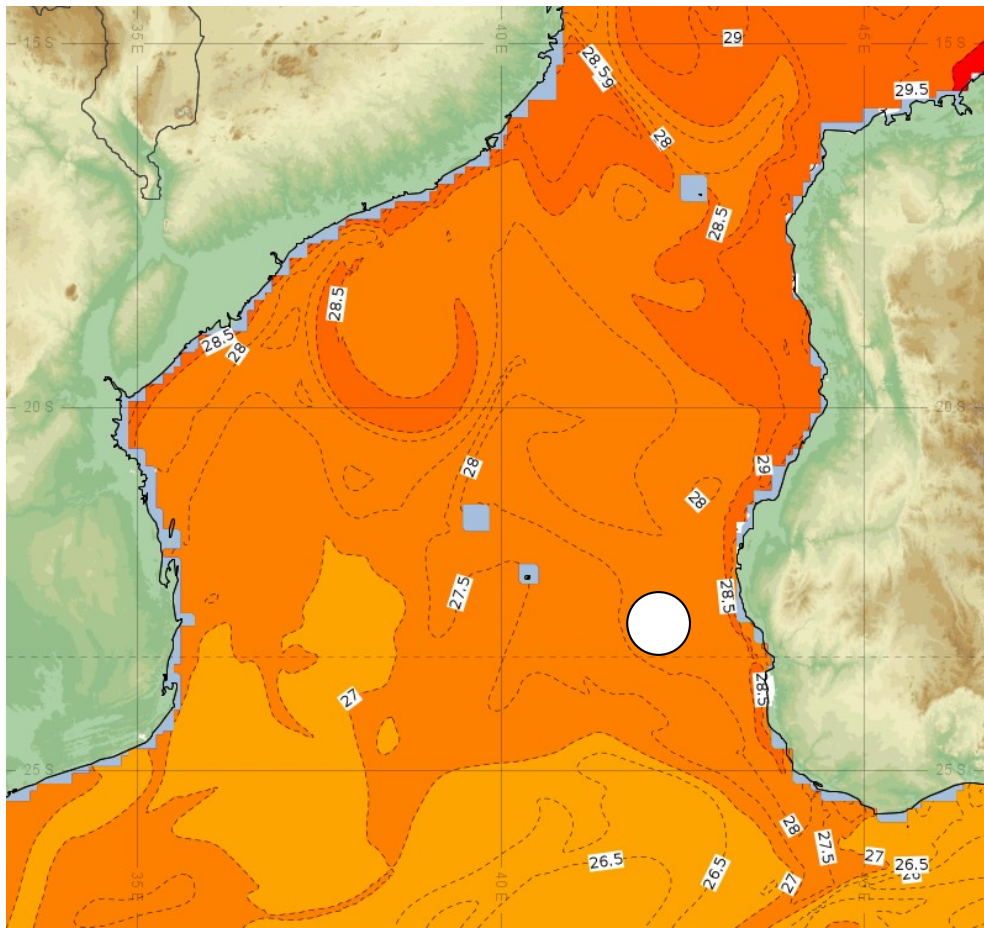
150hPa wind (upper divergence) 08/03 12Z



