

WTIO30 FMEE 211239

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 2/4/20222023

1.A VERY INTENSE TROPICAL CYCLONE 4 (DARIAN)

2.A POSITION 2022/12/21 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 13.7 S / 90.0 E

(THIRTEEN DECIMAL SEVEN DEGREES SOUTH AND
NINETY DECIMAL ZERO DEGREES EAST)

MOVEMENT: WEST 7 KT

3.A DVORAK ANALYSIS: 7.0/7.0/D 0.5/12 H

4.A CENTRAL PRESSURE: 920 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 120 KT

RADIUS OF MAXIMUM WINDS (RMW): 18

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

28 KT NE: 185 SE: 250 SW: 325 NW: 215

34 KT NE: 140 SE: 185 SW: 215 NW: 150

48 KT NE: 100 SE: 100 SW: 110 NW: 100

64 KT NE: 65 SE: 65 SW: 65 NW: 65

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 700 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2022/12/22 00 UTC: 13.3 S / 88.5 E, VENT MAX= 120 KT, VERY INTENSE TROPICAL
CYCLONE

28 KT NE: 175 SE: 280 SW: 305 NW: 185

34 KT NE: 120 SE: 165 SW: 185 NW: 110

48 KT NE: 75 SE: 85 SW: 75 NW: 75

64 KT NE: 55 SE: 55 SW: 55 NW: 45

24H: 2022/12/22 12 UTC: 13.1 S / 87.0 E, VENT MAX= 110 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 175 SE: 285 SW: 315 NW: 185

34 KT NE: 120 SE: 175 SW: 185 NW: 120

48 KT NE: 75 SE: 95 SW: 85 NW: 75

64 KT NE: 55 SE: 55 SW: 55 NW: 55

36H: 2022/12/23 00 UTC: 13.0 S / 85.1 E, VENT MAX= 110 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 175 SE: 295 SW: 325 NW: 185

34 KT NE: 120 SE: 175 SW: 195 NW: 120

48 KT NE: 85 SE: 95 SW: 85 NW: 75
64 KT NE: 55 SE: 55 SW: 55 NW: 55

48H: 2022/12/23 12 UTC: 13.1 S / 83.6 E, VENT MAX= 120 KT, VERY INTENSE TROPICAL CYCLONE

28 KT NE: 185 SE: 315 SW: 335 NW: 185
34 KT NE: 120 SE: 185 SW: 205 NW: 120
48 KT NE: 85 SE: 95 SW: 95 NW: 75
64 KT NE: 65 SE: 55 SW: 65 NW: 55

60H: 2022/12/24 00 UTC: 13.3 S / 82.4 E, VENT MAX= 120 KT, VERY INTENSE TROPICAL CYCLONE

28 KT NE: 185 SE: 325 SW: 345 NW: 185
34 KT NE: 120 SE: 185 SW: 205 NW: 130
48 KT NE: 85 SE: 100 SW: 95 NW: 85
64 KT NE: 65 SE: 65 SW: 65 NW: 55

72H: 2022/12/24 12 UTC: 13.9 S / 82.1 E, VENT MAX= 110 KT, INTENSE TROPICAL CYCLONE

28 KT NE: 185 SE: 345 SW: 350 NW: 185
34 KT NE: 120 SE: 195 SW: 215 NW: 130
48 KT NE: 95 SE: 100 SW: 95 NW: 85
64 KT NE: 65 SE: 65 SW: 65 NW: 55

2.B LONGER-RANGE OUTLOOK:

96H: 2022/12/25 12 UTC: 15.7 S / 82.5 E, VENT MAX= 080 KT, TROPICAL CYCLONE

28 KT NE: 185 SE: 370 SW: 380 NW: 195
34 KT NE: 120 SE: 205 SW: 220 NW: 140
48 KT NE: 100 SE: 110 SW: 100 NW: 85
64 KT NE: 75 SE: 65 SW: 75 NW: 65

120H: 2022/12/26 12 UTC: 17.1 S / 82.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM

28 KT NE: 195 SE: 390 SW: 400 NW: 195
34 KT NE: 120 SE: 215 SW: 240 NW: 150
48 KT NE: 100 SE: 110 SW: 110 NW: 90

2.C ADDITIONAL INFORMATION:

DURING THE LAST HOURS, THE DARIAN SYSTEM HAS APPROACHED THE 90TH, AND IS LEAVING THE AUSTRALIAN AREA OF RESPONSIBILITY. THE SYSTEM IS NOW FOLLOWED BY THE CMRS OF REUNION.

THE SYSTEM HAS CONTINUED ITS PROGRESSIVE INTENSIFICATION, TO REACH THE LOWER STAGE OF CTTI DURING THE MORNING.

ACCORDING TO THE LAST AMSR2 MICROWAVE DATA OF 0759Z, THE SYSTEM PRESENTS A STRUCTURE SEEMING TO ANNOUNCE A FIRST EYE CYCLE, WITH A SECOND OUTER EYE WALL FORMING AROUND THE INNER WALL PERFECTLY CIRCULAR IN 37 AS IN 89GHZ.

DARIAN IS EXPECTED TO CONTINUE GENERALLY WESTWARD FOR THE NEXT THREE DAYS, THROUGH FRIDAY, UNDER THE INFLUENCE OF THE MID-TROPICAL RIDGE TO THE SOUTH.

FROM SATURDAY, THE ARRIVAL OF A TROUGH FROM THE SOUTH WEAKENS THE SUBTROPICAL RIDGE, WHILE A RIDGE BUILDS UP TO THE NORTH EAST AND THEN

TO THE NORTH OF THE SYSTEM, BUT THE TRAJECTORY SLOWS DOWN AND THEN TURNS TO THE SOUTH UNTIL MONDAY.

POSITIONED UNDER THE UPPER RIDGE, THE SYSTEM BENEFITS FROM GOOD ENVIRONMENTAL CONDITIONS DURING THE WHOLE PERIOD, WITH EVEN FROM SATURDAY THE ESTABLISHMENT OF A GOOD POLAR EVACUATION CHANNEL. NEVERTHELESS, BEYOND SATURDAY, THE SLOWER MOVEMENT OF THE SYSTEM OVER WATERS WITH LESS ENERGY POTENTIAL SHOULD CAUSE A WEAKENING OF THE SYSTEM.