

WTIO30 FMEE 151818

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 19/2/20232024

1.A SEVERE TROPICAL STORM 2 (BELAL)

2.A POSITION 2024/01/15 AT 1800 UTC:

WITHIN 20 NM RADIUS OF POINT 21.7 S / 56.9 E

(TWENTY ONE DECIMAL SEVEN DEGREES SOUTH AND
FIFTY SIX DECIMAL NINE DEGREES EAST)

MOVEMENT: SOUTH-EAST 9 KT

3.A DVORAK ANALYSIS: 4.0/5.0/W 1.0/12 H

4.A CENTRAL PRESSURE: 975 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 60 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 295 SE: 270 SW: 220 NW: 220

34 KT NE: 155 SE: 155 SW: 155 NW: 120

48 KT NE: 85 SE: 100 SW: 90 NW: 75

64 KT NE: 0 SE: 0 SW: 0 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1005 HPA / 1300 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/16 06 UTC: 22.2 S / 58.0 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 295 SE: 360 SW: 345 NW: 220

34 KT NE: 175 SE: 220 SW: 205 NW: 130

48 KT NE: 85 SE: 95 SW: 85 NW: 65

24H: 2024/01/16 18 UTC: 22.7 S / 60.0 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 295 SE: 270 SW: 230 NW: 215

34 KT NE: 165 SE: 165 SW: 150 NW: 120

48 KT NE: 85 SE: 85 SW: 55 NW: 45

36H: 2024/01/17 06 UTC: 22.7 S / 61.6 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 270 SE: 215 SW: 205 NW: 195

34 KT NE: 155 SE: 130 SW: 120 NW: 100

48 KT NE: 75 SE: 85 SW: 55 NW: 45

48H: 2024/01/17 18 UTC: 22.5 S / 63.0 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM

28 KT NE: 270 SE: 295 SW: 270 NW: 205

34 KT NE: 155 SE: 175 SW: 155 NW: 110

48 KT NE: 75 SE: 95 SW: 85 NW: 45

60H: 2024/01/18 06 UTC: 22.2 S / 63.4 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
28 KT NE: 260 SE: 270 SW: 240 NW: 205
34 KT NE: 150 SE: 155 SW: 150 NW: 100
48 KT NE: 75 SE: 85 SW: 55 NW: 45

72H: 2024/01/18 18 UTC: 21.7 S / 63.3 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 250 SE: 285 SW: 250 NW: 120
34 KT NE: 150 SE: 165 SW: 155 NW: 65

2.B LONGER-RANGE OUTLOOK:

96H: 2024/01/19 18 UTC: 22.1 S / 62.4 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 175 SE: 220 SW: 185 NW: 130
34 KT NE: 100 SE: 130 SW: 110 NW: 0

120H: 2024/01/20 18 UTC: 21.8 S / 61.7 E, VENT MAX= 025 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION:

PT=4.0 CI=5.0

OVER THE PAST 6 HOURS, BELAL'S CLOUD CONFIGURATION HAS REMAINED FAIRLY LOOSE, BUT THE TEMPERATURE OF THE CLOUD TOPS HAS COOLED SOMEWHAT, WITH A BURST OF CONVECTION NEAR THE CENTER. MICOR-WAVE SSMIS IMAGES FROM 1354 SHOW DEEP CONVECTION MAINLY IN THE SOUTHEAST QUARTER OF THE SYSTEM. IN ADDITION, THE ASCAT PASS AT 1730Z SHOWS A WEAKENING OF THE MEAN WINDS. IN ACCORDANCE WITH THE OBJECTIVE AND SUBJECTIVE ANALYSES AVAILABLE, BELAL HAS BEEN RETRODASED TO THE STAGE OF A STRONG TROPICAL STORM WITH 60KT WIND.

BELAL WILL CONTINUE TO MOVE EAST-SOUTHEAST UNTIL TUESDAY, AS THE NEAR-EQUATORIAL RIDGE TO THE NORTHEAST OF THE SYSTEM STRENGTHENS. IN MID-WEEK, WITH A NEW RIDGE SWELLING TO THE WEST AND SOUTH-WEST OF THE SYSTEM, IT MOVES EASTWARDS. THEN MORE CONTRADICTORY STEERING FLOWS SHOULD LEAD TO A SLOWING OF THE MOVEMENT AND A TURN TO THE NORTH. ON LONGER TIME SCALES, THE CONTRADICTORY DIRECTING FLOWS CONTINUE TO MAKE TRAJECTORY PREDICTION HIGHLY UNCERTAIN, AND THE RSMC IS CURRENTLY OPTING FOR A GENERALLY WESTERLY TRAJECTORY, WHICH MAY CHANGE CONSIDERABLY.

AS IT MOVES AWAY FROM REUNION, BELAL RETURNS TO RELATIVELY FAVORABLE ENVIRONMENTAL CONDITIONS, BUT SHOULD BE CONSTRAINED BY A MORE PRONOUNCED WESTERLY SHEAR, ALLOWING DRY AIR TO APPROACH THE CENTER. THE INTENSITY OF THE SYSTEM SHOULD THEREFORE GRADUALLY DIMINISH. AT THE END OF THE WEEK, BEGINNING OF THE WEEKEND, BELAL COULD WEAKEN MORE MARKEDLY AND BEGIN TO FILL IN.

EXPECTED IMPACTS ON REUNION AND MAURITIUS OVER THE NEXT 72 HOURS :

REUNION:

- END OF STORM FORCE ON MONDAY NIGHT. END OF SEVERE WEATHER FOR TUESDAY MORNING.
- RAINFALL TOTALS IN THE ORDER OF 200-250MM IN 24H OVER THE SOUTHEASTERN HEIGHTS AND IN THE ORDER OF 150-200MM IN 24H IN THE SOUTH.
- WAVES AROUND 6M TONIGHT THEN CLOSE TO 4M TOMORROW.

MAURITIUS :

- GALE FORCE WINDS LIKELY UNTIL TUESDAY MORNING.
- WAVES CLOSE TO 4-5M, WEAKENING ON WEDNESDAY.