

WTIO30 FMEE 180650

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 21/10/20222023

1.A MODERATE TROPICAL STORM 10 (FABIEN)

2.A POSITION 2023/05/18 AT 0600 UTC:

WITHIN 30 NM RADIUS OF POINT 8.9 S / 71.8 E

(EIGHT DECIMAL NINE DEGREES SOUTH AND
SEVENTY ONE DECIMAL EIGHT DEGREES EAST)

MOVEMENT: WEST 6 KT

3.A DVORAK ANALYSIS: 2.5/3.5/W 2.0/24 H

4.A CENTRAL PRESSURE: 991 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 100 SE: 280 SW: 250 NW: 120

34 KT NE: 0 SE: 230 SW: 215 NW: 75

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1011 HPA / 600 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2023/05/18 18 UTC: 9.3 S / 71.0 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 110 SE: 270 SW: 220 NW: 130

34 KT NE: 85 SE: 130 SW: 165 NW: 75

24H: 2023/05/19 06 UTC: 9.5 S / 70.2 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 110 SE: 270 SW: 215 NW: 130

34 KT NE: 85 SE: 130 SW: 155 NW: 85

48 KT NE: 0 SE: 55 SW: 55 NW: 65

36H: 2023/05/19 18 UTC: 9.8 S / 69.7 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 100 SE: 215 SW: 185 NW: 120

34 KT NE: 75 SE: 100 SW: 130 NW: 85

48 KT NE: 35 SE: 35 SW: 45 NW: 45

48H: 2023/05/20 06 UTC: 10.1 S / 69.9 E, VENT MAX= 045 KT, MODERATE TROPICAL
STORM

28 KT NE: 130 SE: 260 SW: 215 NW: 130

34 KT NE: 95 SE: 130 SW: 155 NW: 95

60H: 2023/05/20 18 UTC: 10.6 S / 70.4 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM

28 KT NE: 100 SE: 240 SW: 195 NW: 130

34 KT NE: 75 SE: 120 SW: 150 NW: 75

72H: 2023/05/21 06 UTC: 11.4 S / 70.9 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM

28 KT NE: 120 SE: 215 SW: 185 NW: 140

34 KT NE: 85 SE: 110 SW: 130 NW: 65

2.B LONGER-RANGE OUTLOOK:

96H: 2023/05/22 06 UTC: 12.4 S / 70.8 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM

28 KT NE: 0 SE: 185 SW: 165 NW: 120

34 KT NE: 0 SE: 95 SW: 100 NW: 65

120H: 2023/05/23 06 UTC: 12.9 S / 70.3 E, VENT MAX= 030 KT, FILLING UP

28 KT NE: 0 SE: 205 SW: 220 NW: 0

2.C ADDITIONAL INFORMATION:

T=2.5 CI=3.5

TROPICAL STORM FABIEN SYSTEM CONTINUES TO SUFFER FROM A MODERATE WESTERLY SHEAR CONSTRAINT THAT CONTINUES TO DRAW DRY AIR INTO THE CIRCULATION. THE CLOUD PATTERN HAS STRONGLY DEGRADED SINCE THE END OF THE NIGHT WITH A FLUCTUATING AND DISORGANIZED CONVECTION TRYING TO MAINTAIN ITSELF NEAR THE CENTER IN THE SOUTHERN SEMICIRCLE OF THE SYSTEM. THE ASCAT PASS OF 0457Z HAS BEEN USEFUL TO SPECIFY THE POSITION, THE INTENSITY AND THE STRUCTURE OF THE WIND FIELD OF THE SYSTEM.

IN TERMS OF TRAJECTORY, THE DISPERSION OF THE MOST RELIABLE GUIDANCES INCREASES SIGNIFICANTLY AFTER 48H. FROM THEN ON, THE CURRENT FORECAST REMAINS IN THE PREVIOUS PHILOSOPHY BUT HAS RETURNED A LITTLE FURTHER EAST AND IS SLOWER: FABIEN IS CURRENTLY HEADING WEST AND WILL TAKE A WEST-SOUTHWEST COMPONENT GUIDED BY THE SUBTROPICAL RIDGE SLIDING FURTHER SOUTH OF THE SYSTEM. BETWEEN FRIDAY AND SATURDAY, FABIEN WILL BE SUBJECT TO MORE CONTRADICTORY STEERING FLOWS BETWEEN TWO RIDGES, WHICH COULD MAKE IT TEMPORARILY QUASI-STATIONARY. THE UNCERTAINTY INCREASES FROM THIS WEEKEND, BECAUSE, IN ADDITION TO COMPLEX STEERING FLOWS, THE TRACK WILL ALSO DEPEND ON THE ACTUAL INTENSITY OF FABIEN.

THE CURRENT SHEAR IS EXPECTED TO EASE NEXT NIGHT AND TOMORROW FRIDAY. IN THE PRESENCE OF A GOOD OCEANIC POTENTIAL, THE CONDITIONS SEEM FAVORABLE FOR A POSSIBLE RESUMPTION OF THE INTENSIFICATION. FROM SATURDAY ONWARDS, THE STRENGTHENING OF THE SOUTH-EAST SHEAR AND ESPECIALLY THE POSSIBLE COLLAPSE OF THE UNDERLYING OCEANIC POTENTIAL DUE TO THE QUASI-STATIONARITY SHOULD LEAD TO A SIGNIFICANT AND DEFINITIVE WEAKENING FROM SUNDAY ONWARDS, DESPITE THE RESUMPTION OF FABIEN'S MOVEMENT. THE SYSTEM WILL EVOLVE SOUTHWARD INTO A FILLING DEPRESSION THEN A RESIDUAL DEPRESSION IN THE FIRST PART OF NEXT WEEK.

