



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 24th April 2007

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

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Valid: 00Z 25th April 2007- 00Z 27th April 2007.

At T+24 hrs, the general flow pattern at 200 mb over Southern Africa (South of the Equator) shown by the GFS, ECMWF and UK-MET models is a upper level trough which has developed a closed circulation near 29°S 39°E, above the Mozambican Channel, stretching into the coast of Tanzania, associated to a west-southwesterly stream thus hence convergence over these areas. A high pressure system centered over northwestern D.R. Congo is causing divergence over the rest of the sub continent. At T+48 hrs, there is no significant change in the general flow pattern, except that the upper level trough with west-southwesterly winds up to 85Kt, which was above the Mozambican Channel, is slightly shifting eastward. There is a trough above the Atlantic Ocean, approaching the southwestern coast of the sub continent. At T+72 hrs, the upper level trough which was above the Mozambican Channel has weakened in amplitude merging with the west-southwesterly stream and has shifted to the east of Madagascar, hence convergence over these areas. The three models show that there is a trough above the southwestern coast of the sub continent, causing convergence over southern Namibia and southwestern South Africa. The rest of the sub continent is under divergence.

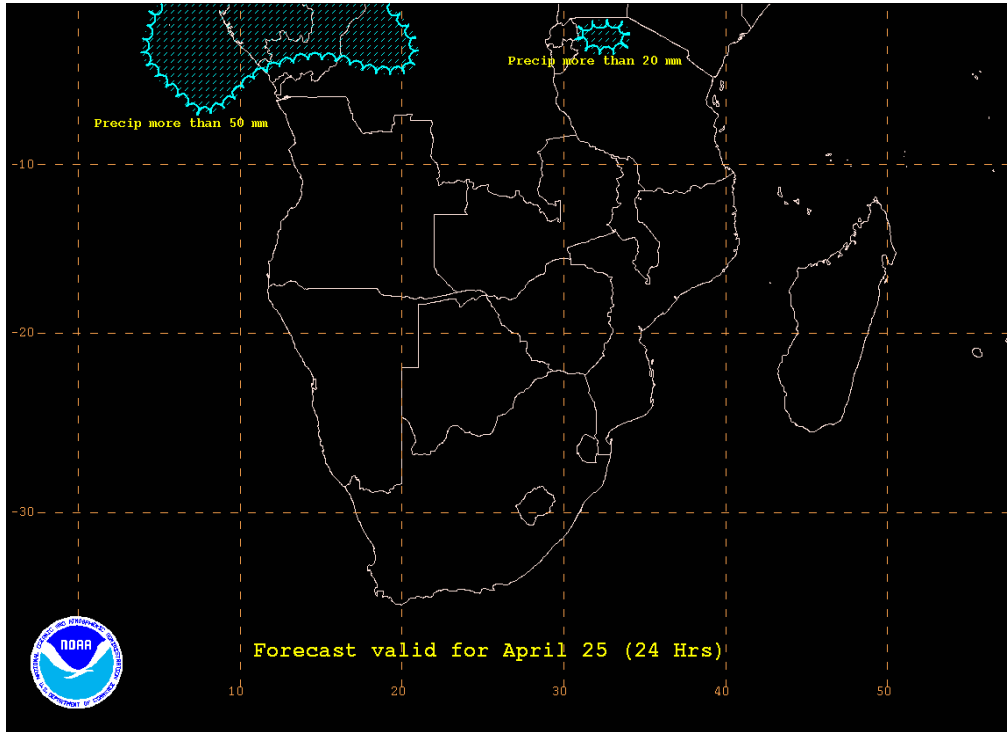
At 500mb, the GFS models show a trough lying above the Mozambican Channel, stretching into southern Tanzania, with southwesterly flow, causing convergence over these areas. There is a upper level low centered at 27°S 38°E, deepening, associated with this trough. Area of convergence is also is over northwestern Gabon. A trough is lying above the Atlantic Ocean, approaching the southwestern coast of the sub continent. The three models show that the St Helene high has two cells, centered at 9°S 19°W and at 18°S 9°E throwing a ridge over the most of the sub continent. The Mascarene high is centered at 11°S 55°E ridging the rest of the sub continent. At T+48 hrs, the three models show that the trough which was lying above the Atlantic Ocean has shifted eastward, causing convergence over the southwestern coast of the sub continent. The upper level

low above southern Mozambican Channel, associated to the trough above the Mozambican Channel, is slightly shifting eastward, causing convergence over southwestern Madagascar. Convergence over northwestern Gabon is maintained. The rest of the sub continent is under divergence of the Mascarene and St Helene highs. At T+72 hrs, there is no significant change in the general flow pattern, except that the trough which was above the Mozambican Channel has shifted to the southeast of Madagascar, weakening and the trough which above the southwestern coast of the sub continent has also shifted eastward, causing convergence over the southwestern parts of the sub continent. The ensemble members of the GFS show a reasonable huge of the 5700m and 5870m height contours to the northeast of Madagascar and over southern parts of the sub continent at T+24 up to T+72, which implies uncertainty in the position of the Mascarene high and also in amplitude and intensity of the trough brushing the southern parts of the sub continent.

