

WTIO30 FMEE 020650

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 12/5/20232024

1.A TROPICAL DEPRESSION 5

2.A POSITION 2024/02/02 AT 0600 UTC:

WITHIN 20 NM RADIUS OF POINT 20.0 S / 68.5 E

(TWENTY DECIMAL ZERO DEGREES SOUTH AND
SIXTY EIGHT DECIMAL FIVE DEGREES EAST)

MOVEMENT: SOUTH-EAST 7 KT

3.A DVORAK ANALYSIS: 2.5/2.5/D 1.0/18 H

4.A CENTRAL PRESSURE: 1000 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 30 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 185 SE: 185 SW: 370 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 900 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/02/02 18 UTC: 21.3 S / 69.8 E, VENT MAX= 030 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 220 SE: 220 SW: 335 NW: 0

24H: 2024/02/03 06 UTC: 23.5 S / 72.2 E, VENT MAX= 030 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 220 SE: 220 SW: 0 NW: 130

36H: 2024/02/03 18 UTC: 27.8 S / 75.2 E, VENT MAX= 035 KT, POST-TROPICAL
DEPRESSION

28 KT NE: 465 SE: 595 SW: 280 NW: 260

34 KT NE: 185 SE: 185 SW: 0 NW: 0

48H: 2024/02/04 06 UTC: 34.0 S / 76.9 E, VENT MAX= 045 KT, EXTRATROPICAL
DEPRESSION

28 KT NE: 595 SE: 630 SW: 445 NW: 280

34 KT NE: 335 SE: 405 SW: 295 NW: 185

60H: 2024/02/04 18 UTC: 37.1 S / 78.4 E, VENT MAX= 045 KT, EXTRATROPICAL
DEPRESSION

28 KT NE: 665 SE: 650 SW: 465 NW: 370

34 KT NE: 260 SE: 335 SW: 335 NW: 220

72H: 2024/02/05 06 UTC: 39.5 S / 81.6 E, VENT MAX= 045 KT, EXTRATROPICAL DEPRESSION

28 KT NE: 480 SE: 480 SW: 425 NW: 405

34 KT NE: 280 SE: 260 SW: 315 NW: 280

2.B LONGER-RANGE OUTLOOK:

NIL

2.C ADDITIONAL INFORMATION:

T=CI=2.5

SINCE THURSDAY NIGHT, INTENSE CONVECTIVE ACTIVITY HAS RESUMED NEAR THE SYSTEM'S CENTER, PROBABLY LINKED TO ITS ACCELERATION IN THE SAME DIRECTION AS THE WIND SHEAR AND ITS MOVEMENT OVER AN AREA OF HIGH OCEANIC HEAT CONTENT. THE LATEST MICROWAVE PASSES SHOW A CLEAR IMPROVEMENT IN THE SYSTEM'S INTERNAL STRUCTURE, PARTICULARLY THE AMSR2 AT 2041Z. ONLY PARTIAL ASCAT PASSES SINCE YESTERDAY EVENING SHOW THE PRESENCE OF WINDS REACHING AT LEAST 30KT, BUT IN THE ABSENCE OF MORE COMPLETE OBJECTIVE DATA AND GIVEN THE IMPROVED CONFIGURATION, WE CAN'T RULE OUT THE POSSIBILITY THAT GALE FORCE WINDS MAY HAVE BEEN PRESENT AROUND 00UTC. SUBJECTIVE DVORAK ANALYSIS IN SHEARED PATTERN OR BASED ON MET/PT GIVES A FT OF 2.0 AT 18UTC THEN 2.5 AT 00 AND 06UTC. THE SYSTEM IS ESTIMATED TO BE AT TROPICAL DEPRESSION STAGE, BUT WITH CONSIDERABLE UNCERTAINTY AS TO ITS ACTUAL INTENSITY. MOREOVER, THE POSITION OF THE CENTER IS UNCERTAIN AND ESTIMATED AT 06UTC AT THE WESTERN EDGE OF THE CONVECTIVE MASS, IN A CONTEXT OF APPARENT INCREASE IN SHEAR EFFECTS.

THE SYSTEM IS MOVING SOUTHEASTWARD THEN SOUTH-SOUTHEASTWARD, STEARED BY A MID-TROPOSPHERE TROUGH TO ITS WEST. IT WILL THEREFORE GRADUALLY LEAVE THE TROPICAL DOMAIN AND EXIT TOWARDS THE SOUTHERN MID-LATITUDES BY SUNDAY EVENING, PASSING CLOSE TO THE ISLAND OF AMSTERDAM.

IN TERMS OF INTENSITY, THERE IS CONSIDERABLE UNCERTAINTY IN THE SHORT TERM AS TO THE EXACT POSITION OF THE CENTER, MORE OR LESS OFFSET TO THE WEST OF THE CDO. ACCORDING TO MOST NUMERICAL MODELS, WIND SHEAR IS SET TO INCREASE AND PROGRESSIVELY EXPOSE THE LOW-LEVEL CENTER BY TONIGHT. THROUGH INTERACTION WITH THE UPPER TROUGH, BAROCLINIC PROCESSES COULD THEN LEAD TO A REINTENSIFICATION FROM SATURDAY ONWARDS, BUT WITH THE SYSTEM BECOMING ASYMMETRICAL AND UNDERGOING EXTRATROPICAL TRANSITION, WITH A WIDENING OF ITS AREA OF STRONG WINDS.

EXPECTED IMPACTS ON AMSTERDAM ISLAND :

- GALE FORCE WINDS (35-40KT LIKELY, TEMPORARILY 45KT POSSIBLE) FROM SUNDAY 06UTC UNTIL MONDAY 06UTC.

- WAVE HEIGHTS OF 4 TO 6 METERS ON SUNDAY AND UNTIL MONDAY MORNING (PEAK ON SUNDAY EVENING).

