Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST18th, January, 2007

AFRICA DESK
CLIMATE PREDICTION CENTER
National Centers for Environmental predictions
National Weather Service
NOAA
Camp Springs MD 20746

FORECAST DISCUSSION 14H00 EST 18th, January, 2007
Valid 12:00Z 19th, January, 2007- 00z 21st, January 2007

At T+24, a sharp upper air trough is situated over the northeastern part of S.A. with a high pressure system centered at about 22S 12E end extends a ridge to central Madagascar. The flow is mainly southwesterly to northwesterly 20knots to 55knots south of 20S and above that southeasterly to easterly winds of 15 to 35knots will prevail. At T+48 the trough moves southern Mozambique as the centre of the high shifts to about 18S 39E. Another trough is approaching from the west at T+48 thus keeping the flow west-southwesterly 15 to 60knots over the southern part of S.A. and NW 20 to 45knots winds over southern Zimbabwe and Mozambique. At T+72 Hrs the trough moves over the southern part of Southern Africa hence the flow will be NW 25 to 60knots south of 20S and the centre of the high moves to 18S 43E. The UK-met and ECMF models handle the situation similar and no disparities between the models.

At 500hpa a high pressure system is centered at about 28S 00W and a trough is moving over the NE part of S.A. & southern Mozambique. Another weak trough can be seen moving over southern Madagascar. At T+48 a high pressure system continues to advance eastwards pushing the trough to the southern Mozambique Channel but this trough is linked to the tropical low over northern Angola hence tropical storms are set to develop in a band stretching from the north down to the central part of Mozambique.
At T+72 another weak trough moves through over the western part of S.A. which will cause the high pressure system to recede westwards and will be centered far in the west. The trough over the Mozambique Channel continues linking up with the low over Angola hence a continuation of tropical storms is expected but most of the heavy rainfall should be off to the sea, east of the trough with a possibility of spreading to southern Madagascar as well.The UK-MET and ECMWF models handle the situation similar and no major discrepancies between these models and GFS.

At 850hPa the St Helena high pressure in the Atlantic Ocean has its centre at 30°S 5°W and the Mascarine high pressure in the Indian ocean has its center is at 32°S 70°E. Between the St Helena high and the Mascarine high is a trough from the south, which is covering most parts of the sub continent. Hence the general pattern over the sub continent is cyclonic flow with strong relative vorticity indicated in areas east of the trough. At T + 48 Hrs the St Helena high pressure cell has its centre at 37°S 00°W while the centre of the Mascarine high has shifted to 28°S 68°E and is ridging into the eastern parts of the sub continent. A trough is confined to the southwestern parts of the sub continent. At T+72 Hrs the centre of the St Helena high has shifted to 30°S 10°W, while the position of the Mascarine high pressure system is maintained, but its bud-off high has been replaced by trough from the south, lying over the western half of South Africa, most parts of Botswana, Namibia and Angola. There is a resemblance in the patterns of UK- Met, ECMWF and GFS models.