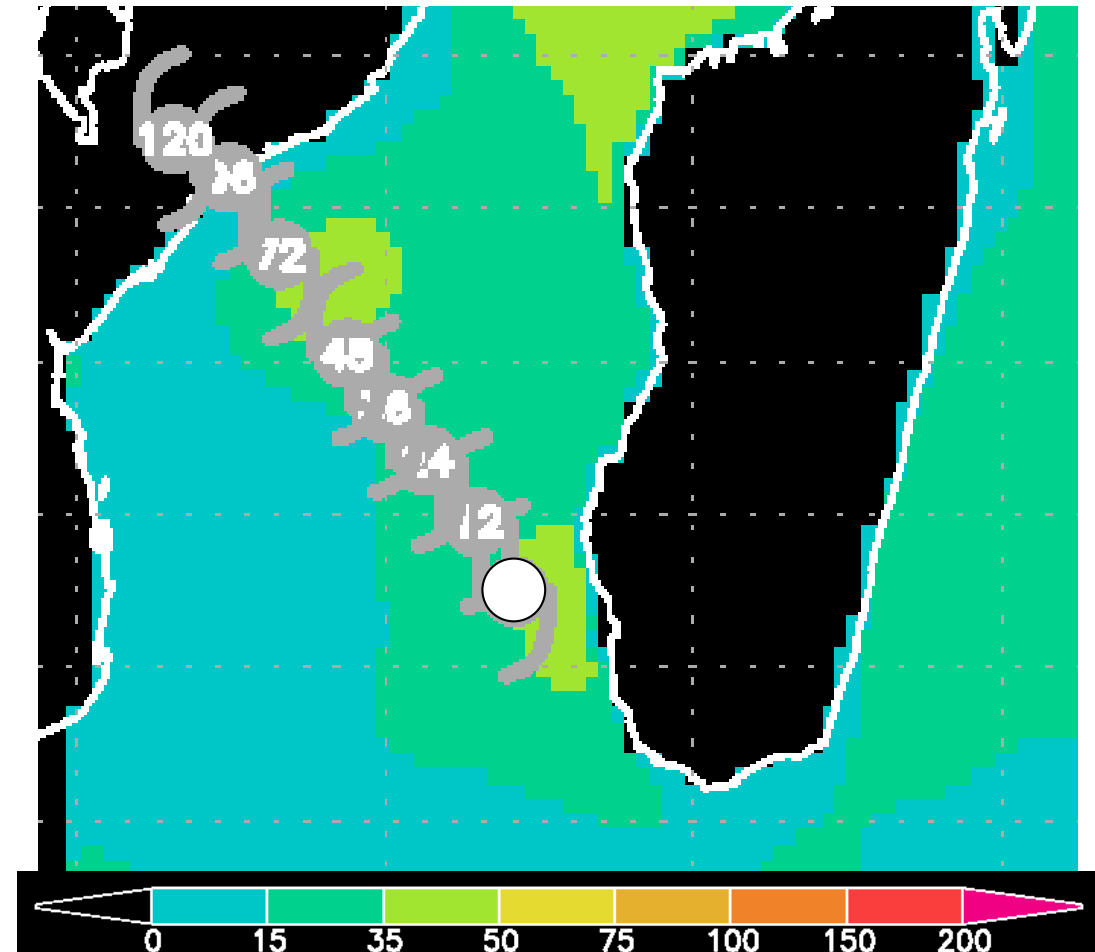
150hPa wind (upper divergence) 10/03 00Z

