



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 01st, February, 2007

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

FORECAST DISCUSSION 14H00 EST 01st, February, 2007

Valid: 00Z 02nd, February, 2007- 00Z 04th, February 2007.

At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) shows that there is an anticyclone or high pressure that has two centers located at 13°S 18°E and 18°S 47°E, and is causing divergence motion over the northeastern parts of the sub continent mainly in Madagascar and Angola where the centers are located. At T+ 48 hrs there is no significant change. At T+72 Hrs the anticyclone or high pressure has slightly shifted to the east with its main center located at 20°S 50°E in eastern coast of Madagascar, other centers are located in southern Botswana, Namibia and Angola boarder and central Zambia this shows that there is vertical motion over the northeastern parts of the sub continent.

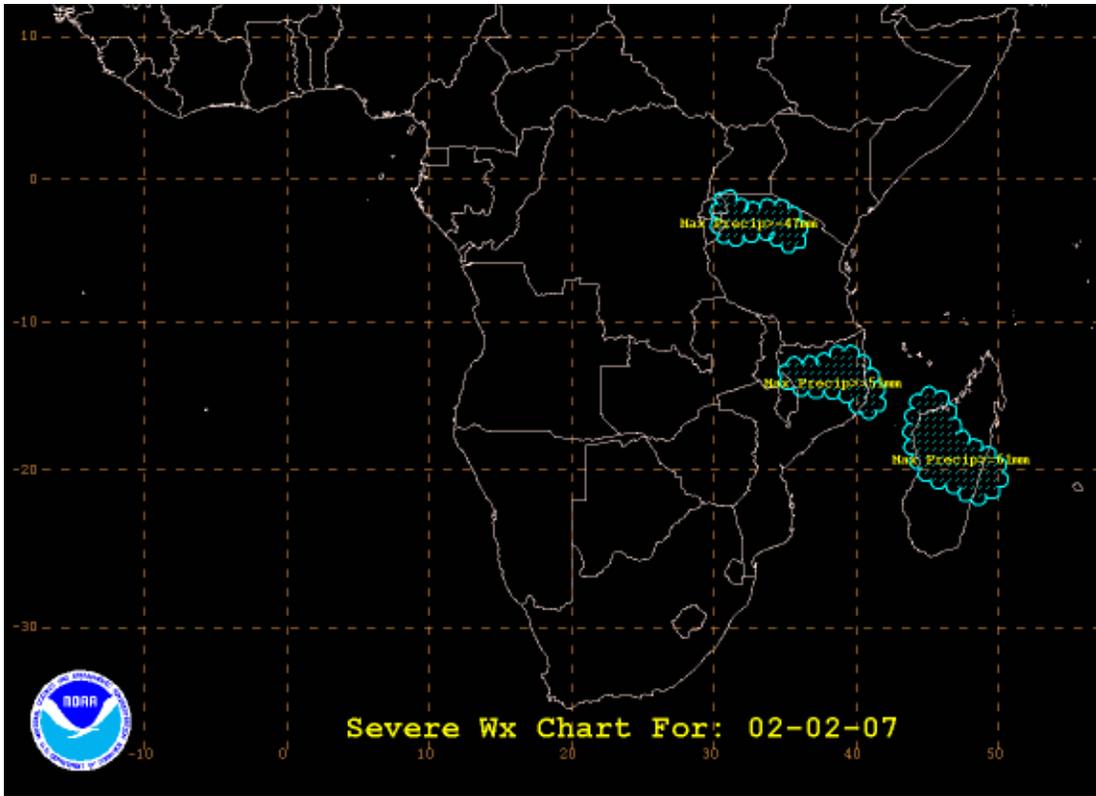
At 500hpa, the St Helena high has its center at 25°S 12°W with a ridge extending upto eastern coast of South Africa enclosing a cutoff high over Namibia pushing the meridional arm of the ITCZ to the north and the trough from the south to the east. The Mascarine high centre is located far to the east and can not be seen in the chart but it has a cutoff high located at 15°S 49°E in Madagascar this shows that the high pressure at 200hPa exist up to this level causing divergence over Madagascar, a back hanging trough with its northwest axis can be seen between the cutoff high of Mascarine and Mascarine itself in the Indian ocean. At T+48 hrs St Helena high has slightly relaxed at the same time split into two cells with their centers located at 28°S 09°W and 23°S 18°E, for the Mascarine high in the Indian ocean there is no significant change. At T+72 hrs the St Helena high has intensified, its center is at 29°S 06°W with a zonal axis ridge extending upto eastern coast of South Africa. The Mascarine high has also intensified and it has two centers located at 14°S 49°E in Madagascar this shows that the high pressure at 200hPa exist up to this level causing divergence over Madagascar and the other centre is located at 07°S 65°E with a cutoff high located at 28°S 59°E, between the two cells there is a narrow back hanging trough with a curved axis in phase with the Merdional Arm of the

