



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 04th May 2007

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

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Valid: 00Z 05th May 2007- 00Z 7th May 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 indicates a trough lying above the southeastern parts of the sub continent, associated with west-northwesterly wind up to 80 kt, stretching into northwestern Namibia. A shallow trough is lying to the north of the northern coast of Madagascar, causing convergence over these areas. The ECMWF model does not show the shallow trough to the north of the coast of Madagascar. A high pressure system cell lying above southern Kenya is causing divergence over the rest of the sub continent. At T+48 hrs, the shallow trough which was lying to the north of the northern coast of Madagascar, is slightly shifting eastward, weakening. The trough which was above southeastern parts of the sub continent has slightly deepened, developing a closed circulation above northeastern South Africa (26°S 29°E). There is a high pressure cell lying to the southeastern coast of South Africa, throwing a ridge into the eastern coast of South Africa. Divergence over the rest of the sub continent is maintained. At T+72 hrs, there is no significant change in the general flow pattern except that the cut-off low which was lying above northeastern South Africa (26°S 29°E), associated to the trough over the southeastern parts of the sub continent, has shifted southeastward. The high pressure cell which was lying to the southeastern coast of South Africa has also shifted further east. The three models show that the rest of the sub continent is under divergence.

At 500mb, the GFS models show an upper level trough lying above central Mozambican Channel, deepening and causing convergence over southern Madagascar, central Mozambique, Zambia/D.R. Congo border and northwestern Angola. Areas of slight convergence can be seen over western Gabon, to the west of the northwestern coast of

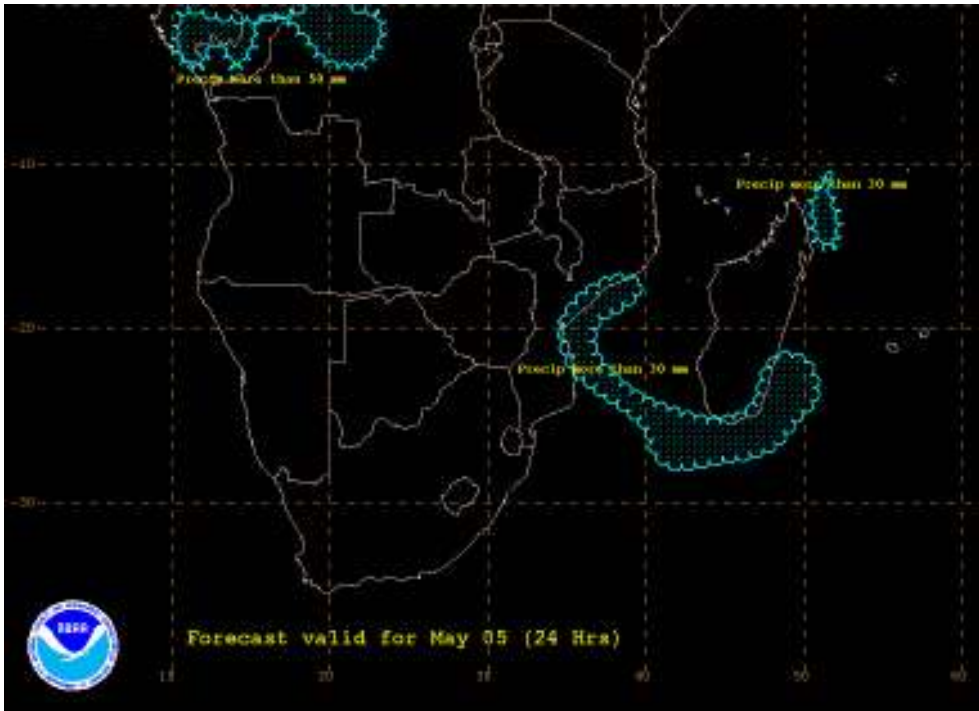
Angola and to the north of the northwestern coast of Madagascar. The St Helene high with three cells, centered at 9°S 1°E, 21°S 9°E and at 30°S 22°E is ridging the most of the sub continent, but causing onshore flow along the central coast of Mozambique. The Mascarene high has two cells, centered at 6°S 40°E and at 11°S 65°E throwing a ridge into the northeastern parts of the sub continent. At T+48 hrs, the upper level trough which was lying above central Mozambican Channel, has developed two closed circulation, one above northern Botswana/Zimbabwe border (19°S 25°E) and another above southwestern Madagascar (23°S 43°E), causing convergence over these areas. Slight convergence over western Gabon and to the west of northwestern coast of Angola, prevails. There is a shallow trough lying above western coast of South Africa. The three models show that rest of the sub continent is under divergence of the St Helene and Mascarene high. At T+72 hrs, convergence over western Gabon is maintained, due to a coastal low. The shallow trough which was lying above western coast of South Africa has slightly shifted eastward. The upper level trough which was above the Mozambican Channel stretching into southern D.R. Congo has weakened in amplitude, due to the ridge of Mascarene high, but the second upper level low over western Zimbabwe prevails, thus strong winds and isolated thundershowers over northeastern Botswana, western Zambia, northeastern South Africa, over Zimbabwe and over central and southern Mozambique is expected to persist. Divergence over the rest of the sub continent is maintained.