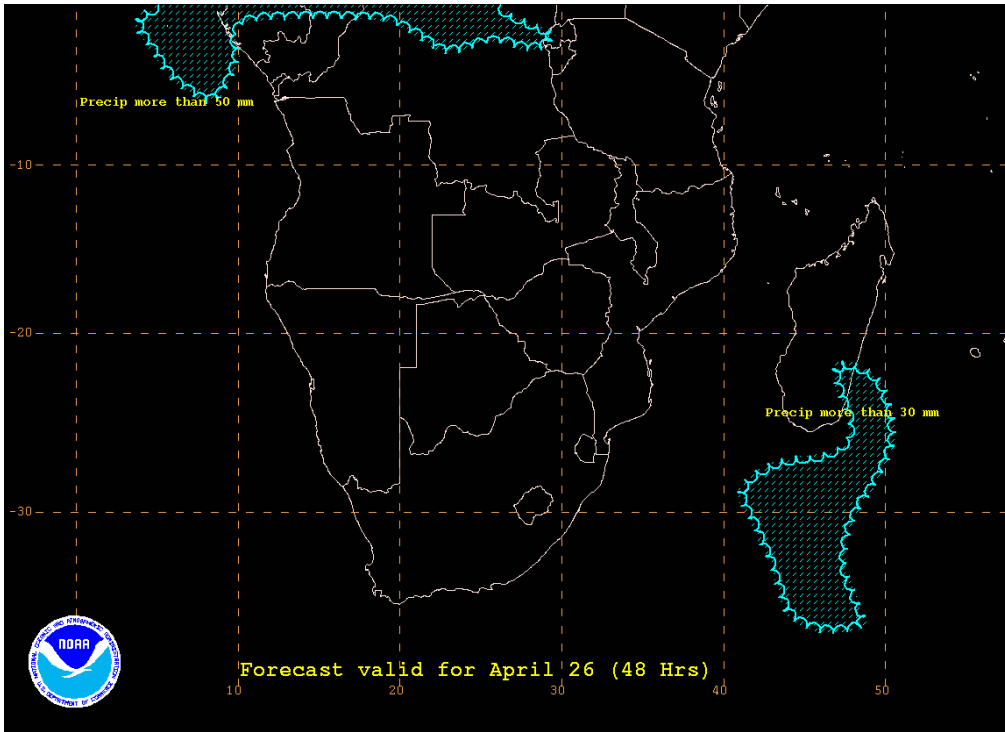
At 850mb, there is a shallow trough to the northeast of the northern coast of Madagascar, causing convergence over these areas. A southeasterly trough lying over southern Mozambican Channel is causing convergence over the central coast of Mozambique and over southwestern Madagascar. Another trough is lying over the southwestern coast of the sub continent, causing convergence over southwestern South Africa. Convergence is also seen over northwestern Gabon and northwestern D.R. Congo. The Mascarene high has two cells; one centered at 31°S 60°E and another one at 41°S 45°E, throwing a ridge into most parts of the sub continent. The St Helene high cell is centered at 30°S 30°W and is hardly ridging the northwestern coast of the sub continent. At T+48 hrs, there is no significant change in the general flow pattern, except that the trough over the Mozambican Channel is weakening. The trough which was over the southwestern coast of the sub continent has slightly shifted eastward, causing convergence over western South Africa and Namibia. At T+72 hrs, the trough over the southwestern parts of the sub continent has stretched into northern Namibia. Convergence over northwestern Gabon and northeastern D.R. Congo is maintained. the southeasterly trough which was over the Mozambican Channel has weakened, due to the ridge of the Mascarene high. The rest of the sub continent is under divergence.

There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over northwestern Gabon and southern Madagascar up to T+72 hrs, and southwestern South Africa from T+72, denoting uncertainty in the intensity of precipitation over these areas.

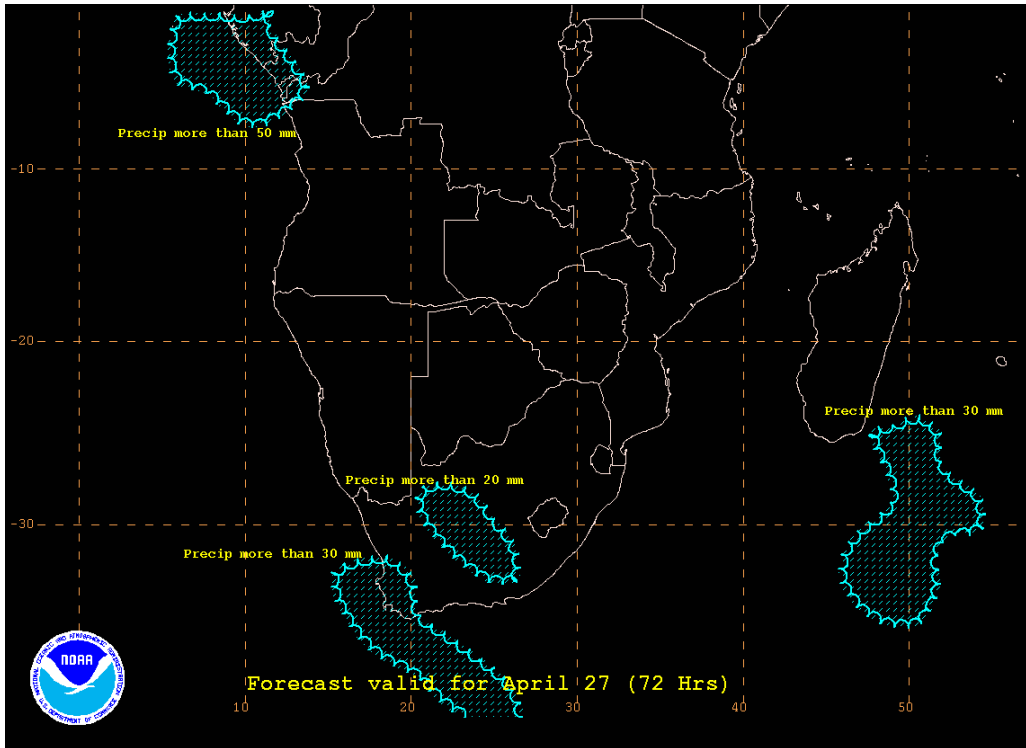
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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