



Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 08<sup>TH</sup> JANUARY 2008**

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

**FORECAST DISCUSSION 14H00 EST, 08<sup>TH</sup> JANUARY 2008**

**Valid: 00Z 09<sup>TH</sup> JANUARY 2008-00Z 11<sup>TH</sup> JANUARY 2008**

**1: 24HR RAINFALL FORECAST**

**DAY 1: 09<sup>TH</sup> JAN 2008**

During the period, 20-60mm is expected over northern Zambia and northern Malawi; 20-50mm over southern Mozambique, central to southern Zimbabwe and northern South Africa; 20-30mm over western Zambia and eastern Angola; 5-25mm over eastern to northeastern Botswana, southern Zambia, northern Zimbabwe, northern Mozambique, southern Malawi, southern to southwestern Tanzania and eastern DRC

**DAY 2: 10<sup>TH</sup> JAN 2008**

During this period, 20-60mm is expected over central to southern Zimbabwe, southern Mozambique, eastern Botswana and extreme northern South Africa; 20-40mm over northern Mozambique, southern Malawi, extreme northeastern Zambia and eastern Angola; 5-30mm over southern to southwestern Tanzania, northern, central to western Zambia, central Botswana, central to northern South Africa, eastern to northern Madagascar and northern Zimbabwe.

**DAY 3: 11<sup>TH</sup> JAN 2008**

During this period, 20-50mm is expected over eastern Botswana, western Zimbabwe and extreme northern South Africa; 20-40mm over central to southern Zambia, southern Malawi and northern Mozambique; 5-30mm over southern Tanzania, northern Zambia, eastern Angola, central Botswana, northern South Africa, eastern Zimbabwe, central to northern Madagascar.

## **2: MODELS DISCUSSION:**

*Models comparison (Valid from 00Z; 08<sup>TH</sup> JANUARY 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 St Helena High pressure system has centered at 33S 7W ridging south of South Africa and causing onshore flow over eastern South Africa and southern Mozambique. A frontal system is to the east of South Africa extending towards southern Mozambique. Low pressure systems dominates central to northern Mozambique, northern Madagascar, Malawi, Botswana, Zambia and eastern Angola associated with convergence. Weak convergence dominates southwestern to southern Tanzania and eastern DRC, otherwise divergence over eastern Tanzania.

At T+48, a St Helena High pressure has retrograded to the west, now centered at 32S 14W, continues to ridge south of South Africa and forming a high pressure cell east of it, centered at 26S 32E. The high pressure cell causes a weak onshore flow on the southern to central Mozambique. A frontal system has been pushed further to the east. Convergence associated with Low pressure systems continue to prevail over central to northern Mozambique, northern Mozambique, southern Malawi, Zimbabwe, northern Botswana, Zambia, eastern DRC, northern Namibia, southern to southwestern DRC. Great part of Tanzania is dominated by divergence pattern.

At T+72, a St Helena High pressure system continues to retrograde to the west, now centered at 30S 22W ridging slightly to the southern South Africa. There is a frontal system ahead of it and to the south of South Africa. A new Mascarene high pressure system has developed, centered at 35S 54E ridging over the northern South Africa and southern Zimbabwe. Convergence continues to dominate Mozambique, southern Malawi, Zimbabwe, northern Botswana, northern Namibia, southern Angola, Zambia, northern Madagascar and southwestern DRC. Tanzania and eastern DRC continues to be dominated by divergence.

### **FLOW AT 500MB**

At T+24, there is a trough system situated southeast of South Africa extending towards central part of the country contributing to strong southwesterlies to westerlies over the eastern part of South Africa. Convergence dominates Malawi, central to northern Mozambique, Zambia, eastern Angola and northern Namibia otherwise divergence over Tanzania and northern DRC.

At T+48, a trough system has shifted to the east but still continues to contribute towards westerlies over southern South Africa. Weak high pressure systems sits over eastern

Angola and Mozambique Channel, associated with divergence over the areas. Convergence continues to be evident over Malawi, Zambia and northern Namibia otherwise easterly to southeasterly dominate northern part of the sub continent.

At T+72, a trough system has filled up while a new one has developed to the west of the South Africa. There is a line of convergence extending from northern Angola to northern South Africa through Zambia and Zimbabwe otherwise southeasterlies continues to dominate northern pattern of the sub continent

### **FLOW AT 200MB**

At T+24, there is an upper level trough southeast of South Africa, its axis extends towards northwestern South Africa through central parts. A high pressure cell causing divergence sits over Zimbabwe, together with a trough system, they both contribute towards a westerly Jet Stream with a maximum speed of 120Kts over northern South Africa. Strong southeasterlies to easterlies dominates northern part of the sub continent.

At T+48, an upper level trough has filled up. A high pressures cell now dominates Zimbabwe, Zambia, northern Namibia and Angola hence contributing to strong westerlies over South Africa. Strong southerlies to southeasterlies dominate northern part of the sub continent.

At T+72, a high pressure system has continues to dominate Zambia, Zimbabwe, northern Namibia and Angola. The system contributes towards very strong westerlies over South Africa. Strong southeasterlies dominates northern part of the sub continent.

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