

WTIO30 FMEE 280018

RSMC / TROPICAL CYCLONE CENTER / LA REUNION

TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 11/4/20232024

1.A INTENSE TROPICAL CYCLONE 4 (ANGGREK)

2.A POSITION 2024/01/28 AT 0000 UTC:

WITHIN 20 NM RADIUS OF POINT 20.0 S / 77.9 E

(TWENTY DECIMAL ZERO DEGREES SOUTH AND
SEVENTY SEVEN DECIMAL NINE DEGREES EAST)

MOVEMENT: WEST-SOUTH-WEST 13 KT

3.A DVORAK ANALYSIS: 4.5/5.5/S 1.0/6 H

4.A CENTRAL PRESSURE: 960 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 90 KT

RADIUS OF MAXIMUM WINDS (RMW): 17 KM

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

28 KT NE: 120 SE: 185 SW: 185 NW: 150

34 KT NE: 75 SE: 95 SW: 95 NW: 95

48 KT NE: 55 SE: 65 SW: 60 NW: 65

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

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1012 HPA / 500 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):

12H: 2024/01/28 12 UTC: 20.9 S / 74.7 E, VENT MAX= 100 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 155 SE: 220 SW: 185 NW: 120

34 KT NE: 85 SE: 130 SW: 130 NW: 75

48 KT NE: 55 SE: 75 SW: 65 NW: 55

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

24H: 2024/01/29 00 UTC: 22.7 S / 72.1 E, VENT MAX= 090 KT, INTENSE TROPICAL
CYCLONE

28 KT NE: 175 SE: 215 SW: 155 NW: 140

34 KT NE: 95 SE: 110 SW: 110 NW: 75

48 KT NE: 55 SE: 75 SW: 65 NW: 45

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

36H: 2024/01/29 12 UTC: 25.1 S / 70.6 E, VENT MAX= 085 KT, TROPICAL CYCLONE

28 KT NE: 185 SE: 185 SW: 150 NW: 150

34 KT NE: 100 SE: 100 SW: 110 NW: 85

48 KT NE: 65 SE: 65 SW: 65 NW: 55

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

48H: 2024/01/30 00 UTC: 27.8 S / 71.0 E, VENT MAX= 080 KT, TROPICAL CYCLONE

28 KT NE: 220 SE: 185 SW: 155 NW: 165

34 KT NE: 110 SE: 100 SW: 110 NW: 95

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

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

60H: 2024/01/30 12 UTC: 29.5 S / 73.0 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM

28 KT NE: 220 SE: 185 SW: 175 NW: 185

34 KT NE: 110 SE: 110 SW: 120 NW: 95

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

72H: 2024/01/31 00 UTC: 30.7 S / 76.1 E, VENT MAX= 050 KT, POST-TROPICAL DEPRESSION

28 KT NE: 240 SE: 155 SW: 250 NW: 215

34 KT NE: 120 SE: 85 SW: 140 NW: 120

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

2.B LONGER-RANGE OUTLOOK:

96H: 2024/02/01 00 UTC: 33.4 S / 85.4 E, VENT MAX= 045 KT, EXTRATROPICAL DEPRESSION

28 KT NE: 400 SE: 280 SW: 240 NW: 380

34 KT NE: 205 SE: 165 SW: 165 NW: 230

2.C ADDITIONAL INFORMATION:

T=4.5+ CI=5.5-

OVER THE PAST 6 HOURS, THE ANGGREK EYE PATTERN HAS FLUCTUATED BUT REMAINED STABLE. CONVECTION HAS CLEARLY INCREASED, HOWEVER, PARTICULARLY IN THE NORTHEAST QUADRANT COMPARED WITH 18Z. MICROWAVE IMAGES FROM GCOM 2024Z AND SSMIS F18 2215Z ALSO SHOW COMPACT DEEP CONVECTION AROUND THE CENTER. SUBJECTIVE DVORAK ANALYSES OSCILLATE BETWEEN 4.5 AND 5 WITH AN AVERAGE T OVER THE LAST 3 HOURS OF 4.5+. IN LINE WITH THE SUBJECTIVE ANALYSES AVAILABLE, ANGGREK IS MAINTAINED AS AN INTENSE TROPICAL CYCLONE WITH WINDS OF 90KT.

NO CHANGE IN TRACK FORECAST. AS A MATURE CYCLONE, ANGGREK IS DRIVEN BY MID/HIGH TROPOSPHERE FLOWS, GUIDED BY A SUBTROPICAL RIDGE TO THE SOUTH OF THE SYSTEM. ANGGREK IS EVOLVING RAPIDLY IN A GENERAL WEST-SOUTH-WESTERLY DIRECTION. FROM MONDAY ONWARDS, THE RIDGE SHIFTS EASTWARDS, INITIALLY PUSHING THE SYSTEM FURTHER SOUTH. FROM TUESDAY ONWARDS, ANGGREK SHOULD BEGIN TO TURN SOUTH-SOUTHEAST, UNDER THE ACTION OF A NORTHWESTERLY FLOW DRIVEN JOINTLY BY A TROUGH TO THE WEST OF THE SYSTEM AND THE RIDGE TO THE EAST. BY THE MIDDLE OF NEXT WEEK, THE METEOR SHOULD ACCELERATE FURTHER TOWARDS THE SOUTHERN LATITUDES, CARRIED ALONG THE EASTERN SLOPE OF A MID-LATITUDE TROUGH. THIS SCENARIO IS LARGELY SUPPORTED BY NUMERICAL SIMULATIONS, WHICH SHOW VERY LITTLE DISPERSION.

ANGGREK IS STILL BENEFITING FROM GOOD ENVIRONMENTAL CONDITIONS (WEST

COAST ALTITUDE DIVERGENCE, FAIRLY LOW SHEAR, HIGH OCEAN POTENTIAL). IT COULD THEREFORE INTENSIFY OVER THE NEXT FEW HOURS. AN EAST-NORTHEAST SHEAR CONSTRAINT SHOULD DEVELOP AS THE SYSTEM MOVES RAPIDLY IN THIS DIRECTION, LIMITING DRY ADVECTION INTO THE HEART OF ANGGREK. THE SMALL SIZE OF THE SYSTEM COULD ALSO FAVOR SUDDEN VARIATIONS IN INTENSITY. THE FINE-GRAINED INTENSITY FORECAST REMAINS UNCERTAIN FOR TODAY AND TOMORROW, BUT THE SYSTEM IS STILL MATURE. THE PRESENT FORECAST ASSUMES A SLOW WEAKENING FROM TOMORROW ONWARDS. ON THE OTHER HAND, THIS WEAKENING SHOULD ACCELERATE ON TUESDAY AND WEDNESDAY AS NORTHERLY AND THEN NORTHWESTERLY SHEAR STRENGTHENS AND OCEAN POTENTIAL RAPIDLY DIMINISHES. ANGGREK SHOULD BEGIN EXTRATROPICALIZATION ON TUESDAY/ WEDNESDAY.

TROPICAL CYCLONE ANGGREK POSES NO THREAT TO INHABITED LAND.