Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 11TH FEBRUARY 2008

AFRICAN DESK
CLIMATE PREDICTION CENTRE
National Centers for Environmental Predictions
National Weather Service
NOAA
Camp Spring MD 20746

FORECAST DISCUSSION 14H00 EST, 11TH FEBRUARY 2008
Valid: 00Z 12TH FEBRUARY 2008-OOZ 14TH FEBRUARY 2008

1: TROPICAL CYCLONE SUMMARY.

During this period, a Tropical Cyclone Ivan is expected to be situated far east of Madagascar and moving slowly southwestwards.

2: 24HR RAINFALL FORECAST

DAY 1: 12TH FEB 2008

During this period, more than 40mm with a Probability Of Precipitation (POP) 60% is expected over extreme northern Madagascar and 50% over central to southern Angola; More than 30mm with POP 70% over central DRC, 40% over eastern Madagascar and central to eastern Tanzania; More than 20mm with POP 70% over western Tanzania, southern DRC and eastern Angola; More than 20mm with POP 60% over northern Namibia and eastern South Africa.

DAY 2: 13TH FEB 2008

During this period, more than 40mm with a POP 60% is expected over northern Madagascar; More than 30mm with POP 40% over southern DRC; More than 20mm with POP 80% over eastern South Africa, 60% over central to southern Tanzania, 50% over northern Zambia, 40% over eastern Madagascar and 30% over northern Angola.

DAY 3: 14TH FEB 2008

During this period, more than 30mm with POP 60% is expected over central to eastern Tanzania; More than 20mm with POP 50% over northern Madagascar.

3: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 11TH FEBRUARY 2008): There is an agreement of UK MET, ECMWF and GFS models. There are no major discrepancies between them.

FLOW AT 850MB

At T+24, a Mascarine high pressure system is expected to be centered at 35S 58E ridging towards northern South Africa while causing onshore flow associated with convergence over eastern Madagascar. A frontal system is expected to touch eastern South Africa ridging behind by a St Helena high pressure system. A severe tropical storm Ivan is expected to be located to the east of Madagascar and associated with convergence over northern Madagascar, northern Mozambique and southern Tanzania. Convergence dominates western to southern Tanzania, southern DRC, Malawi, central to southern Angola, central to northern Namibia and central to eastern South Africa. Diffluent pattern dominates Zimbabwe, Zambia and Botswana.

At T+48, a frontal system is expected to shift slightly to the east and pointing towards northeastern South Africa. A Mascarine high pressure system continues to shift to the east and ridging towards southern Mozambique. A severe Tropical Storm Ivan is almost quasi stationary but associated with convergence over northern Mozambique and southern Tanzania. Convergence dominates central South Africa, Namibia, southern Angola, southern Zambia and eastern DRC otherwise diffluent pattern over southern DRC, western to central Tanzania, northern Zambia and central to southern Madagascar.

At T+72, a Severe Tropical Storm Ivan is expected to shift westwards towards 15S 58E causing convergence over northern Madagascar. A Mascarine high pressure system is expected to shift further to east, together with a Severe Tropical Strom Ivan, they expect contribute towards diffluent pattern over central to southern Madagascar. There is a weak high pressure system southeast of South Africa contributing to push a frontal system further to the east. Convergence dominates central South Africa, Botswana, eastern Namibia, southern Angola, southern Mozambique, southern Zambia but diffluent pattern is expected to continue over southern DRC and central to southwestern Tanzania.

FLOW AT 500MB

At T+24, a weak high pressure system sits over northern Namibia causing divergence over there. A weak trough system is expected to be situated south of South Africa, together with a high pressure over northern Namibia, they both contributes towards southwesterlies over South Africa. Convergence associated with a Severe Tropical Strom Ivan dominates east of Madagascar. Northwesterlies are expected to dominate central DRC to southern Tanzania associated with weak convergence over the areas. Convergence also dominates Zambia and western Angola.

At T+48, a weak high pressure system has almost maintained the position over northern Namibia. A trough system is expected to shift slightly to the east, together with a high pressure system over Namibia, they both continue to contribute towards southwesterlies over South Africa. A convergence associated with a Severe Tropical Storm Ivan continues to maintain the position east of Madagascar while dragging northwesterlies to westerlies through DRC and Tanzania.

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At T+72, convergence associated with a Severe Tropical Strom Ivan is expected to shift westwards toward 13S 58E. A high pressure system is expected to sit southeast of Madagascar, together with Ivan, they expected to contribute towards diffluent pattern over central to southern Madagascar. There is a weak convergence over southern DRC and western Tanzania otherwise no significant change over the rest of the sub continent.

FLOW AT 200MB

At T+24, a high pressure system is expected to sit northeast of Namibia causing divergence over there. A trough system is expected to be situated over Mozambique Channel pointing towards central Mozambique. These two systems contribute towards strong southerlies over South Africa, Botswana and Zimbabwe. There is diffluent pattern to the east of a trough system, expecting to dominate northern Mozambique, central to southern Tanzania and northern Madagascar. Divergence associated with Severe Tropical Strom Ivan is situated to the east of Madagascar.

At T+48, a trough system which was to the east of South Africa has slightly filled up but a new trough system is expected over southeast of South Africa. A high pressure system northeast of Namibia is expected to maintain the position, together with a trough system southeast of South Africa, they expect to contribute towards very strong southwesterlies over South Africa. Divergence continues to prevail over southern Tanzania and southern DRC otherwise a weak diffluent over northern Madagascar. Divergence associated with Severe Tropical Strom Ivan is expected to maintain its position, east of Madagascar.

At T+72, a trough system is expected to shift slightly to the east and pointing towards northeastern South Africa. A high pressure system which was situated northeast of Namibia is expected to retrograte to the west and contributes toward westerlies over southern Namibia and South Africa. Divergence is expected to persist over southern Tanzania, northern Mozambique and northern Madagascar.

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