

WTIO30 FMEE 160055

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 20/2/20232024

1.A TROPICAL CYCLONE 2 (BELAL)

2.A POSITION 2024/01/16 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 22.1 S / 58.1 E

(TWENTY TWO DECIMAL ONE DEGREES SOUTH AND
FIFTY EIGHT DECIMAL ONE DEGREES EAST)

MOVEMENT: EAST 9 KT

3.A DVORAK ANALYSIS: 4.0/4.5/D 0.5/12 H

4.A CENTRAL PRESSURE: 970 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 65 KT

RADIUS OF MAXIMUM WINDS (RMW): 37 KM

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

28 KT NE: 295 SE: 250 SW: 325 NW: 295

34 KT NE: 215 SE: 175 SW: 185 NW: 155

48 KT NE: 150 SE: 155 SW: 160 NW: 130

64 KT NE: 55 SE: 45 SW: 35 NW: 0

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 1000 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/16 12 UTC: 22.5 S / 59.1 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 305 SE: 240 SW: 270 NW: 240

34 KT NE: 175 SE: 140 SW: 155 NW: 130

48 KT NE: 75 SE: 100 SW: 100 NW: 65

64 KT NE: 55 SE: 45 SW: 65 NW: 55

24H: 2024/01/17 00 UTC: 22.8 S / 61.0 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 285 SE: 250 SW: 205 NW: 260

34 KT NE: 155 SE: 150 SW: 155 NW: 140

48 KT NE: 85 SE: 100 SW: 85 NW: 65

64 KT NE: 55 SE: 45 SW: 65 NW: 55

36H: 2024/01/17 12 UTC: 22.7 S / 62.2 E, VENT MAX= 065 KT, TROPICAL CYCLONE

28 KT NE: 280 SE: 260 SW: 220 NW: 215

34 KT NE: 155 SE: 150 SW: 155 NW: 110

48 KT NE: 75 SE: 100 SW: 95 NW: 65

64 KT NE: 45 SE: 55 SW: 65 NW: 55

48H: 2024/01/18 00 UTC: 22.8 S / 63.7 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM
28 KT NE: 250 SE: 280 SW: 260 NW: 195
34 KT NE: 140 SE: 155 SW: 150 NW: 95
48 KT NE: 75 SE: 100 SW: 85 NW: 45

60H: 2024/01/18 12 UTC: 23.2 S / 64.8 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 230 SE: 260 SW: 285 NW: 150
34 KT NE: 130 SE: 150 SW: 140 NW: 55
48 KT NE: 75 SE: 100 SW: 85 NW: 0

72H: 2024/01/19 00 UTC: 23.3 S / 64.1 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 120 SE: 175 SW: 165 NW: 95
34 KT NE: 0 SE: 110 SW: 0 NW: 0

2.B LONGER-RANGE OUTLOOK:

96H: 2024/01/20 00 UTC: 23.5 S / 62.2 E, VENT MAX= 025 KT, FILLING UP

120H: 2024/01/21 00 UTC: 24.2 S / 61.6 E, VENT MAX= 025 KT, REMNANT LOW

2.C ADDITIONAL INFORMATION:

PT=4.5 CI=5.0

FOLLOWING THE 1445Z SAR OBSERVATION, BELAL'S INTENSITY AT 18Z HAS BEEN REVISED UPWARDS TO 65KT. OVER THE LAST 6 HOURS, BELAL'S CLOUD CONFIGURATION HAS BEEN ORGANIZED INTO A CDO, WITH A CLEAR UPSURGE IN CONVECTION AROUND THE CENTER. IN ADDITION, THE 2137 ASMR2 MICROWAVE IMAGE SHOWS A CLEARLY VISIBLE, ALBEIT SHREDDED, EYE. WITH THESE ELEMENTS, AS WELL AS THE ASCAT PASS OF 1815Z, THE BELAL SYSTEM IS MAINTAINED AS A TROPICAL CYCLONE WITH WINDS OF 65KT.

BELAL WILL CONTINUE TO MOVE EAST-SOUTHEAST UNTIL TUESDAY, AS THE NEAR-EQUATORIAL RIDGE TO THE NORTHEAST OF THE SYSTEM STRENGTHENS. BY MID-WEEK, WITH A NEW RIDGE SWELLING TO THE WEST AND SOUTH-WEST OF THE SYSTEM, IT IS MOVING EASTWARDS. THERE IS A STRONG DIVERGENCE BETWEEN MODELS CONCERNING BELAL'S LONGER-TERM TRACK. THE CONTRADICTORY STEERING FLOWS SHOULD LEAD TO A SLOWING DOWN OF THE MOVEMENT, A TURN TO THE SOUTH AND THEN A FURTHER MOVE TO THE WEST BEFORE PLUNGING INTO THE EXTRA-TROPICAL DOMAIN. RSMC TRACK IS CLOSER TO THE DETERMINISTIC IFS MODEL, TAKING INTO ACCOUNT EUROPEAN AND AMERICAN ENSEMBLE MODELS, BUT THERE IS STILL A HIGH DEGREE OF UNCERTAINTY WHICH DOES NOT RULE OUT A TURN TO THE NORTH (AS IN PREVIOUS BULLETINS).

BELAL IS STILL EVOLVING UNDER FAVORABLE ENVIRONMENTAL CONDITIONS, ENABLING IT TO MAINTAIN ITS TROPICAL CYCLONE STATUS (OR CLOSE TO IT) OVER THE NEXT 24 HOURS. AS BELAL'S TRAJECTORY SLOWS, IT SHOULD EXPERIENCE MORE WESTERLY SHEAR, ALLOWING DRY AIR TO INTRUDE AROUND ITS CENTER. IT WOULD THEN BEGIN A GRADUAL WEAKENING. DEPENDING ON ITS LONGER-TERM TRACK, BELAL COULD GRADUALLY FILL IN. HOWEVER, SOME SCENARIOS SUGGEST A REINTENSIFICATION WHILE REMAINING IN THE TROPICAL DOMAIN. THIS IS NOT THE SCENARIO FAVORED BY THE RSMC.

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

REUNION:

- END OF NEAR GALE FOR TUESDAY MORNING.
- WAVES CLOSE TO 4M DROPPING.

MAURITIUS:

- END OF NEAR GALE FOR TUESDAY MORNING.
- WAVES CLOSE TO 4-5M, DECREASING WEDNESDAY.