



Forecasting guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 14th DECEMBER 2007

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

**FORECAST DISCUSSION 14H00 EST, 14th DECEMBER 2007
Valid: 00Z 15TH DECEMBER 2007-00Z 17TH DECEMBER 2007**

1: 24HR RAINFALL FORECAST

DAY 1: 15TH DEC 2007

During the period, 30-75mm is expected over northeastern Botswana; 30-60 mm over central DRC; 30-50 over southeastern Angola and extreme northern Botswana; 15-30mm over northern Zambia, northern Malawi and southwestern Tanzania; 5-15mm over northern Botswana, central Zimbabwe, western Mozambique, southern Malawi, eastern Zambia, western Tanzania, southeastern DRC and western Madagascar.

DAY 2: 16TH DEC 2007

During this period, 40-60mm is expected over northern Zimbabwe; 20-30mm over southeastern South Africa, northern Zambia, southwestern Tanzania and northern Malawi; 15-25 over northeastern Namibia, western Botswana and extreme southeastern Angola; 5=10mm over southern Tanzania, southeastern DRC, central/southern Zambia, southern Malawi, eastern Mozambique, eastern Botswana and southeastern Angola

DAY 3: 17TH DEC 2007

During this period, 40-60mm is expected over eastern South Africa, Swaziland, extreme northern Angola, southern Republic of Congo, eastern DRC; 10-30 over central to northern South Africa, southwestern Tanzania, southeastern Botswana, central to eastern Zimbabwe, eastern Mozambique, Malawi and northern Zambia.

2: MODEL DISCUSSION:

Model comparison (Valid from 00Z; 14th Dec 2007): There is an agreement of UK MET, ECMWF and GFS models. There are no major discrepancies between them.

FLOW AT 850MB

At T+24, there is a Low pressure system stretching from Angola to the western side of South Africa causing convergence over there. Wind convergence associated with northeasterlies and northwesterlies is a dominant feature over central/southern DRC, southwestern/western Tanzania and northern Zambia. A Low pressure system is situated on the western part of Madagascar, causing convergence over there. The eastern part of the sub continent is dominated by continental northeasterlies. The high pressure cells, St Helena and Mascarine are situated far to the west and east respectively. A deep Low pressure system is over the Indian Ocean centered at 15S 66E.

At T+48, a Low pressure system continues to be a dominant feature on the eastern side of the sub continent, stretching from Angola towards central/western South Africa. Wind convergence dominates northern Zambia, Zimbabwe and Botswana. There is a weak trough system south of the sub continent extending towards the tip of South Africa with a new high pressure cell ahead of it, centered at 40S 30E. St Helena and Mascarne high pressure systems are still far to the west and east respectively. A Low pressure system over the Indian Ocean shifted eastwards, now centered at 15S 63E.

At T+72, a St Helena high pressure has now centered at 33S 9E associated by a weak onshore flow on Angola coast. The eastwards shift of St Helena high pressure has pushed the trough system eastwards, now touching southern part of South Africa. Strong wind convergence is a dominant feature seen over Zambia, Botswana, eastern DRC, central South Africa, northern Namibia and southern Angola. Northeasterlies continues to dominate eastern part of the sub continent. A deep Low over the Indian Ocean continues to move eastwards, now centered at 18S 60E.

FLOW AT 500MB

At T+24, there is a deep Low pressure cell situated of South Africa at 28S 9E. Westerlies to Southwesterlies dominate South Africa. Another Low pressure is over eastern Angola, causing convergence over there otherwise no significant convergence over the rest of the sub continent.

At T+48, a Low pressure system which was situated west of South Africa has maintained the position but it is associated with strong northwesterlies on the western part of South Africa. There is a deep Low pressure system over the Indian Ocean centered at 15S 63E, otherwise there is no significant flow pattern over the rest of the sub continent.

At T+72, a Low pressure system west of South Africa has weakened and the associated trough axis lies over the western part of South Africa. The system is associated with strong northwesterlies up to 35kts over South Africa. A Low pressure over Indian Ocean persists, now centered at 16S 57E. No significant flow pattern over the rest of the sub continent.

FLOW AT 200MB

At T+24, a Low pressure system is situated west of South Africa, centered at 30S 9E. A high pressure cell causing divergence sits over Zimbabwe, together with a Low pressure system west of South Africa, they both contribute to a Jet Stream having a Maximum speed of 90Kts over South Africa. Wind convergence is evident on the northern part of Tanzania, otherwise Southeasterlies dominates northern part of the sub continent.

At T+48, a high pressure over Zimbabwe is still a dominant feature over there. A Low pressure system west of South Africa has filled up forming a trough over there. These two systems continue to contribute towards a northwesterly Jet stream with a maximum speed of 85Kts over South Africa. Northern part of the sub continent is still dominated by southeasterly flow pattern.

At T+72, a trough system west of South and a high pressure over Zimbabwe continues to maintain their positions. Northwesterly Jet Stream reaching 90Kts is a dominant feature over the southern part of South Africa. Strong southerlies to southeasterlies, 30-40Kts dominates northern part of the sub continent.

