



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 18th April 2007

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

FORECAST DISCUSSION 14H00 EST 18th April 2007

Valid: 00Z 19th April 2007- 00Z 21st April 2007.

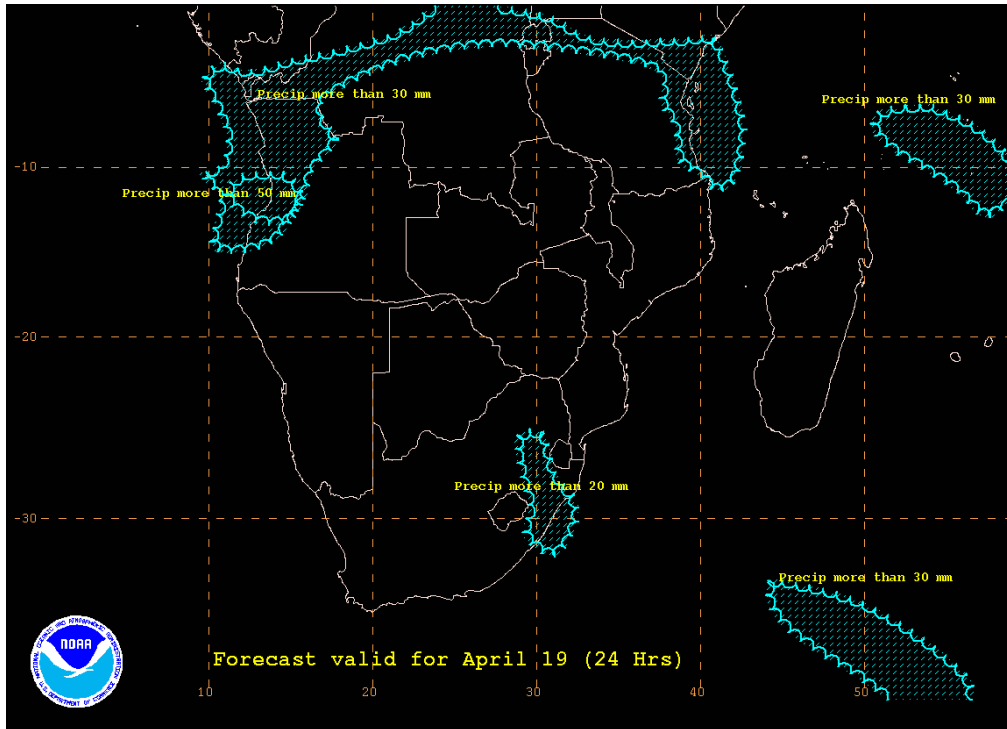
At 200mb, the GFS, ECMWF and UK-MET models show the following general flow pattern over Southern Africa (South of the Equator). There is a trough to the eastern coast of Madagascar, causing convergence over these areas. Another trough is lying over the Atlantic Ocean further west of the southwestern coast of the sub continent. There is a shallow trough over northwestern areas of D.R. Congo. A high pressure system centered over northern Zambia (10°S 30°E) 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 trough which was over the Atlantic Ocean, to the west of the southwestern coast of the sub continent has shifted southeastward, weakening and the shallow trough over northeastern areas of D.R. Congo has also weakened. At T+72 hrs, the trough which was to the east of the coast of Madagascar is maintained, stretching into areas which are to the north of the Mozambican Channel. The three models show a shallow trough lying over the southern coast of South Africa, causing convergence over these areas. The rest of the sub continent is under divergence.

At 500mb, the GFS models show shallow troughs to the southeast of the Mozambican Channel and further southeastern Madagascar, causing convergence over these areas. Convergence is also seen over areas which are further northeast of the northeastern coast of Madagascar, associated with a cut-off low lying near 8°S 61°E. There is a slight convergence over the northwestern coast of Angola. A trough is lying over the Atlantic Ocean, further west of the western coast of the sub continent. The three models show that the Mascarene high centered over southwestern Zambia at 19°S 22°E is throwing a ridge over the rest of the sub continent, but causing onshore flow along the Northeastern coast of the sub continent. At T+48 hrs, the three models show that there is a shallow trough over the northeastern South Africa and to the south of the Mozambican Channel. The shallow trough which was further southeastern Madagascar has slightly shifted eastward.