ITCZ. There is a cyclonic circulation over Uganda north of lake Victoria and southeastern DR Congo.

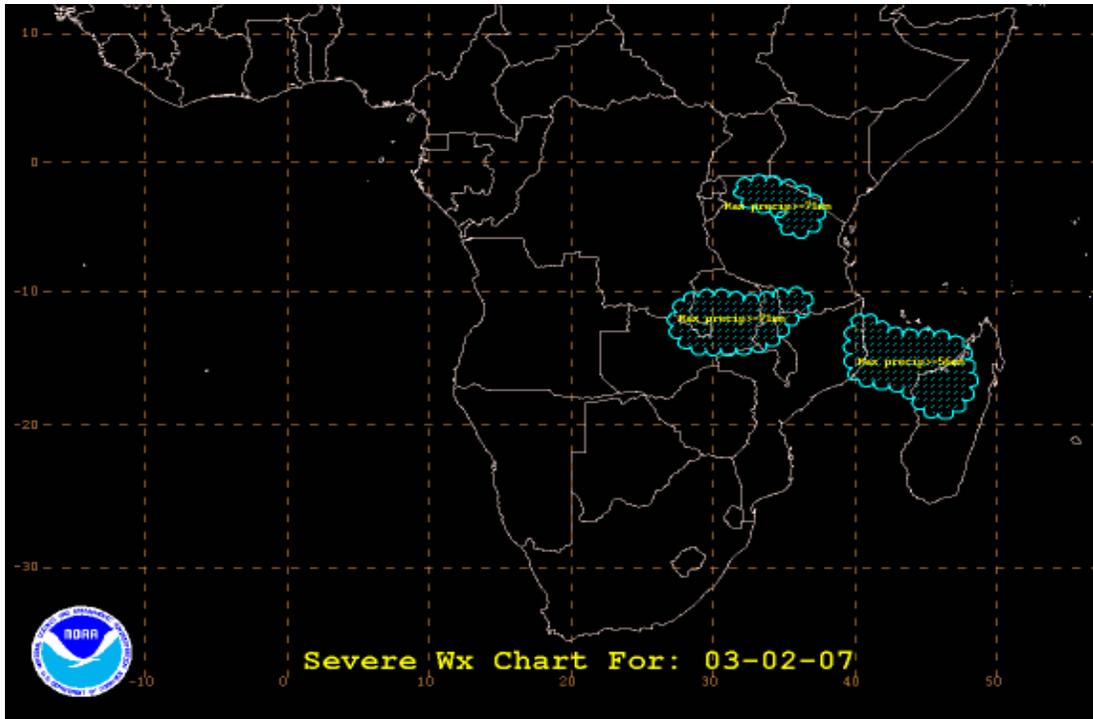
At 850 hPa, T + 24 Hrs St. Helena high centre is at 25°S 12°W with a curved ridge enclosing a cutoff high extending to southern Malawi, this ridge has pushed the meridional arm of the ITCZ to the north and the back hanging trough associated with a low to the east this trough is between the St. Helena high and the Mascarine high. The Mascarine high has its centre at 34°S 66°E with a curved ridge enclosing the cyclonic circulation (Tropical Cyclone) at 17°S 65°E. Area of convergence can be seen over Uganda due to the influence of Lake Victoria which modify the weather surrounding the lake. At T + 48 Hrs St. Helena high has relaxed with its centre at 25°S 10°W. The Mascarine high has its centre beyond 70°E and the cutoff from St. Helena has joined the mascarine high with its center located at 32°S 39°E, between St. Helena high and the Mascarine high there is a shallow trough from the south associated with a cut off low also in phase with the meridional arm of the ITCZ. The tropical cyclone is stationary. Area of linear convergence can be seen over Zambia and cyclonic circulations can be seen over Madagascar and Angola. At T + 72 Hrs St. Helena high has intensified and its centre is located at 28°S 10°W and the Mascarine high has its centre beyond 70°E and can not be seen in the chart with a cutoff high located at 35°S 50° E, between St. Helena high and the Mascarine high there is a shallow trough from the south in phase with meridional arm of the ITCZ. Area of convergence can be seen over southern Uganda and cyclonic circulations can be seen over Angola, Namibia, Madagascar and the Tropical cyclone at 18°S 65°E.

