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WTIO30 FMEE 101224
RSMC / TROPICAL CYCLONE CENTER / LA REUNION
TROPICAL CYCLONE FORECAST WARNING (SOUTH-WEST INDIAN OCEAN)

0.A WARNING NUMBER: 22/9/20182019
1.A TROPICAL CYCLONE 9 (GELENA)

2.A POSITION 2019/02/10 AT 1200 UTC:
WITHIN 30 NM RADIUS OF POINT 21.7 S / 65.5 E
(TWENTY ONE DECIMAL SEVEN DEGREES SOUTH AND
SIXTY FIVE DECIMAL FIVE DEGREES EAST)
MOVEMENT: EAST-SOUTH-EAST 13 KT

3.A DVORAK ANALYSIS: 4.5/5.0/W 2.0/24 H

4.A CENTRAL PRESSURE: 970 HPA
5.A MAX AVERAGE WIND SPEED (10 MN): 75 KT
RADIUS OF MAXIMUM WINDS (RMW): 37 KM

6.A EXTENSION OF WIND BY QUADRANTS (KM):
28 KT NE: 190 SE: 190 SW: 280 NW: 220
34 KT NE: 170 SE: 170 SW: 170 NW: 140
48 KT NE: 100 SE: 100 SW: 100 NW: 100
64 KT NE: 60 SE: 60 SW: 60 NW: 60

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 800 KM
8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION: DEEP

1.B FORECASTS:
12H: 2019/02/11 00 UTC: 23.3 S / 67.5 E, VENT MAX= 065 KT, TROPICAL CYCLONE
24H: 2019/02/11 12 UTC: 24.4 S / 69.3 E, VENT MAX= 060 KT, SEVERE TROPICAL STORM
36H: 2019/02/12 00 UTC: 25.0 S / 71.0 E, VENT MAX= 055 KT, SEVERE TROPICAL STORM
48H: 2019/02/12 12 UTC: 25.0 S / 72.5 E, VENT MAX= 050 KT, SEVERE TROPICAL STORM
60H: 2019/02/13 00 UTC: 25.0 S / 74.2 E, VENT MAX= 040 KT, MODERATE TROPICAL STORM
72H: 2019/02/13 12 UTC: 25.1 S / 76.4 E, VENT MAX= 035 KT, FILLING UP

2.B LONGER-RANGE OUTLOOK:
96H: 2019/02/14 12 UTC: 26.0 S / 81.1 E, VENT MAX= 030 KT, FILLING UP

2.C ADDITIONAL INFORMATION:
T=4.5-;CI=5.0-

OVER THE LAST 6 HOURS, THE RAGGED EYE DISAPPEARED ON THE VIS IMAGERY AND THE CLOUD PATTERN HAS DETERIORATED SLIGHTLY ON THE IR IMAGES. A WIDE CDO IS NOW COVERING THE CIRCULATION CENTER. AMSR2 37GHZ MW 0949Z

IMAGE SHOWS THAT THE NORTH-WESTERN SEMI-CIRCLE OF GELANA'S INNER CORE IS OPEN, PROBABLY BECAUSE OF THE NORTH-WESTERLY WIND SHEAR AND ASSOCIATED MID-TROPOSPHERIC DRY AIR. THE COMPARISON WITH THE 89GHZ IMAGE SHOWS A SLIGHT TILT BETWEEN THE MID AND LOWER LEVELS. THE SSMI MW 1102Z IMAGE CONFIRMS THE WEAKNESS LOCATED IN THE NORTH-WESTERN QUADRANT.

GELENA REMAINS STEERED BY THE NEAR EQUATORIAL RIDGE IN THE NORTH-EAST, AS THE UPPER TROUGH LOCATED IN THE SOUTH WEAKENS AND SHIFTS EASTWARDS. GELENA SHOULD SHORTLY BEGIN TO SLOW DOWN. FROM MONDAY EVENING, GELENA WILL TRACK IN THE REAR OF THE UPPER LEVEL TROUGH, WITHIN WESTERLY WINDS. CONSEQUENTLY, THE TRACK SHOULD BEND WESTWARD AND TEMPORARILY WEST-NORTH-WESTWARD TUESDAY. THE SPREAD OF THE DETERMINISTIC MODELS AND THE EURO ENSEMBLE SHOWS A MODERATE INCREASE IN THE UNCERTAINTY FROM TUESDAY EVENING, ONCE THE SYSTEM HAS FINISHED TO TURN WESTWARD.

TODAY AND MONDAY, WITH THE DECREASE OF GELENA'S SPEED, THE EFFECTS OF THE VERTICAL WINDSHEAR SHOULD BE MORE IMPORTANT LEADING TO A WEAKENING OF THE INTENSITY. ON THE OTHER HAND, THE SYSTEM SHOULD STILL BENEFIT FROM THE GOOD UPPER LEVEL DIVERGENCE AHEAD OF THE UPPER LEVEL TROUGH AND MAINTAIN A SIGNIFICANT INTENSITY UNTIL MONDAY EVENING. FROM TUESDAY HOWEVER, WEST OF THE TROUGH AXIS, THE UPPER DIVERGENCE DECREASES AND THE SYSTEM SHOULD WEAKEN AT A QUICKER PACE, OVER WATERS WITH LIMITED HEAT POTENTIAL. IN THE UPPER AND MID LEVELS, THE STRONG WESTERLY WINDS LOCATED NORTH OF THE SUBTROPICAL JETSTREAM DO NOT ALLOW A REINTENSIFICATION.