



Direction Interrégionale de La Réunion  
BP 4  
97491 Ste Clotilde Cedex  
Tel: 0262 92 11 00  
Fax exploitation: 0262 92 11 48  
Fax direction: 0262 92 11 47



WTIO30 FMEE 291855

RSMC / TROPICAL CYCLONE CENTER / LA REUNION  
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 6/4/20132014

1.A MODERATE TROPICAL STORM 4 (BEJISA)

2.A POSITION 2013/12/29 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 10.4 S / 52.5 E

(TEN DECIMAL FOUR DEGREES SOUTH AND FIFTY TWO DECIMAL FIVE DEGREES EAST)

MOVEMENT : QUASI-STATIONARY

3.A DVORAK ANALYSIS: 3.0/3.0/D 0.5/6 H

4.A CENTRAL PRESSURE: 998 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 40 KT

RADIUS OF MAXIMUM WINDS (RMW) :28 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):

28 KT NE: 110 SE: 90 SW: 90 NW: 190

34 KT NE: 60 SE: 40 SW: 0 NW: 90

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1010 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION : MEDIUM

1.B FORECASTS:

12H: 2013/12/30 06 UTC: 11.0 S / 52.3 E, MAX WIND=050 KT, SEVERE TROPICAL STORM

24H: 2013/12/30 18 UTC: 12.2 S / 52.5 E, MAX WIND=070 KT, TROPICAL CYCLONE

36H: 2013/12/31 06 UTC: 13.5 S / 52.7 E, MAX WIND=080 KT, TROPICAL CYCLONE

48H: 2013/12/31 18 UTC: 15.2 S / 53.0 E, MAX WIND=085 KT, TROPICAL CYCLONE

60H: 2014/01/01 06 UTC: 16.7 S / 53.3 E, MAX WIND=085 KT, TROPICAL CYCLONE

72H: 2014/01/01 18 UTC: 17.9 S / 53.8 E, MAX WIND=080 KT, TROPICAL CYCLONE

2.B LONGER-RANGE OUTLOOK :

96H: 2014/01/02 18 UTC: 20.1 S / 55.7 E, MAX WIND=060 KT, SEVERE TROPICAL STORM

120H: 2014/01/03 18 UTC: 22.3 S / 57.0 E, MAX WIND=050 KT, SEVERE TROPICAL STORM

2.C ADDITIONAL INFORMATION:

T=CI=3.0-

THE SYSTEM HAS BEEN NAMED BEJISA BY THE NATIONAL WEATHER SERVICES OF MADAGASCAR AT 15 UTC. IT HAS BEEN RELOCALISED AT 12 UTC TO THE NORTH-EAST OF THE PREVIOUS ESTIMATE (CORRECTIVE 12 UTC POSITION: 10.3S / 52.5E). DURING THE LAST 6 HOURS, THE PRESENTATION OF THE SYSTEM HAS IMPROVED

ON BOTH CLASSICAL IMAGERY (BUILD-UP OF A 100 NM DIAMETER COLD TOP CLUSTER OF CONVECTION OVER THE CENTER) AND MW IMAGERY (IMPROVEMENT OF THE LOW LEVEL CIRCULATION SEEN ON WINDSAT OF 1420Z AND TRMM OF 1508Z). THE CURRENT ESTIMATE IS ON THE HIGH SIDE OF THE LASTEST DVORAK ESTIMATE (PGTW AND KNES AT 2.5) BUT IS JUSTIFIED BY THE MW PRESENTATION. ENVIRONMENTAL PRESSURES REMAINS HIGH (1012 HPA). SO THE MSLP ESTIMATE IS HIGHER THAN USUAL.

BEJISA IS EXPECTED TO TRACK SLOWLY MAINLY SOUTHWARDS UNDER THE STEERING INFLUENCE OF THE MONSOON FLOW IN A FIRST TIME THEN UNDER THE STEERING INFLUENCE OF A MID TROPOSPHERIC RIDGE LOCATED EAST OF THE SYSTEM PROLONGED BY A BRANCH SOUTH OF THE SYSTEM TOWARDS THE MASCARENES. FROM TUESDAY OR WEDNESDAY, THE SOUTHERN BRANCH OF THIS RIDGE IS EXPECTED TO WEAKEN ALLOWING THE SYSTEM TO ACCELERATE SOUTHWARDS.

MOST OF THE NWP GUIDANCES ARE IN GOOD AGREEMENT WITH THE PHILOSOPHY OF THIS SCENARIO BUT SHOWS HOWEVER DISCREPANCIES ABOUT THE TIMING (ECMWF IS MORE RAPID THAN GFS AND NAVGEM). FROM THURSDAY, THE EASTERN RIDGE IS EXPECTED TO EXTEND AGAIN SOUTH-WESTWARDS. THERE IS DIVERGENCE CONCERNING THE INFLUENCE OF THIS RIDGE SOUTHWARDS ON THE MEDIUM RIDGE FORECAST TRACK.

ECMWF APPEARS TO BE THE MOST CONSISTENT MODEL AT MEDIUM RANGE SO THE CURRENT FORECAST IS THEREFORE BASED ON THE MEAN OF THE LATEST 2 RUNS OF ECMWF (28/12Z AND 29/00Z) AND THE MEAN OF THE 51 MEMBERS OF THE ECMWF ENSEMBLE FORECAST.

ON THIS FORECAST TRACK, THE SYSTEM SHOULD MOVE UNDER THE UPPER LEVEL RIDGE WITHIN THE NEXT 12 HOURS AND SHOULD TAKE BENEFIT OF THIS GOOD ENVIRONMENTAL CONDITIONS TO INTENSIFY. GIVEN THE IMPROVEMENT NOTED ON RECENT MW IMAGERY, THE INTENSIFICATION RATE IS MORE AGGRESSIVE THAN PREVIOUSLY FOR THE NEXT 24/36 HOURS. FROM THURSDAY OR FRIDAY, NORTH-WESTERLY VERTICAL WINDSHEAR IS EXPECTED TO STRENGTHEN ALOFT AND SHOULD BEGIN TO MAKE THE SYSTEM WEAKENING. THERE IS THEREFORE A UNCERTAINTY ABOUT THE INTENSITY OF THE SYSTEM AS IT WILL APPROACH REUNION'S AND MAURITIUS ISLANDS.

INHABITANTS OF THE NORTH-EASTERN PART OF MADAGASCAR IN A FIRST TIME THEN PEOPLE FROM REUNION'S AND MAURITIUS ISLANDS AT MEDIUM RANGE ARE INVITED TO CLOSELY MONITORED THE PROGRESS OF THIS SYSTEM.