Forecast : Environment

Tropical Cyclone FREDDY 965hPa 75kt moving NW 4kt at 12Z



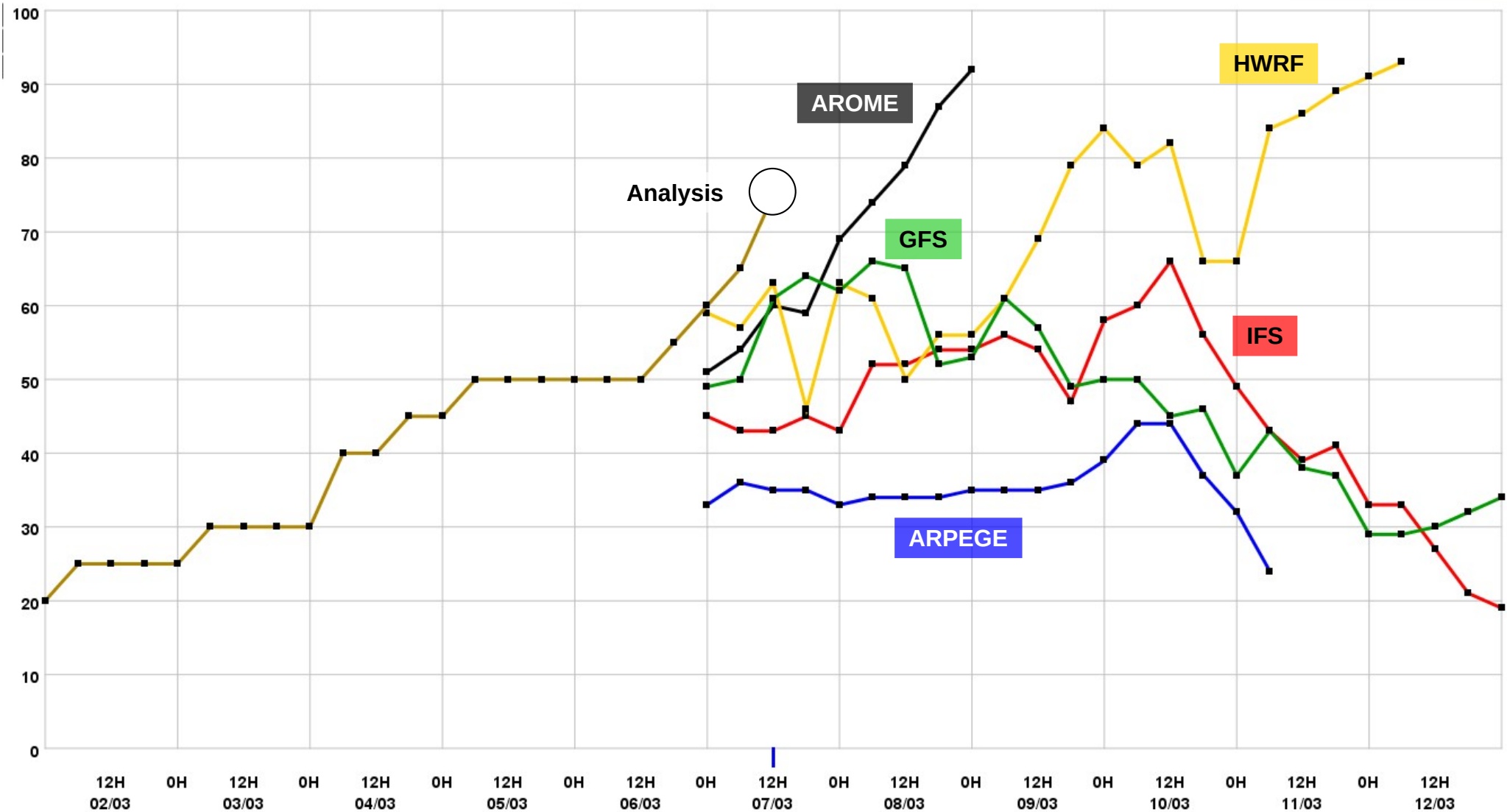
SST



TCHP

Forecast

Forecast intensities (kt)



