



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 23rd May 2007

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

FORECAST DISCUSSION 14H00 EST 23rd May 2007

Valid: 00Z 24th May 2007- 00Z 26th May 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 to the southwestern coast of Madagascar, with a closed circulation near 41°S 39°E associated with west-northwesterly stream up to 110 kt, causing convergence over these areas. There is a shallow trough to the northeastern coast of Madagascar. Another trough is lying above the Atlantic Ocean, approaching the southwestern coast of the sub continent. A high pressure system cell centered above western Tanzania is causing divergence over the most of the sub continent. Areas which are between 56°E and 70°E longitude but between 11°S and 0° latitude are under subsidence. The rest of the sub continent is under a ridge. At T+48 hrs, the trough which was to the southwestern coast of Madagascar has shifted eastward, weakening and the winds has also weakened. The shallow trough which was to the northeastern coast of Madagascar has also shifted eastward. The trough which was over the Atlantic Ocean, approaching the southwestern coast of the sub continent has shifted eastward, weakening in amplitude. Divergence prevails over the rest of the sub continent.

At T+72 hrs, the trough which was above the southwestern parts of the sub continent has shifted northeastward. The rest of the sub continent is under subsidence.

FLOW AT 500MB

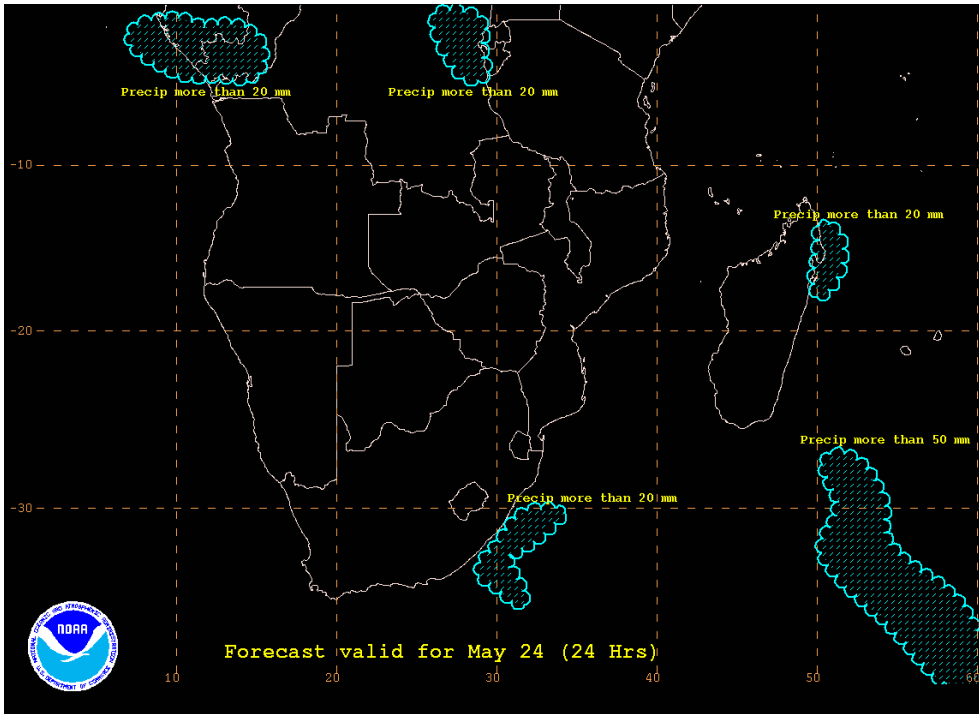
At T+24 hrs, the GFS models show a upper level trough to the southeastern coast of the sub continent, stretching into northeastern Mozambique, with a closed circulation near 40°S 40°E, weakening, but causing convergence over these areas. There is a trough to the southwestern coast of the sub continent. The Mascarene high with two cells centered at 12°S 58°E and to the northwestern coast of Angola is ridging the most of the sub continent. The southern parts of the sub continent are under a ridge of a sub tropical high.

