

WTIO30 FMEE 180107

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 3/8/20202021

1.A MODERATE TROPICAL STORM 8 (JOSHUA)

2.A POSITION 2021/01/18 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 19.2 S / 87.8 E

(NINETEEN DECIMAL TWO DEGREES SOUTH AND  
EIGHTY SEVEN DECIMAL EIGHT DEGREES EAST)

MOVEMENT: WEST 8 KT

3.A DVORAK ANALYSIS: 2.5/3.0/S 0.0/24 H

4.A CENTRAL PRESSURE: 994 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 40 KT

RADIUS OF MAXIMUM WINDS (RMW): NIL

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

28 KT NE: 75 SE: 185 SW: 185 NW: 0

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 400 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: MEDIUM

1.B FORECASTS (WINDS RADII IN KM):

12H: 2021/01/18 12 UTC: 19.2 S / 85.9 E, VENT MAX= 035 KT, MODERATE TROPICAL  
STORM

28 KT NE: 35 SE: 100 SW: 95 NW: 0

34 KT NE: 0 SE: 55 SW: 35 NW: 0

24H: 2021/01/19 00 UTC: 19.1 S / 83.9 E, VENT MAX= 030 KT, REMNANT LOW

28 KT NE: 0 SE: 75 SW: 45 NW: 0

36H: 2021/01/19 12 UTC: 19.4 S / 81.6 E, VENT MAX= 025 KT, FILLING UP

48H: 2021/01/20 00 UTC: 20.0 S / 79.2 E, VENT MAX= 020 KT, FILLING UP

60H: 2021/01/20 12 UTC: 20.9 S / 77.1 E, VENT MAX= 020 KT, FILLING UP

72H: 2021/01/21 00 UTC: 21.8 S / 75.0 E, VENT MAX= 020 KT, DISSIPATING

2.B LONGER-RANGE OUTLOOK:

NIL

2.C ADDITIONAL INFORMATION:

T=2.5; CI=3.0-

DURING THE NIGHT THE CONVECTIVE ACTIVITY SHOWN LESS FLUCTUATIONS BUT WAS CONFINED TO THE SOUTHWEST QUADRANT ESSENTIALLY. THE SYSTEM IS VISIBLY SHEARED FROM THE NORTH (DEEP LAYERS SHEAR) AND RECENT MICROWAVE IMAGING SHOWS A DEGRADATION OF THE STRUCTURE IN LOW LEVELS. AS A CONSEQUENCE THE INTENSITY IS LOWERED TO 40 KT.

IN TERMS OF TRACK FORECASTS, JOSHUA IS UNDER THE INFLUENCE OF THE END OF THE SUBTROPICAL RIDGE PRESENT ON THE WESTERN PART OF THE AUSTRALIAN BASIN AND WHICH IS SHIFTING WESTWARD IMPOSING A GLOBAL DIRECTIONAL FLOW TOWARDS THE WEST. ALL THE GUIDES ARE IN GOOD AGREEMENT WITH THIS TRACK WHICH SHOULD EVOLVE LITTLE DURING THE NEXT 48 HOURS.

FOLLOWING THIS TRACK, JOSHUA IS NOW EXPECTED TO EVOLVE WITHIN INCREASING UNFAVORABLE ENVIRONMENTAL CONDITIONS: THE MID LEVELS SHEAR WILL INCREASE AND THE DRY AIR ALREADY PRESENT IN THE WESTERN SECTOR WILL GRADUALLY ERODE THE CONVECTION AND WEAKEN THE SYSTEM. THE SYSTEM SHOULD THEN EVOLVE QUITE RAPIDLY INTO A REMNANT LOW.