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

0.A WARNING NUMBER: 21/6/20202021
1.A SEVERE TROPICAL STORM 6 (DANILO)

2.A POSITION 2021/01/05 AT 0600 UTC:
WITHIN 20 NM RADIUS OF POINT 16.4 S / 76.6 E
(SIXTEEN DECIMAL FOUR DEGREES SOUTH AND
SEVENTY SIX DECIMAL SIX DEGREES EAST)
MOVEMENT: SOUTH 6 KT

3.A DVORAK ANALYSIS: 4.0/4.0/D 0.5/6 H

4.A CENTRAL PRESSURE: 981 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 55 KT
RADIUS OF MAXIMUM WINDS (RMW): 19 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 130 SE: 510 SW: 510 NW: 130
34 KT NE: 65 SE: 65 SW: 130 NW: 65
48 KT NE: 35 SE: 35 SW: 40 NW: 35

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1006 HPA / 1400 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS (WINDS RADII IN KM):
12H: 2021/01/05 18 UTC: 16.9 S / 76.3 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
28 KT NE: 95 SE: 280 SW: 285 NW: 100
34 KT NE: 85 SE: 75 SW: 120 NW: 85
48 KT NE: 65 SE: 65 SW: 75 NW: 55

24H: 2021/01/06 06 UTC: 17.2 S / 75.5 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 65 SE: 140 SW: 220 NW: 75
34 KT NE: 55 SE: 85 SW: 55 NW: 65

36H: 2021/01/06 18 UTC: 17.3 S / 73.2 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
28 KT NE: 75 SE: 380 SW: 280 NW: 130
34 KT NE: 65 SE: 120 SW: 130 NW: 95

48H: 2021/01/07 06 UTC: 17.2 S / 70.6 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 65 SE: 250 SW: 325 NW: 75
34 KT NE: 55 SE: 55 SW: 130 NW: 65

60H: 2021/01/07 18 UTC: 17.2 S / 67.9 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 55 SE: 150 SW: 240 NW: 55

72H: 2021/01/08 06 UTC: 17.2 S / 65.6 E, VENT MAX= 030 KT, TROPICAL DEPRESSION
28 KT NE: 55 SE: 140 SW: 175 NW: 55

2.B LONGER-RANGE OUTLOOK:
96H: 2021/01/09 06 UTC: 17.6 S / 61.1 E, VENT MAX= 035 KT, MODERATE TROPICAL STORM
28 KT NE: 215 SE: 470 SW: 470 NW: 205
34 KT NE: 205 SE: 230 SW: 195 NW: 110

120H: 2021/01/10 06 UTC: 18.7 S / 57.6 E, VENT MAX= 045 KT, MODERATE TROPICAL STORM
28 KT NE: 260 SE: 480 SW: 470 NW: 230
34 KT NE: 250 SE: 250 SW: 205 NW: 110

2.C ADDITIONAL INFORMATION:
T=CI=4.0

IN THE LAST FEW HOURS, THE STRUCTURE OF THE SYSTEM HAS NOT CHANGED. IT IS THEREFORE STILL A CDO PATTERN.
HOWEVER, WE NOTICE ON THIS MORNING'S VISIBLE CHANNEL SATELLITE IMAGES THAT CONVECTION HAS FLARED OUT AROUND THE CENTER OF THE SYSTEM.
THE LATEST SSMIS F17 MICROWAVE IMAGES OF 0107Z INDICATE A WESTWARD SHIFT OF THE LOW LAYER CIRCULATION CENTER. THIS OBSERVATION IS CONFIRMED BY THE ANALYSIS OF SHEAR ALOFT; IN THE UPPER TROPOSPHERE, THE SHEAR IS MODERATE TO STRONG IN THE EASTERN SECTOR, AT THE EDGE OF THE RIDGE. IN THE MIDDLE TROPOSPHERE, THE SHEAR IS MODERATE NORTHEASTERLY. IN TERMS OF INTENSITY, DVORAK'S SUBJECTIVE ANALYSIS INDICATES AN ESTIMATE OF 55 KT. THE OBJECTIVE ANALYSES (ADT AND SATCON) ESTIMATE A VALUE OF 50 KT, LEAVING THE SYSTEM AT THE STAGE OF A STRONG TROPICAL STORM.

IN TERMS OF TRAJECTORY FORECAST, THERE IS LITTLE CHANGE FROM THE PREVIOUS FORECAST. INDEED, THE SYSTEM IS SUBJECT TO CONTRARY FLOWS IN THE LOWER AND MIDDLE TROPOSPHERE UNTIL WEDNESDAY. THEN, UNDER THE EFFECT OF THE EASTWARD EVACUATION OF THE EQUATORIAL RIDGE, THE MOVEMENT OF THE SYSTEM WILL BE DRIVEN MORE BY THE EASTWARD FLOW GENERATED BY THE SUBTROPICAL RIDGE. HOWEVER, AT THE END OF THE PERIOD, DANILO COULD TURN SOUTHWESTWARD ON THE NORTHWEST FACE OF THE SUBTROPICAL RIDGE BUT CURRENTLY THE DISPERSION OF THE MODELS IS PARTICULARLY IMPORTANT AT THESE TIMES.

IN TERMS OF INTENSITY, THE FORECAST REMAINS VERY UNCERTAIN. THE CIMMS DATA ANALYSIS SHOW A SHEAR FROM THE NORTHEAST SECTOR ON AVERAGE AND THEN FROM THE EAST SECTOR IN THE UPPER TROPOSPHERE. IT SHOULD PROGRESSIVELY ADVECT DRY AIR ALOFT WITHIN THE CORE OF THE SYSTEM. THE MAJORITY OF THE AVAILABLE MODELS SUGGEST A WEAKENING. THUS, DANILO SHOULD TRACK ON THE NORTH FACE OF THE SUBTROPICAL HIGH PRESSURE AT A MODERATE INTENSITY FROM WEDNESDAY. ON SATURDAY, THE ALTITUDE CONSTRAINT COULD RELAX AND A GOOD DIVERGENCE COULD BE IN PLACE,

WHICH COULD ALLOW A REINTENSIFICATION OF THE METEOR THIS COMING WEEKEND ACCORDING TO THE CURRENT FORECAST. HOWEVER, OTHER MODELS PREDICT THE MAINTENANCE OF UNFAVORABLE ENVIRONMENTAL CONDITIONS FOR THE DEVELOPMENT OF DANILO.