

WTIO30 FMEE 220039

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

0.A WARNING NUMBER: 16/5/20182019

1.A INTENSE TROPICAL CYCLONE 5 (CILIDA)

2.A POSITION 2018/12/22 AT 0000 UTC:

WITHIN 15 NM RADIUS OF POINT 16.2 S / 58.0 E

(SIXTEEN DECIMAL TWO DEGREES SOUTH AND FIFTY EIGHT DECIMAL ZERO
DEGREES EAST)

MOVEMENT : SOUTH-SOUTH-EAST 6 KT

3.A DVORAK ANALYSIS: 6.0/6.5/S 0.0/12 H

4.A CENTRAL PRESSURE: 940 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 110 KT

RADIUS OF MAXIMUM WINDS (RMW) :19 KM

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

28 KT NE: 140 SE: 190 SW: 140 NW: 140

34 KT NE: 90 SE: 90 SW: 90 NW: 90

48 KT NE: 70 SE: 70 SW: 70 NW: 70

64 KT NE: 50 SE: 50 SW: 50 NW: 50

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1008 HPA / 1100 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION : DEEP

1.B FORECASTS:

12H: 2018/12/22 12 UTC: 17.7 S / 58.3 E, MAX WIND=105 KT, INTENSE TROPICAL
CYCLONE

24H: 2018/12/23 00 UTC: 19.8 S / 59.4 E, MAX WIND=090 KT, INTENSE TROPICAL
CYCLONE

36H: 2018/12/23 12 UTC: 22.1 S / 61.0 E, MAX WIND=075 KT, TROPICAL CYCLONE

48H: 2018/12/24 00 UTC: 24.4 S / 63.1 E, MAX WIND=065 KT, TROPICAL CYCLONE

60H: 2018/12/24 12 UTC: 26.6 S / 65.4 E, MAX WIND=055 KT, SEVERE TROPICAL STORM

72H: 2018/12/25 00 UTC: 29.1 S / 67.1 E, MAX WIND=045 KT, POST-TROPICAL
DEPRESSION

2.B LONGER-RANGE OUTLOOK :

96H: 2018/12/26 00 UTC: 34.7 S / 70.3 E, MAX WIND=040 KT, POST-TROPICAL
DEPRESSION

120H: 2018/12/27 00 UTC: 37.2 S / 74.2 E, MAX WIND=035 KT, POST-TROPICAL
DEPRESSION

2.C ADDITIONAL INFORMATION:

T=6.0;CI=6.5

OVER THE LAST 6 HOURS, CLOUD TOPS HAVE SLIGHTLY WARMED AGAIN, THUS DETERIORATING THE SAT IR PRESENTATION. THE 1754Z ASCAT SWATH STILL SHOWS THAT GALE FORCE IS REACHED ON A RELATIVELY SMALL AREA. AMSR2 2150Z MW IMAGES SHOW A SOLID INNER-CORE. HOWEVER, ON THE 89GHZ IMAGE, A NARROW BAND IS TIGHTLY WRAPPING AROUND THE CENTRAL CONVECTION RING. THESE TWO STRUCTURES, ALTHOUGH VERY CLOSE, SEEM ALSO SEPARATED BY A NARROW MOAT AREA. THIS COULD BE THE SIGN OF AN EYEWALL REPLACEMENT CYCLE (ERC). THE NEXT MW IMAGES SHOULD ALLOW TO VERIFY THIS HYPOTHESIS.

IN TERMS OF TRACK FORECAST, CILIDA REMAINS STEERED BY THE WESTERN EDGE OF A MID-TROPOSPHERE SUBTROPICAL RIDGE. THE GRADUAL EASTWARD SHIFT OF THESE SUBTROPICAL HIGH GEOPOTENTIALS AND THE ARRIVAL OF A MID-LEVEL TROUGH FROM THE WEST HAVE ALREADY DRIVEN A SOUTH-SOUTH-EASTWARDS TURN. LATER TODAY, CILIDA SHOULD FINISH TO TURN SOUTH-EASTWARD WHILE ACCELERATING. THE DISPERSION OF THE AVAILABLE NWP MODELS AND ECMWF ENSEMBLE REMAINS RELATIVELY LOW.

THE SYSTEM IS STILL CURRENTLY UNDER THE UPPER LEVEL RIDGE AND BENEFITS FROM VERY GOOD ENVIRONMENTAL CONDITIONS UNTIL MID-DAY TODAY (WITH A VERY GOOD UPPER DIVERGENCE INCREASED BY TWO OUTFLOW CHANNELS). A 6-12 H WINDOW REMAINS FOR THE SYSTEM TO MAYBE REACH THE VERY INTENSE TROPICAL CYCLONE STAGE. HOWEVER, IF AN ERC DOES BEGIN IN THE NEXT HOURS, THE INTENSITY SHOULD DECREASE A LITTLE QUICKER THAN ANTICIPATED.

IN THE SECOND HALF OF DAY, A STRENGTHENING OF THE WEST-NORTH-WESTERLY SHEAR AHEAD OF AN UPPER TROUGH AND DRIER MID-LEVELS SHOULD TRIGGER THE WEAKENING OF THE SYSTEM. THE SMALL SIZE OF THE SYSTEM IS MAKING IT POTENTIALLY MORE SENSIBLE TO ITS ENVIRONMENT. MONDAY, THE SYSTEM EVACUATES TOWARDS THE MID-LATITUDES WHILE STILL WEAKENING OVER COOLER WATERS. FROM TUESDAY, UNDER THE INFLUENCE OF THIS UPPER TROUGH THAT SHOULD EVENTUALLY CATCH UP, THE SYSTEM SHOULD BEGIN AN EXTRATROPICALISATION PHASE.

CILIDA IS VERY DANGEROUS. IT IS POSING A POTENTIAL THREAT TO THE MASCARENES ISLANDS ESPECIALLY MAURITIUS AND RODRIGUES ISLANDS. HOWEVER, GIVEN THE SMALL SIZE OF THE CORE AND THE GOOD CONFIDENCE IN THE TRACK, BOTH ISLANDS SHOULD AVOID THE MOST DISASTROUS IMPACTS, NOTABLY IN TERMS OF WINDS. THE CLOSEST PASSAGE IS STILL FORECAST FOR THE END OF TOMORROW'S NIGHT. THE INHABITANTS OF THESE ISLANDS ARE INVITED TO CLOSELY MONITOR THE PROGRESS OF THE SYSTEM.