



Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 20<sup>TH</sup> FEBRUARY 2008**

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

**FORECAST DISCUSSION 14H00 EST, 20<sup>TH</sup> FEBRUARY 2008  
Valid: 00Z 21<sup>TH</sup> FEBRUARY 2008-00Z 23<sup>TH</sup> FEBRUARY 2008**

**1: TROPICAL CYCLONE SUMMARY.**

During this period, an Ex Tropical Cyclone Ivan is expected to be situated over Mozambique Channel, west of Madagascar and deepen. (GFS, UK MET and ECMWF models)

21<sup>st</sup> Feb 2008, 00Z the position is expected to be around 21.9S, 42.2E with central pressure 1000hPa.

22<sup>nd</sup> Feb 2008, 00Z at 21.7S, 41.6E and 998hPa.

23<sup>rd</sup> Feb 2008, 00Z at 22.4S, 40.9E and 997Pa.

**2: 24HR RAINFALL FORECAST**

**DAY 1: 21<sup>ST</sup> FEB 2008**

During this period, more than 50mm with a Probability Of Precipitation (POP) 90% is expected over western Madagascar; More than 40mm with POP 60% over southwestern Angola, 40% over southeastern Madagascar; 20mm with POP 60% over eastern Madagascar, western to southwestern Tanzania, northeastern Angola, 40% over southern DRC, northern Mozambique, northern Malawi and northern Zambia.

**DAY 2: 22<sup>ND</sup> FEB 2008**

During this period, more than 50mm with POP 80% is expected over northwestern Madagascar, 50% over southern Madagascar; More than 40mm with POP 40% over western Angola; More than 30mm with POP 40% over northern Mozambique and northern Malawi; More than 20mm with POP 60% over northeastern Angola, southern DRC and northern Zambia and 30% over southwestern to southern Tanzania and eastern Madagascar.

**DAY 3: 23<sup>RD</sup> FEB 2008**

More than 40mm with POP 70% is expected over western to southern Madagascar; More than 30mm with POP 60% over northern Malawi, northern Zambia and southwestern Tanzania; More than 20mm with POP 60% over southwestern Angola, southern DRC and southeastern Madagascar, 40% over southern Tanzania and northern Mozambique.

**3: MODELS DISCUSSION:**

*Models comparison (Valid from 00Z; 20<sup>TH</sup> FEBRUARY 2008): GFS, UK MET and ECMWF models predict an Ex Tropical Cyclone Ivan to be situated over Mozambique Channel, west of Madagascar and intensify. It is expected to start moving southwards at the end of the period. There is an agreement between the models, no major discrepancies among them.*

**FLOW AT 850MB**

At T+24, an Ex Tropical Cyclone Ivan is expected to be situated southwest of Madagascar causing convergence over there and onshore flow over southern Mozambique. A Mascarine high pressure system is expected to be situated far to the east ridging slightly westwards while a new high pressure system is expected to be situated southeast of South Africa ridging towards northern part with a frontal system ahead of it. A St Helena high pressure system is expected to be centered far to the west at 26S 12W ridging south of South Africa. Diffluent pattern is expected to prevail over eastern Tanzania, contributed by a high pressure system over the Indian Ocean. Convergence is expected to prevail over northern Mozambique, southern Tanzania, Lake Victoria Basin, central to western Zambia, eastern Angola while diffluent over southern DRC, Botswana and Zimbabwe.

At T+48, an Ex Tropical Cyclone Ivan is expected to shift slightly to the west and continues to cause convergence over southwestern and northern Madagascar, onshore flow over southern Mozambique and diffluent pattern over eastern Tanzania. A Mascarine high pressure system is expected to shift further to the east and continue ridging westwards. A frontal system is expected to be south of South Africa ridging behind by a St Helena high pressure system, centered far to the west. Convergence is expected to continue prevailing over northern Mozambique otherwise diffluent pattern over western Tanzania, Zambia, Botswana, Zimbabwe, southern DRC and western Namibia.

T+72hr, convergence associated with an Ex Tropical Cyclone Ivan continues to dominate Mozambique Channel, west of Madagascar with onshore flow over southern Mozambique. A Mascarine high pressure system is expected to maintain its position far

to the east ridging slightly westwards. A frontal system is expected to touch southeastern South Africa where a St Helena high pressure system will be ridging behind it. Convergence dominates Lake Victoria basin, southern Angola while Zimbabwe, Botswana, Zambia, southern DRC and northern Angola continues to be dominated by diffluent pattern.

### **FLOW AT 500MB**

At T+24, a sub tropical high pressure system is expected to dominate large areas of South Africa, Botswana and Namibia causing divergence over there. An Ex Tropical Cyclone Ivan is expected to be situated over southwestern Madagascar and contributing to convergence over the northern part. Convergence is expected to prevail over northern Mozambique, southern Tanzania and Malawi while a diffluent over Lake Victoria Basin, Zimbabwe, Zambia and Angola.

At T+48, a sub tropical high pressure system is expected to continue dominating South Africa, Botswana and Namibia associated with divergence over the areas. A high pressure system is expected to sit over Indian Ocean, east of Tanzania and contributing to diffluent pattern over eastern part. An Ex Tropical Cyclone Ivan is expected to maintain its position over the Mozambique Channel, west of Madagascar, together with a high pressure over Indian Ocean, they contribute to convergence over northern part of Madagascar. Diffluent pattern continues to prevail over Zimbabwe, Zambia and Angola.

At T+72, a sub tropical high pressure system continues to dominate South Africa, Botswana and Namibia. An Ex Tropical Cyclone Ivan is expected to maintain its position and associated with convergence over northern part of Madagascar. Convergence continues to prevail over northern Mozambique otherwise a diffluent pattern over Zimbabwe, Zambia and southern Tanzania.

### **FLOW AT 200MB**

At T+24, an upper level high pressure is expected to sit over southern Angola and causing divergence over there and northern Namibia. A trough system is expected to be over southern Mozambique, together with a high pressure system over Angola, they contribute to very strong westerlies to southwesterlies over South Africa. Divergence associated with an Ex Tropical Cyclone Ivan dominates over the Mozambique Channel.

At T+48, an upper level high pressure system which was over southern Angola is expected to shift slightly to the west while a trough system over southern Mozambique is going to maintain its position. These two systems are expected to cause very strong southwesterlies over South Africa. Divergence continues to dominate Mozambique Channel, otherwise strong southeasterlies over the northern part of the sub continent.

At T+72, a sub tropical high pressure system has almost maintained the position but a trough system is expected to fill up slightly. Divergence associated with an Ex Tropical Cyclone Ivan is expected to continue dominating the Mozambique Channel. Diffluent pattern is expected to prevail over Tanzania and southern DRC.

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