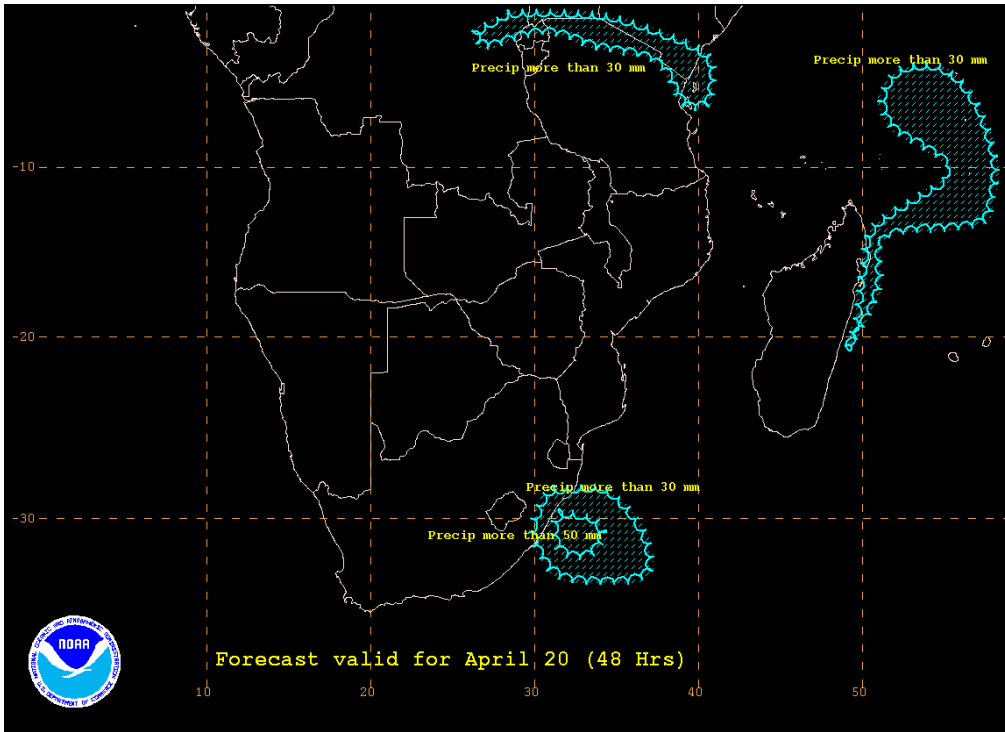
The shallow trough associated with a cut-off low lying near 8°S 61°E, which was further northeast of the northeastern coast of Madagascar, has shifted westward, causing convergence over the northeastern coast of Madagascar. The trough over the Atlantic Ocean is approaching the southwestern coast of the sub continent, weakening in amplitude. The rest of the sub continent is under divergence of the Mascarene high. At T+72 hrs, there is no significant change in the general flow pattern, except that the shallow trough which was over northeastern South Africa has weakened and the shallow trough further northeast of the northeastern coast of Madagascar, associated with a low, as also weakened. The ensemble members of the GFS show a huge spread of the 5700m and 5870m height contours over the eastern coast of Madagascar extending to the northeastern Tanzania and over northeastern South Africa at T+24, which implies uncertainty in the position of the shallow troughs and the southeasterly trough associated to the cut-off low to the north of the coast of Madagascar.