Forecast

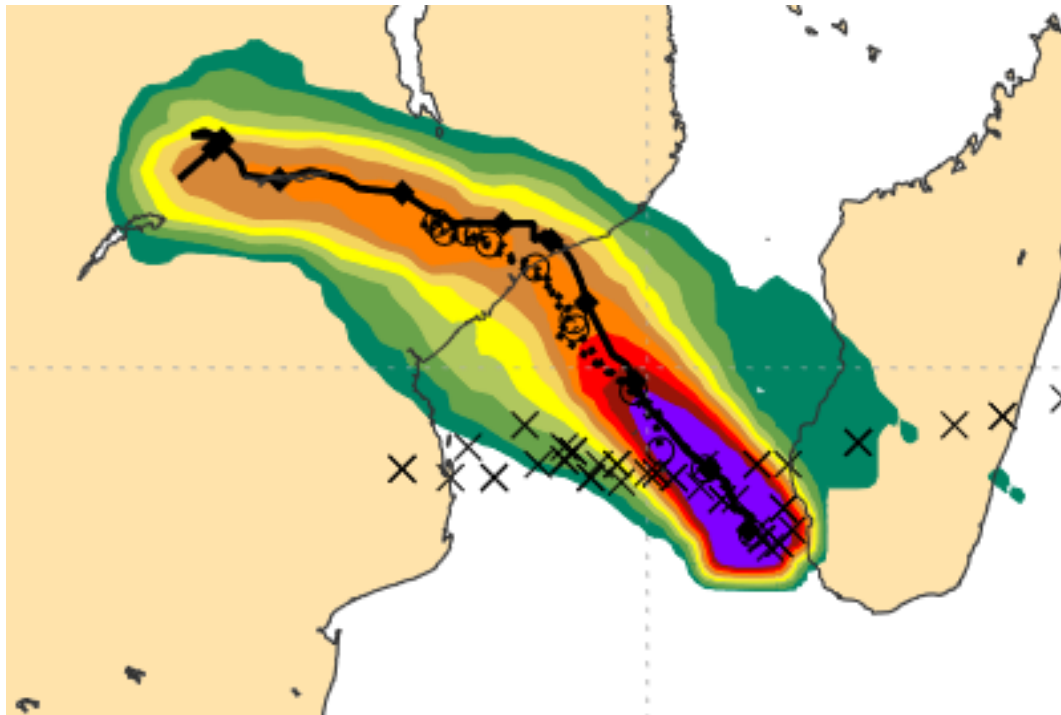
ECMWF EPS Forecast 07/03 00Z

Date 20230307 00 UTC @ECMWF

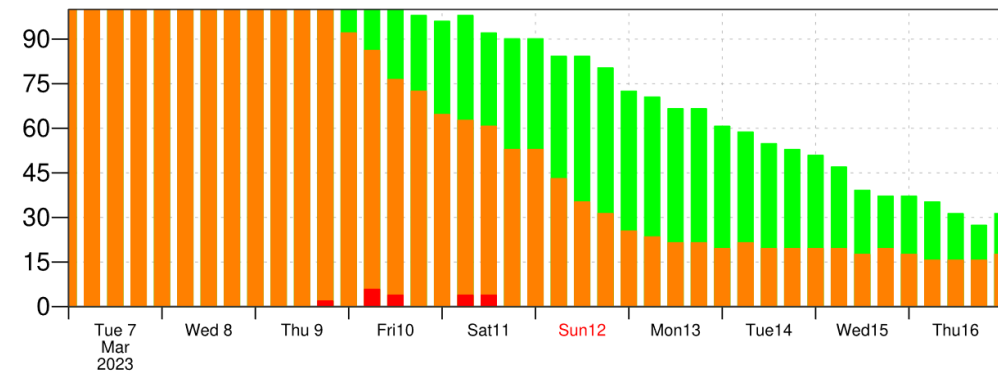
Probability that **FREDDY** will pass within 120 km radius during the next **240** hours

tracks: **solid**=HRES; **dot**=Ens Mean [reported minimum central pressure (hPa) **978**]

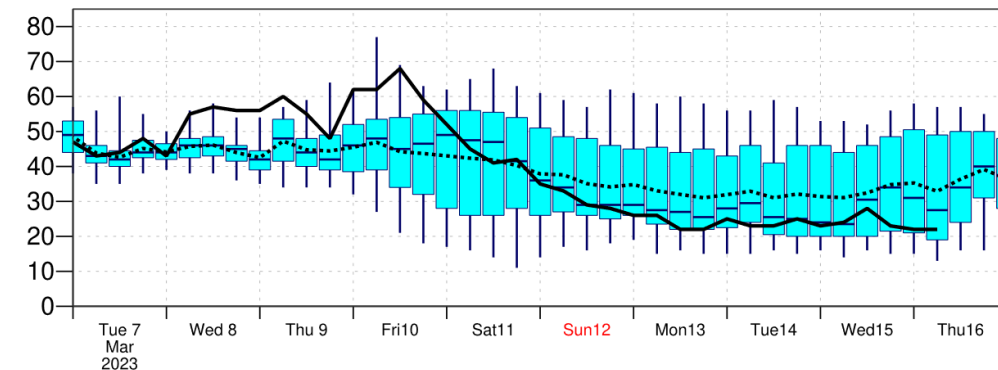
5-10 10-20 20-30 30-40 40-50 50-60 60-70 70-80 80-90 > 90%



Probability (%) of Tropical Cyclone Intensity falling in each category
TD[up to 33] **TS** [34-63] **HR1**[64-82] **HR2** [83-95] **HR3** [> 95 kt]

