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WTIO30 FMEE 041317

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

0.A WARNING NUMBER: 5/4/20162017

1.A MODERATE TROPICAL STORM 4 (CARLOS)

2.A POSITION 2017/02/04 AT 1200 UTC:

WITHIN 20 NM RADIUS OF POINT 16.7 S / 56.5 E

(SIXTEEN DECIMAL SEVEN DEGREES SOUTH AND FIFTY SIX DECIMAL FIVE DEGREES EAST)

MOVEMENT : SOUTH-SOUTH-WEST 5 KT

3.A DVORAK ANALYSIS: 3.0/3.0/D 1.5/24 H

4.A CENTRAL PRESSURE: 995 HPA

5.A MAX AVERAGE WIND SPEED (10 MN): 45 KT

RADIUS OF MAXIMUM WINDS (RMW) :11 KM

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

28 KT NE: 60 SE: 60 SW: 50 NW: 40

34 KT NE: 40 SE: 40 SW: 30 NW: 30

7.A FIRST CLOSED ISOBAR (PRESSURE / AVERAGE DIAM): 1009 HPA / 300 KM

8.A VERTICAL EXTENSION OF CYCLONE CIRCULATION : DEEP

1.B FORECASTS:

12H: 2017/02/05 00 UTC: 17.4 S / 56.2 E, MAX WIND=060 KT, SEVERE TROPICAL STORM

24H: 2017/02/05 12 UTC: 17.6 S / 56.5 E, MAX WIND=075 KT, TROPICAL CYCLONE

36H: 2017/02/06 00 UTC: 17.8 S / 57.1 E, MAX WIND=075 KT, TROPICAL CYCLONE

48H: 2017/02/06 12 UTC: 18.6 S / 57.4 E, MAX WIND=060 KT, SEVERE TROPICAL STORM

60H: 2017/02/07 00 UTC: 19.6 S / 56.8 E, MAX WIND=050 KT, SEVERE TROPICAL STORM

72H: 2017/02/07 12 UTC: 21.5 S / 54.9 E, MAX WIND=045 KT, MODERATE TROPICAL STORM

2.B LONGER-RANGE OUTLOOK :

96H: 2017/02/08 12 UTC: 23.1 S / 51.5 E, MAX WIND=060 KT, SEVERE TROPICAL STORM

120H: 2017/02/09 12 UTC: 24.6 S / 51.3 E, MAX WIND=070 KT, TROPICAL CYCLONE

2.C ADDITIONAL INFORMATION:

T=CI=3.0+

THE CLOUD PATTERN HAS CONTINUE TO IMPROVE THIS AFTERNOON SPECIALLY ON VIS IMAGERY WITH A TEMPORARILY AN EYE-LIKE FEATURE FOLLOWED BY A POP

UP OF HOT TOWERS NEAR THE CENTER VERY RECENTLY.

THE INTENSITY ANALYSIS IS A TOUGH ONE WITH THIS CASE OF MIDGET SYSTEM. HIGH SPREAD ARE SEEN ON SUBJECTIVE DVORAK ESTIMATES RANGING FROM 1.5 TO 3.0. FMEE AT 3.0 IS ASSESSED WITH A 0.6° CURVED BAND ON EIR (CONSTRAINTS BROKEN OVER 6 HOURS DUE TO MIDGET SYSTEM). THE FINAL INTENSITY IS EVEN BRING UP TO 45 KT BASED ON LOW BIAIS OF THE DVORAK ESTIMATES IN CASE OF SMALL SYSTEM.

TODAY, THE TRACK IS EXPECTED TO BEND SOUTH-SOUTH-EASTWARDS, STEERED BY THE MID-TROPOSPHERIC RIDGE IN ITS NORTH-EAST. TOMORROW, THE RIDGE IS WEAKENING AND THE SYSTEM SHOULD SLOW DOWN DUE TO THE LACK OF A WELL DEFINED STERRING FLOW (SLOW EASTWARDS DRIFT POSSIBLE DUE TO HIGHER STEERING LEVELS). FROM MONDAY, THE SYSTEM SHOULD GRADUALLY ACCELERATE TOWARDS THE SOUTH-WEST. THE AVAILABLE GUIDANCE IS IN RATHER GOOD AGREEMENT ON THIS TRACK FORECAST. THE TIMING IS IN GRADUAL BETTER AGREEMENT AMONGST THE NWP GUIDANCE. THE FORECAST TRACK IS IN-BETWEEN GLOBAL CONSENSUS AND IFS-GFS LAST OUTPUTS.

AS RECENT ENVOLUTION SHOW THAT THE SYSTEM MANAGED TO BUILD A SMALL BUT COMPACT INNER-CORE, THE NEXT 24H-36HR FORECAST HAS BEEN NUDGED UPWARD AND NOW FOLLOW THE AROME OCEAN INDIEN THAT SUGGEST A POTENTIAL RAPID INTENSIFICATION DURING THE NEXT 24 HOURS. WE REMIND THAT SMALL SYSTEM ARE KNOWN TO SHOW RAPID INTENSITY FLUCTUATION UPWARDS ... AS DOWNWARDS ...

A WEAKENING TREND WITHIN A MARGINAL UPPER LEVEL ENVIRONMENTAL CONDITIONS, IS EXPECTED AS THE SYSTEM WILL MOVE CLOSE OR OVER THE MASCAREGNE ISLANDS, INDUCING HIGH UNCERTAINTY ABOUT THE FINAL IMPACT OVER THOSE SMALL ISLANDS ...

MORE SIGNIFICANT INTENSIFICATION ARE LIKELY NEAR THE END OF THE FORECAST PERIOD WITHIN IMPROVING ENVIRONMENTAL CONDITIONS.