At 850mb, there is a shallow trough to the south of the southern coast of the sub continent, causing convergence over these areas. Slight convergence is also seen over the western coast of Namibia and northeastern D.R. Congo. There is low associated to a southeasterly trough lying further northeast of the northern coast of Madagascar (9°S 58°E) and Another one lying to the west of the coast of Angola, causing convergence over areas which are to the north of 9°S latitude. The St Helene high centered at 33°S 2°E is hardly ridging the southwestern coast of South Africa. The Mascarene high has two cells; one centered at 32°S 62°E, throwing a ridge to the most of the sub continent and another one at 32°S 32°E causing onshore flow along the northeastern coast of South Africa, thus heavy rainfall is expected over these areas. At T+48 hrs, the trough which was to the south of the southern coast of the sub continent has weakened, due to the ridge of the Mascarene high cell centered at 32°S 32°E. Convergence over the western coast of Namibia, Angola and northeastern D.R. Congo is maintained. The low which was lying further northeast of the coast of Madagascar at 9°S 58°E, associated with a southeasterly trough, is tracking westward. Divergence prevails over the rest of the sub continent. At T+72 hrs, the low associated with a southeasterly trough, still tracks westward causing convergence over northern Madagascar, the coast of Tanzania and the southeastern coast of Kenya. Convergence over northeastern D.R. Congo prevails. Convergence is also seen over of the coast of Namibia. Divergence prevails over the rest of the sub continent. There is a huge spread between the ensemble products of the 50 mm isolines of 6 hourly total precipitations over the coast of Tanzania extending to the northern coast of Madagascar, over northwestern Angola, northeastern D.R. Congo and over northeastern coast of South Africa up to T+36 hrs, denoting uncertainty in the intensity of precipitation over these areas.

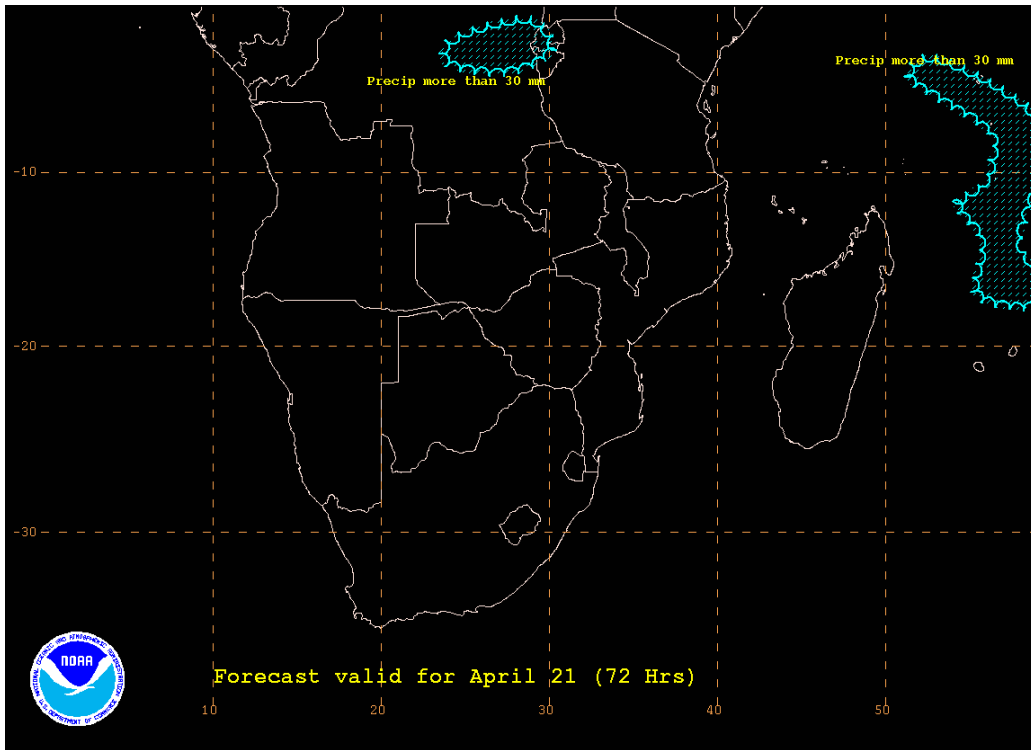
FORECAST MAP FOR DAY 1



FORECAST MAP FOR DAY 2



FORECAST MAP FOR DAY 3



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