Generally there is a resemblance in the patterns of UK- Met, ECMWF and GFS models because for the consecutive three days, the 200hPa shows anticyclonic circulation while at lower levels the general flow is cyclonic which means there is a vertical motion in the area and the three models mentioned above show similarity meaning that the season has not changed over most countries.

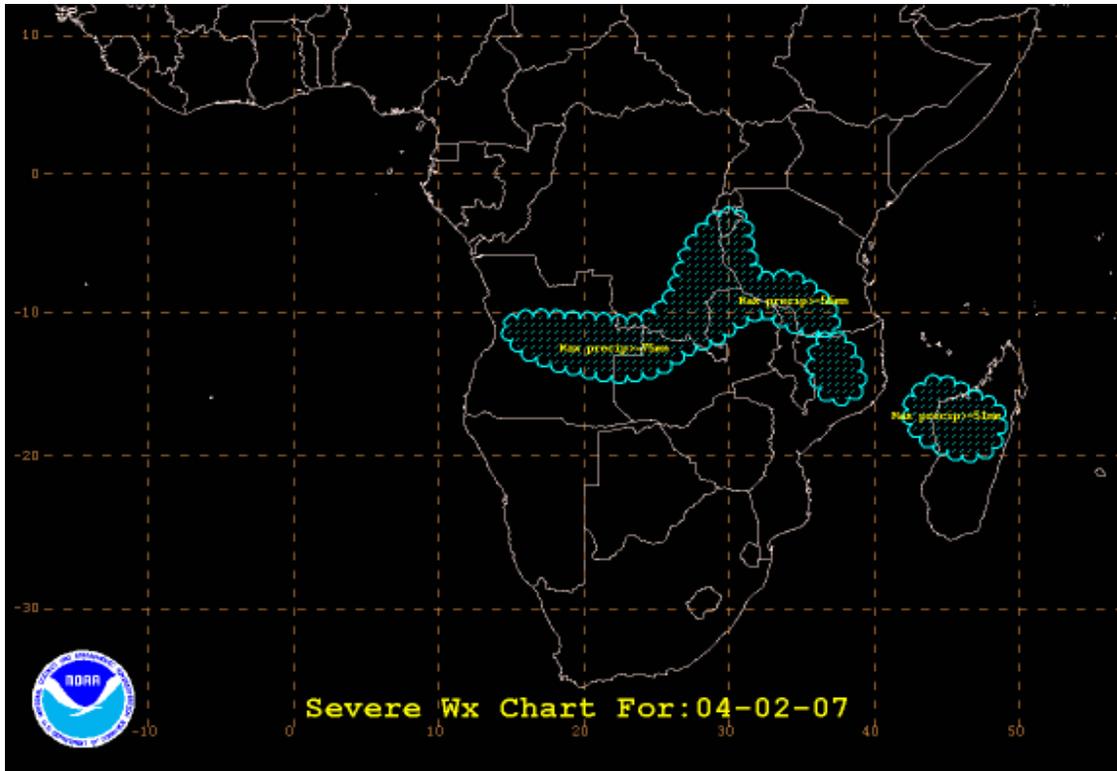
FORECASTMAPFORDAY1



FORECAST MAP FOR DAY2



FORECAST FOR DAY 3



Authors :

Oliver Moses:- Botswana Meteorological Services and African Desk

Siyabonga F. Mthethwa:- South African Weather Service and African Desk

Francis K. Gumbo:- Tanzania Meteorological Services and African Desk

Wassila Thiaw:- African Desk