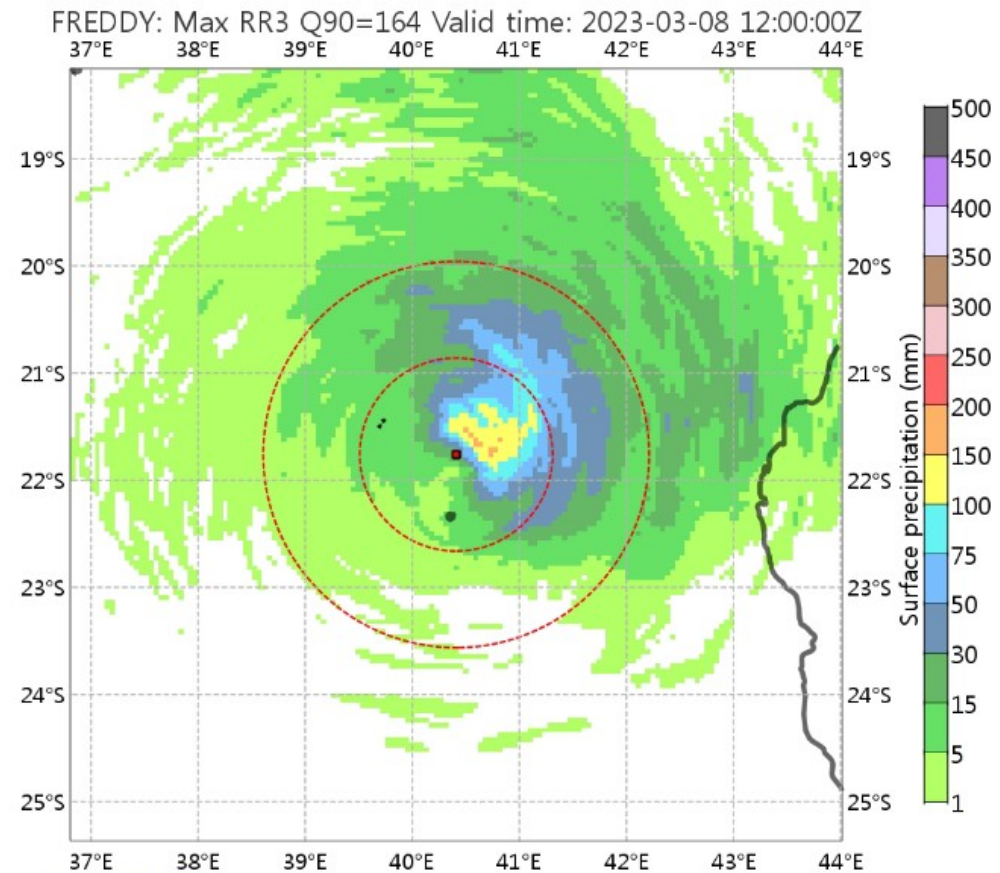
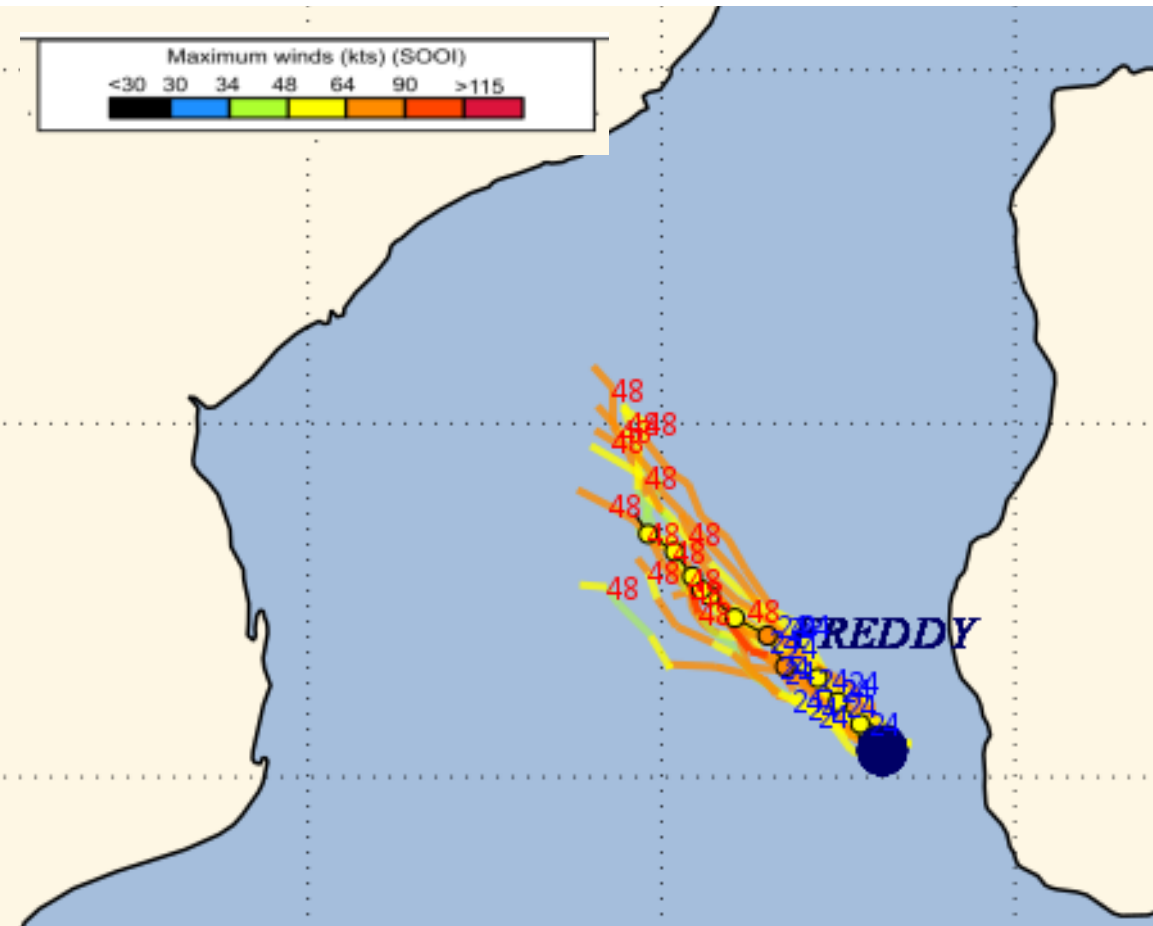