At 850mb, there is a shallow trough lying to the southwest of the southern coast of Madagascar, aligned with a cut-off low over northeastern coast of Mozambique, causing convergence over these areas. A southeasterly trough is causing convergence over the northeastern coast of Tanzania, southern Kenya and northwestern D.R. Congo. Areas of convergence are also seen over western Gabon, due to a low. The St Helene high cell is centered at 31°S 33°E, ridging the southeastern coast of the sub continent, and causing onshore flow along the central and northern coast of Mozambique, hence strong winds and heavy rainfall. The Mascarene high centered at 29°S 64°E is hardly throwing a ridge into the northeastern coast of the sub continent. At T+48 hrs, there is no significant change in the general flow pattern, except that the cut-off low which was lying over northeastern coast of Mozambique is slightly shifting southwestward filling up as it drifts over a warm surface. At T+72 hrs, onshore flow along the eastern coast of Mozambique prevails as the cut-off low is moving slowly southwestward to the warmer sea. Areas which are to the north of 11°S are under convergence due to the southeasterly trough. The rest of the sub continent is under divergence of the Mascarene high.

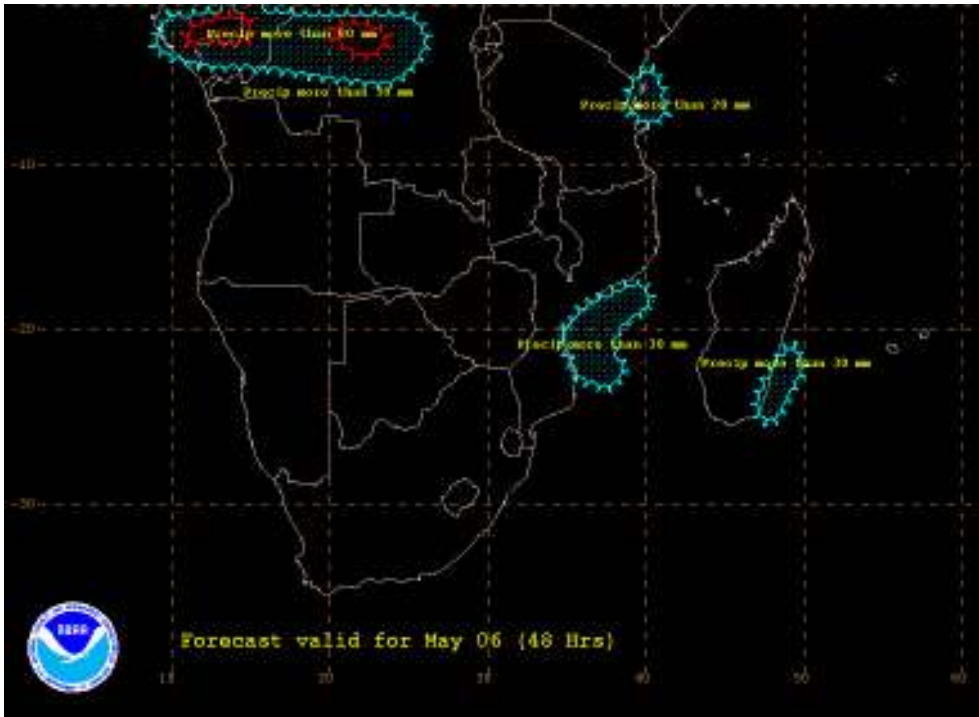
There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over Gabon, northwestern D.R. Congo, northeastern coast of Tanzania, southeastern coast of Kenya, southeastern Madagascar and over the southern and central coast of Mozambique up to T+72 hrs, denoting uncertainty in the intensity of precipitation over these areas.