At T+48 hrs, the upper level trough associated to a cut-off low, which was to the southeastern coast of the sub continent has dissolved as the main stream approached from the rear catching the upper level low, merging. The trough which was to the southwestern coast of the sub continent has shifted eastward, causing convergence over eastern South Africa, Southern Botswana and southern Namibia linking with a shallow trough over Zimbabwe. The rest of the sub continent is under divergence of the Mascarene high. At T+72 hrs, the trough which was over the southeastern parts of the sub continent, linking to the shallow trough over Zimbabwe, has slightly shifted eastward as the St Helene high is ridging in from the southwest, causing onshore flow along the southern coast of South Africa. Slight convergence can be seen over the coast of Kenya. The rest of the sub continent is under subsidence, due to the Mascarene high. The ensemble members of the GFS show a large spread of the 5700m and 5870m height contours to the south of the Mozambican Channel at up to T+36 hrs, which implies uncertainty in location and shape of the jet and also in the height gradient over these areas; over the areas which are to the north of 15°S latitude up to T+72 hrs, denoting uncertainty in the height gradient due to a lesser extent of the high pressure cells; And also to the southern coast of the sub continent which implies uncertainty in location and depth of the trough to the southern coast of South Africa up to T+72 hrs.

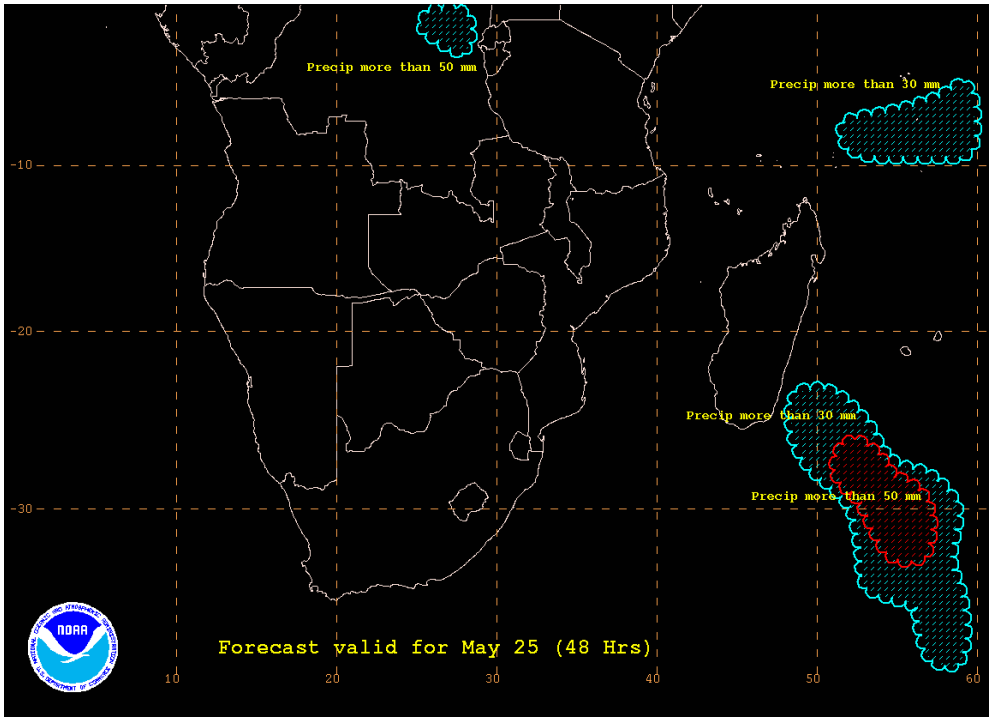
FLOW AT 850MB