10m Wind Speed (kt) **solid**=HRES; **dot**=Ens Mean



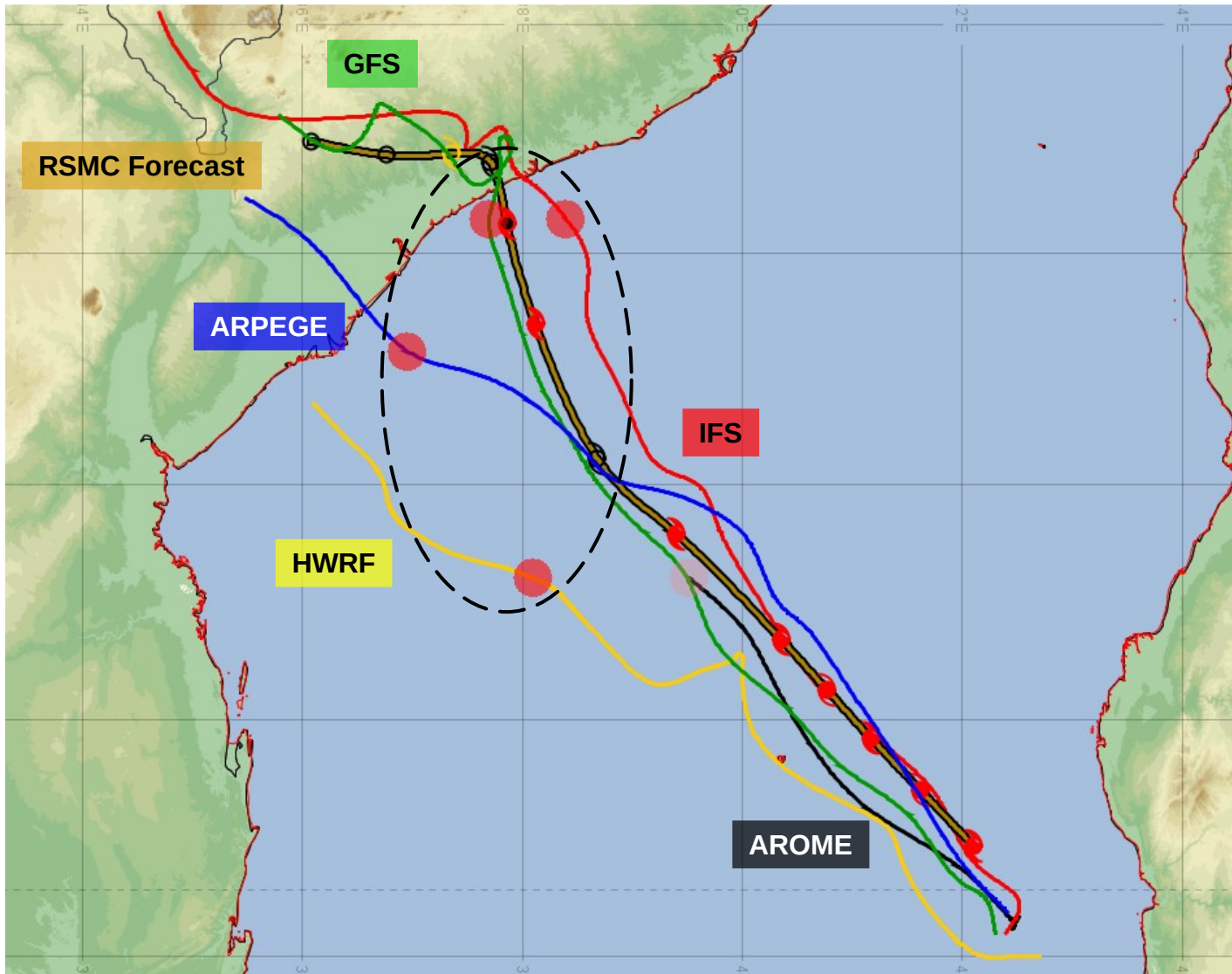
Forecast

PEARO Forecast 07/03 00Z



