Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 29th 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 30th May 2007- 00Z 01st June 2007.

FLOW AT 200MB

At T+24 hrs, the general flow pattern over Southern Africa (South of the Equator) shown by the GFS, ECMWF and UK-MET models indicates a trough lying above the northeastern coast of Mozambique, stretching into southern Madagascar, causing convergence over these areas. Slight convergence can be seen over southwestern extreme of South Africa, due to a shallow trough. A high pressure system cell centered above northwestern Angola (9°S 16°E) is causing divergence over the rest of the sub continent.
At T+48 hrs, the trough which was above the northeastern coast of Mozambique has shifted eastward, weakening. The shallow trough over the southwestern extreme of South Africa is deepening. The rest of the sub continent is under a ridge.
At T+72 hrs, the trough which was lying above the southwestern parts of the sub continent has slightly shifted eastward stretching into western Zambia. Two high pressure systems with the cells, centered at 10^{o}S 61^{o}E and at 11^{o}S 1^{o}W, are causing subsidence over the rest of the sub continent.

FLOW AT 500MB

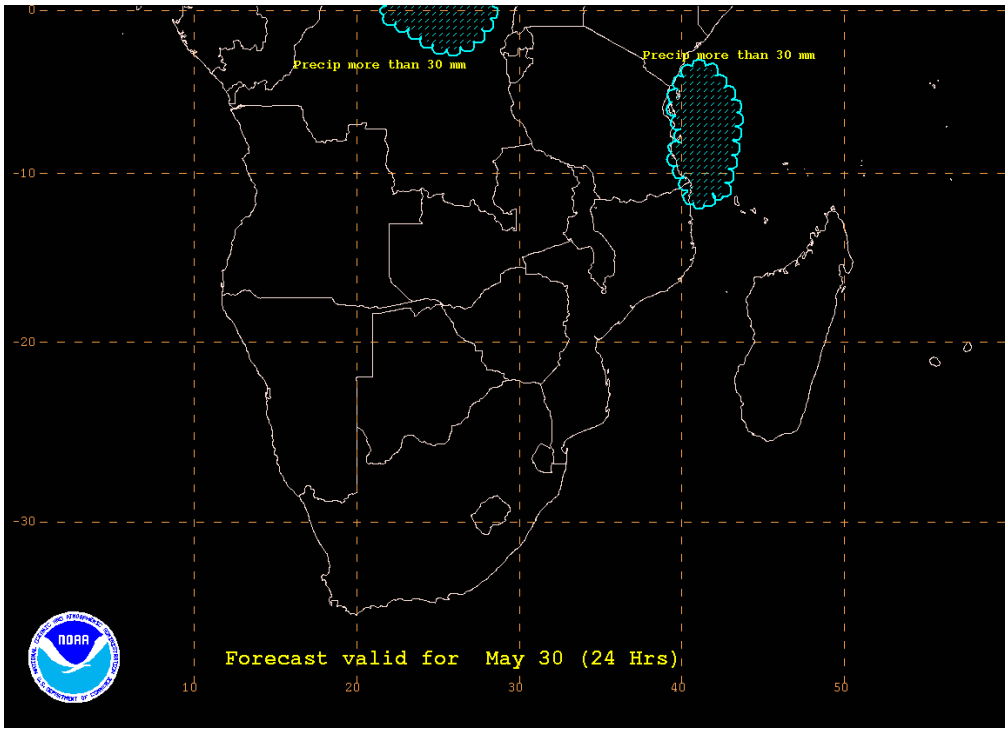
At T+24 hrs, the models show a trough to the southeastern parts of Madagascar, linking a shallow trough over central Mozambican Channel, causing convergence over these areas. Another shallow trough is lying to the southwestern coast of South Africa. The Mascarene high cell centered at 11°S 52°E and the St Helene high pressure cell with its center located at 11°S 20°E are ridging the rest of the sub continent.
At T+48 hrs, the trough which was to the southeastern parts of Madagascar has shifted eastward weakening, due to the ridge of the Mascarene High. There is a upper level trough lying over the southwestern coast of the sub continent, starting to detach from the meridional stream over southwestern extreme of South Africa, as a consequence of further increase in the amplitude of the waves, thus a cold upper level low within these

area of the trough is expected to form. Subsidence prevails over the rest of the sub continent.
At T+72 hrs, the upper level trough with a closed circulation near 31^{o}S 19^{o}E is slightly shifting eastward, deepening, causing convergence over eastern Namibia, western Botswana, western South Africa and over areas which are to the east of 34^{o}E longitude, but to the south of 30^{o}S latitude. The rest of the sub continent is under divergence of the Mascarene and St Helene highs.