The ensemble members of the GFS show a huge spread of the 20 Kt isolines of the 10 m level wind over areas which are between 26°S and 46°S latitude but between 32°E and 46°E longitude, which implies that there is uncertainty in the intensity of the wind over these areas.

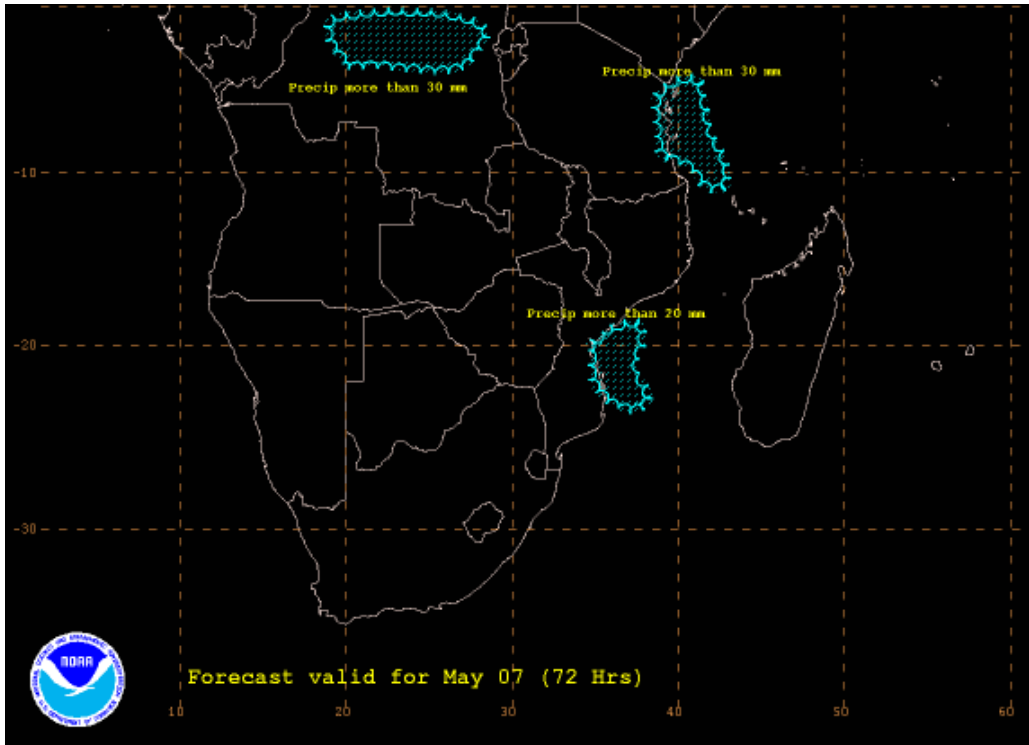
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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