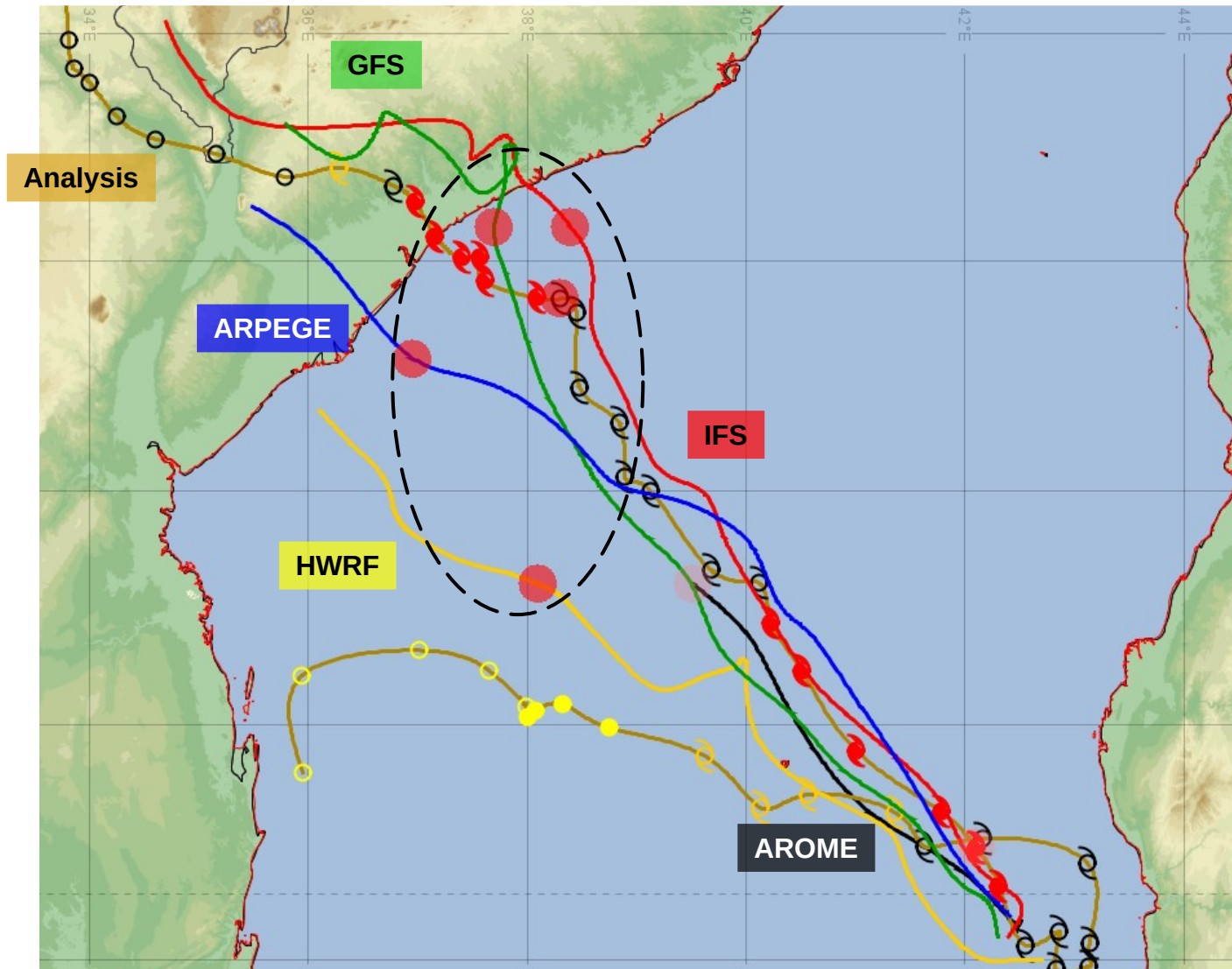
Experimental product : 90 % Quantile of 3 hour rainfall in relative framework