At T+24 hrs, there is a trough to the south of Madagascar associated to a cut-off low near 41°S 44°E and southwest-northwesterly winds up to 30 kt, dissolving. Areas of convergence can be seen to the northwest of the coast of Namibia, due to a cut-off low. Areas which are to the north of 6°S latitude are under convergence due to a southeasterly trough. There is a trough to the southwestern coast of South Africa, aligned with the low to the northwestern coast of Namibia. The Mascarene high pressure with two cells, centered at 31°S 70°E and at 49°S 59°E is hardly ridging the northeastern parts of the sub continent, but causing onshore flow along the northeastern coast of Madagascar, northeastern extreme of the coast of Mozambique and along the coast of Tanzania. A sub tropical high pressure system, centered over southern South Africa (30°S 29°E) is ridging the most of the sub continent and causing onshore flow along the eastern coast of South Africa and also along the central and northern coast of Mozambique. At T+48 hrs, the trough which was to the southwestern coast of South Africa has rapidly shifted into southern Madagascar has the St Helene high centered at 32°S 2°W is ridging in from the southwest. The sub tropical high which was over the southern South Africa has shifted northeastward into the center of Mozambique, hence subsidence. Convergence over areas which are to the north of 6°S latitude and to the northwest of the coast of Namibia is maintained. Over the rest of the sub continent, there is no significant change in the general flow pattern. At T+72 hrs, there is no significant change in the general flow pattern except that, the cut-off low to the northwest of the coast of Namibia has shifted further west. There is a shallow trough to the southwestern extreme of the coast of South Africa, causing convergence over these areas.

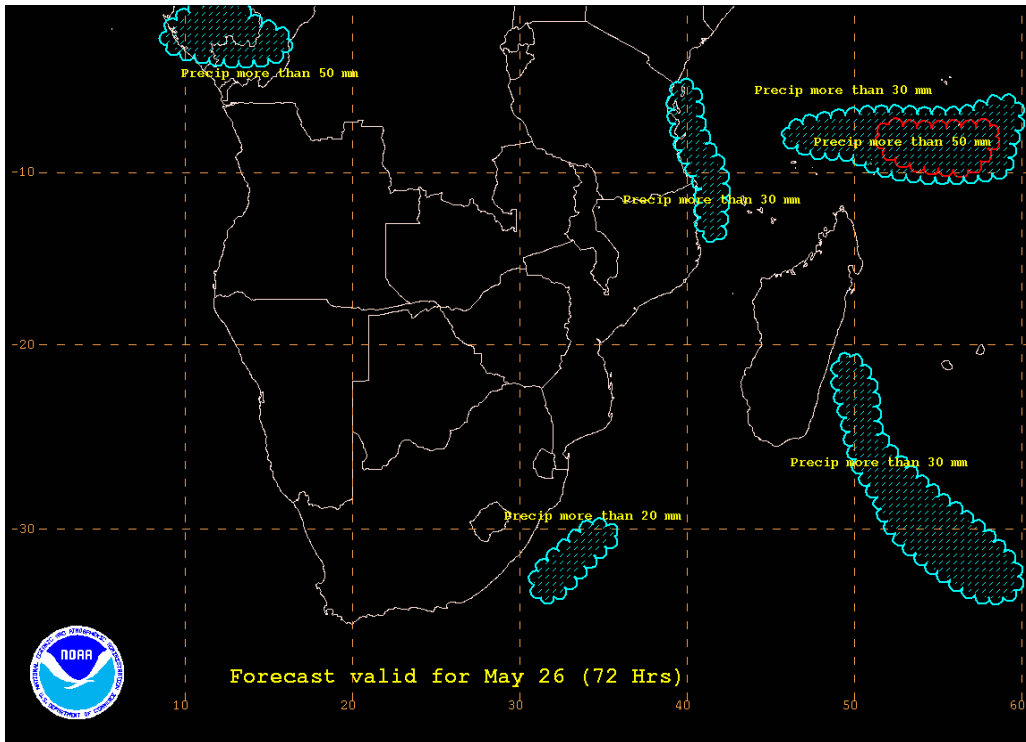
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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