Forecasting guidance for Sever Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 28TH DECEMBER 2007

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

FORECAST DISCUSSION 14H00 EST, 28th DECEMBER 2007
Valid: 00Z 29th DECEMBER 2007-OOZ 31st DECEMBER 2007

1: 24HR RAINFALL FORECAST

DAY 1: 29TH DEC 2007

During this period, 40-60mm is expected over eastern Madagascar; 30-50mm over northern, western and southern Madagascar, central Mozambique, northern Zimbabwe, central to southern Zambia; 5-30mm over northern Mozambique, southwestern Tanzania, Malawi, northern and western Zambia, central Zimbabwe, northeastern Angola, extreme northern Botswana and extreme southern DRC.

DAY 2: 30TH DEC 2007

During this period, 50-75mm is expected over the eastern Madagascar; 40-60mm over central to northern Madagascar, extreme southern Zambia and extreme northern Botswana; 5-30mm over central to northern Mozambique, southern Malawi, central to western Zambia, northern Zimbabwe and northern Botswana.

DAY 3: 31ST DEC 2007

During this period, 40-75mm is expected over eastern Madagascar; 30-60mm over central to northern Madagascar; 25-50mm over southern Zambia and extreme northern Botswana; 5-30mm over northern Mozambique, southern Malawi, northern Zimbabwe, central to northern Zambia, extreme eastern Angola.

2: MODELS DISCUSSION:

Models comparison (Valid from 00Z; 28th 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, a high pressure cell is situated south of South Africa at 35S 28E, causing divergence over South Africa but onshore flow over Mozambique coast. A Mascarine high pressure system is situated far south east, centered at 34S 69E. A frontal system is ahead of it, pointing towards Mozambique Channel. There is a Low pressure system associated with a frontal system over southern Madagascar, it is causing convergence over there. A Low pressure system dominates central Mozambique, southern DRC, northern Zimbabwe, Zambia, Malawi, Botswana, Angola and northern Namibia causing convergence over the areas. Large area of Tanzania is dominated by divergence pattern.

At T+48, a new Mascarine high pressure has now centered at 40S 35E, ridging towards northern South Africa while causing onshore flow over Mozambique coast. A St Helena high pressure is situated far to the west, causing a weak onshore flow on Angola coast. A frontal system has been pushed further to the east, but a deep Low pressure system causing convergence is over western Madagascar. Low pressure systems causing convergence continues dominate central to northern Mozambique, Zambia, Malawi, Namibia and Angola. Divergence prevails over Tanzania and southern part of DRC.

At T+72, a Mascarine high pressure system has slightly shifted eastwards, now centered at 40S 43E and ridging towards northern South Africa. A deep Low pressure system over Madagascar is almost quasi stationary, it continues to cause significant convergence over there. Convergence continues to prevail over central Mozambique, Malawi, Zambia but still divergence dominates Tanzania and southern DRC.

FLOW AT 500MB

At T+24, there is a weak sub tropical high pressure system over Namibia ridging towards South Africa. A trough system is situated east of South Africa, pointing towards Mozambique Channel, together with a high pressure system, they both contribute towards strong winds south of South Africa. Convergence is dominating Zambia.

At T+48, a weak high pressure has shifted southeastwards, now centered over South Africa at 33S 27E and causing divergence over there. A trough system has been pushed further to the east. Convergence still dominates Zambia, northern part of Zimbabwe and also western Madagascar.

At T+72, a weak high pressure has further shifted southeastwards, now centered at 36S 37E, otherwise convergence continues to dominate western Madagascar, Zambia, Malawi and central Mozambique.

FLOW AT 200MB

At T+24, a high pressure cell dominates Zimbabwe, Zambia and Botswana, causing divergence over there. Very strong westerlies associated by this high pressure system are dominating large part of South Africa. Strong southeasterlies are dominating northern part of the sub continent.

At T+48, the high pressure cell have now centered over northern Namibia at 18S 20E causing divergence over there. Very strong westerlies associated by this high pressure system continue to dominate South Africa, otherwise strong southeasterlies over the northern part of the sub continent.

At T+72, the high pressure cells has retrograted slightly to the west, now centered at 21S 16E. A trough system is situated east of South Africa, extending towards northern South Africa. These two systems contribute towards strong southwesterlies over South Africa. Strong southeasterlies continues to dominate northern part of the sub continent.

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