Official forecast Forecast tracks + positions (red dots) at 10/03 12Z / 72h

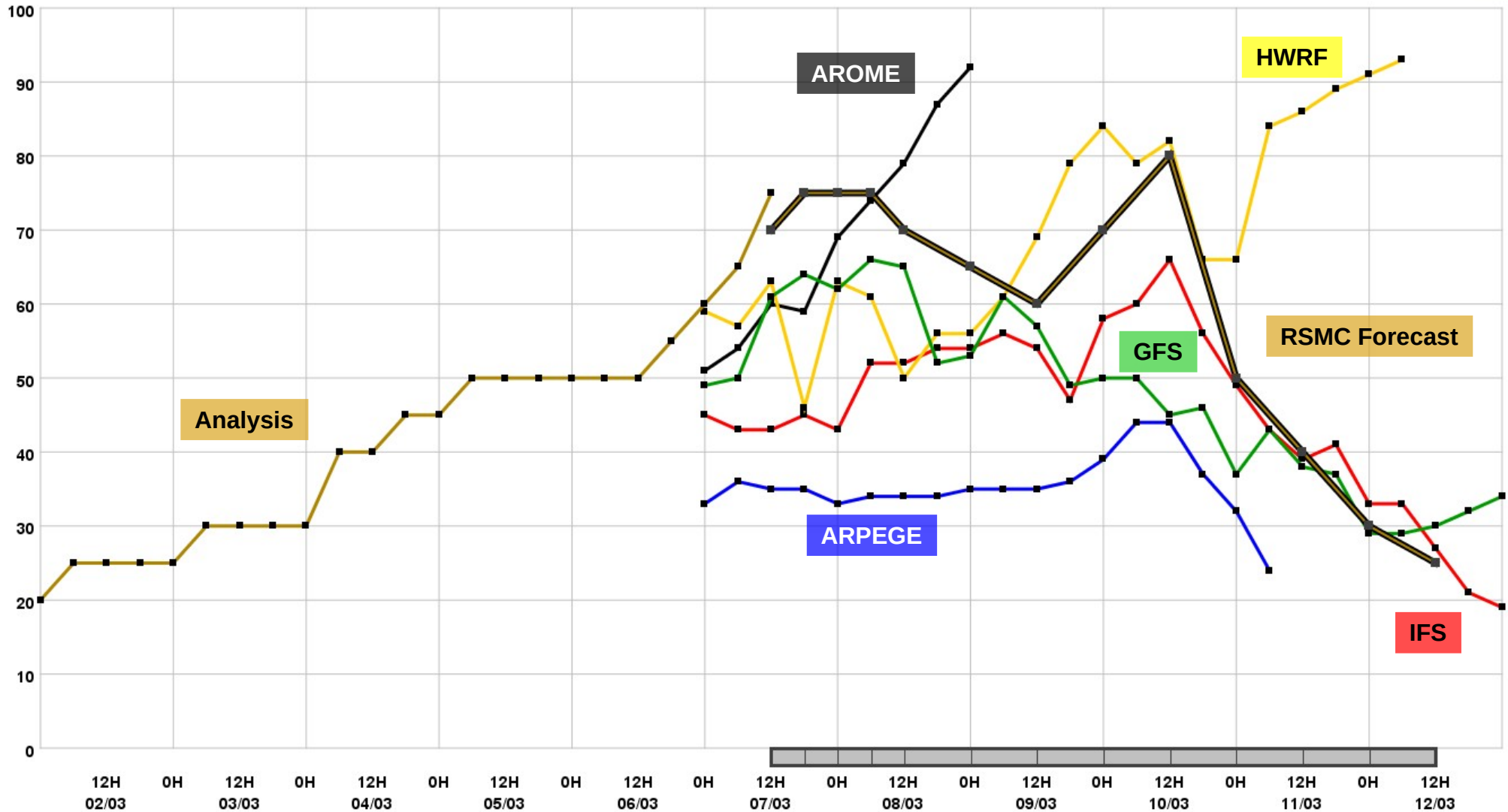


In reality

Forecast tracks + positions (red dots) at 10/03 12Z / 72h



Official forecast



In reality

