

WTIO30 FMEE 140629

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 5/10/20222023

1.A MODERATE TROPICAL STORM 10 (FABIEN)

2.A POSITION 2023/05/14 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 4.8 S / 82.4 E
(FOUR DECIMAL EIGHT DEGREES SOUTH AND
EIGHTY TWO DECIMAL FOUR DEGREES EAST)
MOVEMENT: WEST-SOUTH-WEST 11 KT

3.A DVORAK ANALYSIS: 3.0/3.0/D 1.0/12 H

4.A CENTRAL PRESSURE: 1001 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 35 KT
RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 130 SE: 130 SW: 185 NW: 185
34 KT NE: 65 SE: 65 SW: 65 NW: 65
48 KT NE: 0 SE: 0 SW: 0 NW: 0
64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/05/14 18 UTC: 5.1 S / 80.3 E, VENT MAX= 040 KT, MODERATE TROPICAL
STORM

28 KT NE: 130 SE: 175 SW: 140 NW: 95
34 KT NE: 65 SE: 65 SW: 65 NW: 65

24H: 2023/05/15 06 UTC: 5.6 S / 78.5 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 120 SE: 150 SW: 195 NW: 110
34 KT NE: 65 SE: 65 SW: 95 NW: 65

36H: 2023/05/15 18 UTC: 6.0 S / 77.1 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 110 SE: 155 SW: 140 NW: 150
34 KT NE: 85 SE: 75 SW: 65 NW: 75
48 KT NE: 45 SE: 55 SW: 45 NW: 55

48H: 2023/05/16 06 UTC: 6.8 S / 75.9 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 130 SE: 230 SW: 185 NW: 150
34 KT NE: 100 SE: 95 SW: 120 NW: 85

48 KT NE: 55 SE: 65 SW: 55 NW: 65
64 KT NE: 35 SE: 45 SW: 45 NW: 35

60H: 2023/05/16 18 UTC: 8.0 S / 75.2 E, VENT MAX= 075 KT, TROPICAL CYCLONE
28 KT NE: 140 SE: 280 SW: 220 NW: 150
34 KT NE: 110 SE: 120 SW: 140 NW: 95
48 KT NE: 65 SE: 75 SW: 65 NW: 75
64 KT NE: 45 SE: 55 SW: 55 NW: 45

72H: 2023/05/17 06 UTC: 8.8 S / 74.6 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 155 SE: 285 SW: 250 NW: 165
34 KT NE: 120 SE: 130 SW: 155 NW: 110
48 KT NE: 75 SE: 75 SW: 65 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 45

2.B LONGER-RANGE OUTLOOK:

96H: 2023/05/18 06 UTC: 10.4 S / 73.2 E, VENT MAX= 085 KT, TROPICAL CYCLONE
28 KT NE: 165 SE: 280 SW: 240 NW: 175
34 KT NE: 120 SE: 130 SW: 150 NW: 120
48 KT NE: 65 SE: 85 SW: 75 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 45

120H: 2023/05/19 06 UTC: 11.1 S / 72.1 E, VENT MAX= 080 KT, TROPICAL CYCLONE
28 KT NE: 175 SE: 260 SW: 250 NW: 185
34 KT NE: 130 SE: 120 SW: 150 NW: 120
48 KT NE: 70 SE: 70 SW: 70 NW: 70
64 KT NE: 60 SE: 60 SW: 60 NW: 50

2.C ADDITIONAL INFORMATION:

FT=CI=3.0-

DURING THE LAST SIX HOURS, THE CLOUD PATTERN HAS IMPROVED. WITH STRONGER CONVECTION NEAR THE CENTER. AFTER A STRONG CONVECTION BOOST OVER THE CENTER IN THE MIDDLE OF THE NIGHT, THE CONVECTION IS ORGANIZED IN COMMA NEAR THE CENTER. THE LAST MICROWAVE IMAGES (2349Z AND 0034Z SSMIS) SHOW SHARPER SIGNS OF CURVATURE. CONSEQUENTLY SYSTEM 10 HAS BEEN RECLASSIFIED AS A MODERATE TROPICAL STORM AND NAMED FABIEN AT 06UTC.

IN TERMS OF TRAJECTORY, IN THE COMING DAYS THE SYSTEM SHOULD KEEP ON MOVING WEST-SOUTHWEST TO SOUTHWESTWARD UNDER THE INFLUENCE OF A SUBTROPICAL RIDGE LOCATED TO THE SOUTHEAST. FROM THE MIDDLE OF NEXT WEEK, MORE CONTRADICTIONARY STEERING FLOWS DRIVEN BY THE NEAR EQUATORIAL RIDGE AND SUBTROPICAL RIDGES SHOULD CAUSE A SLOWING DOWN OF ITS MOVEMENT, LEADING TO AN INCREASE IN UNCERTAINTY ON THE LATE TRACK. THE RSMC FORECAST REFLECTS A COMPROMISE BETWEEN THE EUROPEAN AND AMERICAN MODELS, BUT CLOSER TO THE EUROPEAN SCENARIO, WHICH SEEMS TO BE MORE CONSISTENT WITH THE INITIAL STATE. THIS SYSTEM IS EXPECTED TO REMAIN EAST OF THE CHAGOS ARCHIPELAGO WITH NO DIRECT THREAT TO THE OTHER INHABITED ISLANDS OF THE BASIN.

IN TERMS OF INTENSITY, THE DEVELOPMENT OF THE SYSTEM HAS BEEN LIMITED

BY THE MODERATE EAST-NORTHEASTERLY SHEAR, THE LOW LATITUDE (NORTH OF 5S) AS WELL AS A WEAKER SURFACE FEEDING ON THE EQUATORIAL SIDE (DUE TO CYCLONE MOCHA IN THE NORTHERN HEMISPHERE). BUT PROGRESSIVELY TODAY AND MOSTLY FROM MONDAY, WITH THE DECREASE OF THIS SHEAR, THE IMPROVEMENT OF THE LOW LEVEL CONVERGENCE AND THE GOOD ALOFT DIVERGENCE, A STRONGER INTENSIFICATION IS EXPECTED. THE RSMC FORECAST THUS ANTICIPATES AN INITIALLY SLOW DEVELOPMENT BECOMING MORE RAPID EARLY NEXT WEEK, WHICH COULD LEAD THE SYSTEM TO BECOME A TROPICAL CYCLONE IN MID-WEEK. THIS IS SUGGESTED BY MOST MODELS, NOTABLY IFS AND GFS.