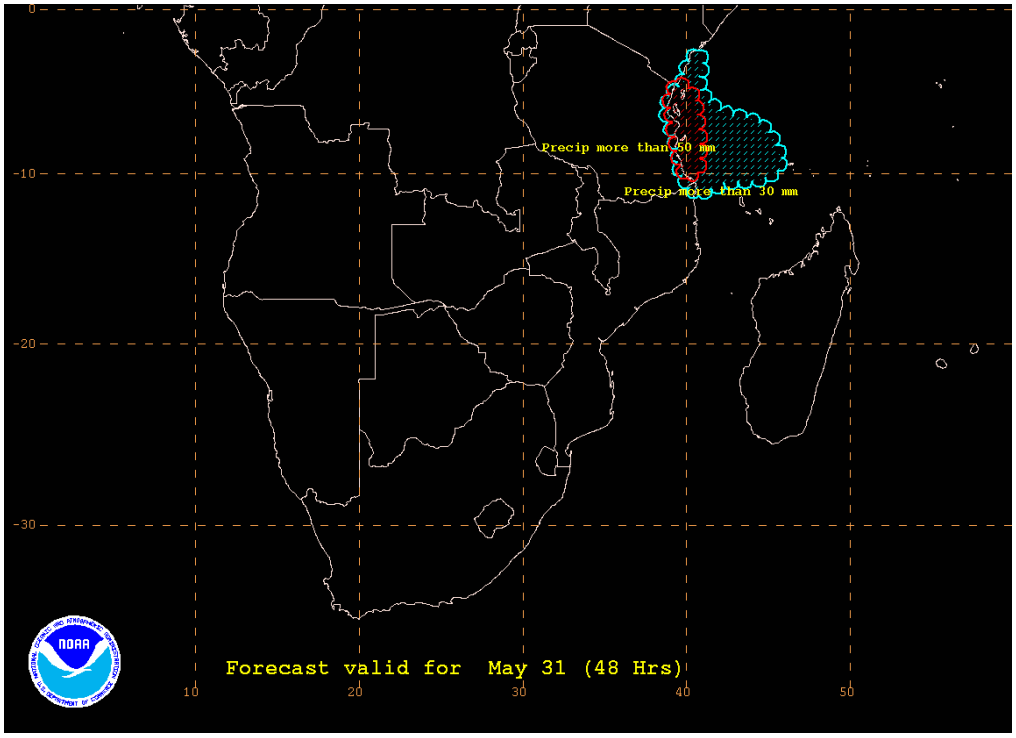
FLOW AT 850MB

At T+24 hrs, there is a trough with a closed circulation near 36^{o}S 19^{o}E, lying over the southwestern coast of the sub continent, causing convergence over these areas. Areas which are to the north of Tanzania, Kenya and central D.R. Congo are under convergence due to a southeasterly trough. The Mascarene high pressure cell centered at 25°S 48°E is ridging the most of the sub continent, causing onshore flow along the coast of Tanzania and also along the northeastern extreme of the coast of Mozambique. The St Helene high is centered at 20^{o}S 18^{o}W, hardly ridging the northwestern coast of the sub continent.
At T+48 hrs, the trough which was to the southwestern coast of the sub continent has shifted eastward has the sub tropical high centered at 40^{o}S 11^{o}E is ridging in from the south. Convergence over Namibia / Botswana border prevails. Over rest of the sub continent there is no significant change in the general flow pattern.
At T+72 hrs, trough which was over the southern parts of the sub continent has rapidly shifted further east, weakening in amplitude, as the sub tropical high is shifting eastward throwing a ridge over the southern parts of the sub continent and causing onshore flow along the southeastern coast of Mozambique. The general flow pattern over the rest of the sub continent is maintained.

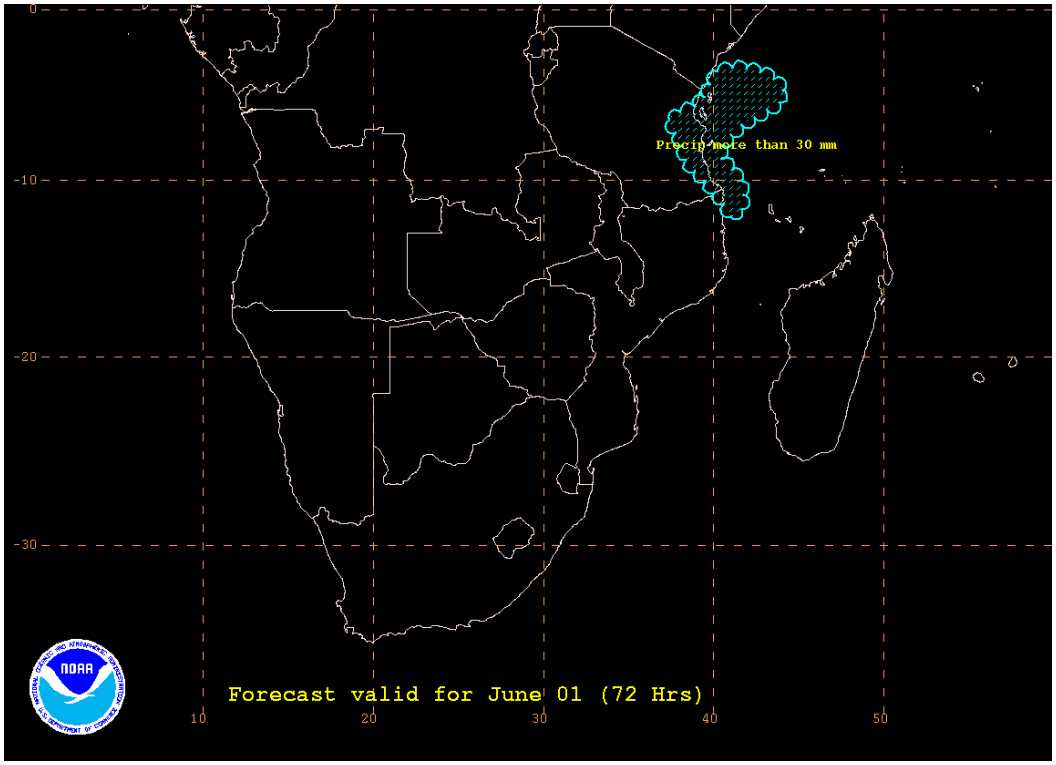
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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