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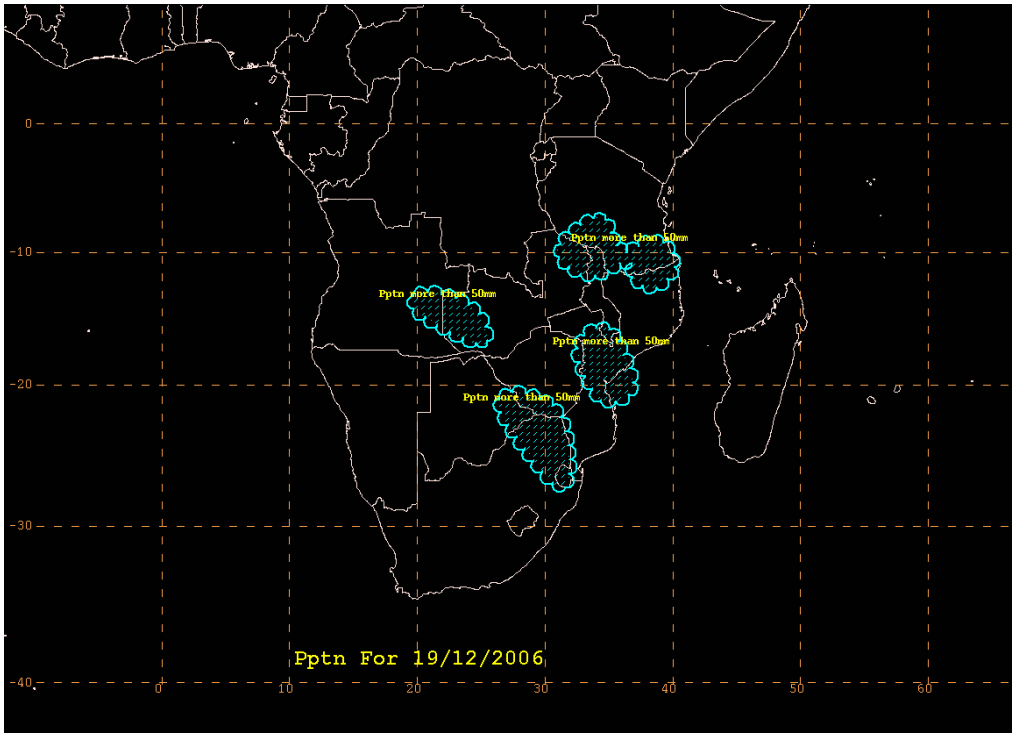
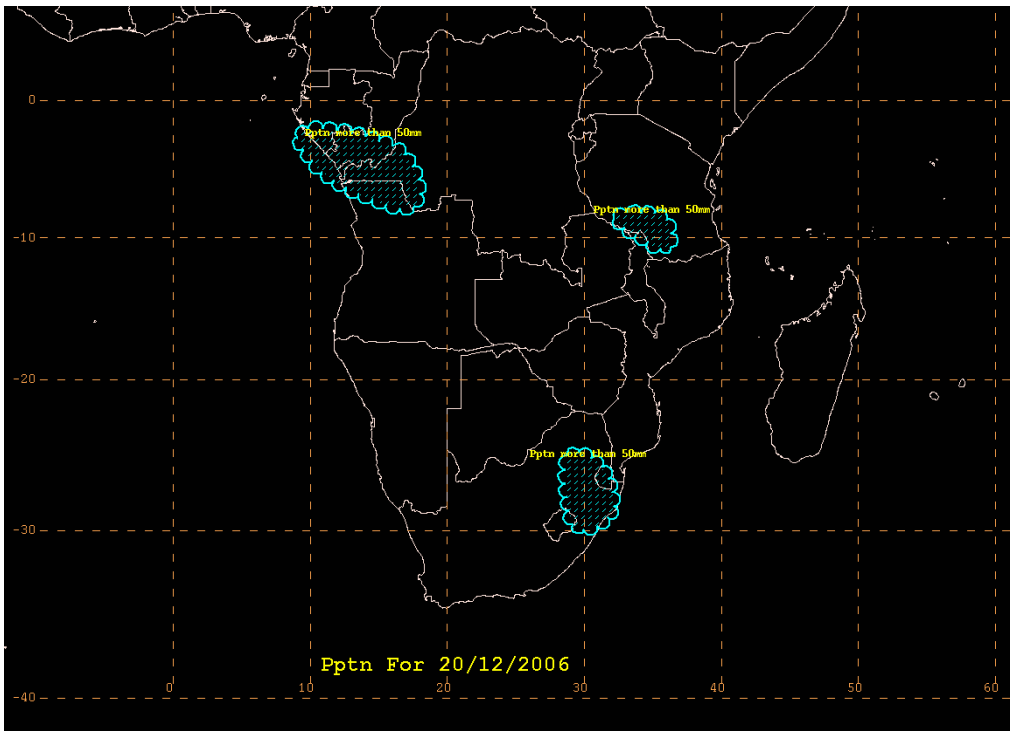
FORECAST MAP FOR DAY1



FORECAST FOR DAY 2



FORECAST FOR DAY 3