



Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)

SHORT RANGE FORECAST DISCUSSION 14H00 EST 26th February 2007

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

FORECAST DISCUSSION 14H00 EST 26th February 2007

Valid: 00Z 27th February 2007- 00Z 01st March 2007.

WARNING: TROPICAL CYCLONE 15S (GAMEDE)

Position at 260600Z --- Near 18.3S 53.3E

Movement past six hours - 290 degrees at 03 KTS

Present wind distribution: Max sustained winds - 095 KT, Gusts 115 KT

12 hrs Forecast position valid at 261800Z --- 18.5S 52.8E

max sustained winds - 100 KT, gusts 125 KT

24 hrs Forecast position valid at 270600Z --- 19.0S 52.4E

Max sustained winds - 105 KT, gusts 130 KT

36 hrs Forecast position valid at 271800Z --- 20.0S 52.0E

max sustained winds - 110 KT, gusts 135 KT

Extended Outlook:

48 hrs Forecast position valid at 280600Z --- 21.2S 51.6E

Max sustained winds - 105 KT, gusts 130 KT

At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) shows a trough over Madagascar and over Mozambique/Madagascar channel, hence convergence over these areas. A high pressure system centered at 21°S 25°E is lying over the rest of the sub continent, hence divergence. At T+48 hrs the trough extends its influence to Mozambique as well. There is no significant change in the general flow pattern over the rest of the sub continent. At T+72 hrs the general flow pattern is similar to that at T+48 hrs.

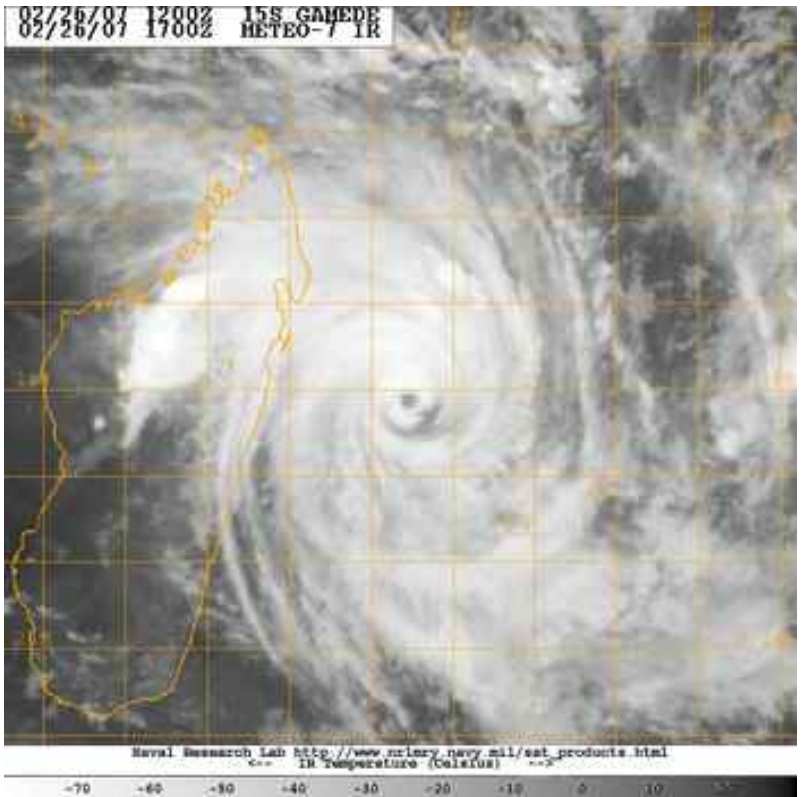
At 500hpa, the T+24 hrs prognosis shows the St Helena high pressure system centered at 25°S 07°W, and has a bud-off high centered at 25°S 16°E, hence the flow over sub-

Saharan Africa is mostly northwesterly winds of 10 to 30KT south of 30°S, and southeasterly winds of 10 to 25KT north of 30°S. A tropical cyclone (Gamede) can be seen clearly by this prognosis and a low over central Zambia forms a connection with this cyclone. At T+48 hrs the cyclone moves rapidly south-southwestwards with winds of up to 75KT according to GFS around the periphery of the 'EYE'. At T+72 hrs the St Helena high has amplified over sub-Saharan Africa with its centre at 28°S 21°E thus preventing the cyclone from affecting much of Madagascar, which at this stage its southeastern part will mostly be affected by the cyclone. A low over western DRC forms part of the extension of the cyclone hence tropical storms can be expected to develop along a line stretching from the central parts of Africa to the southern parts of Tanzania.

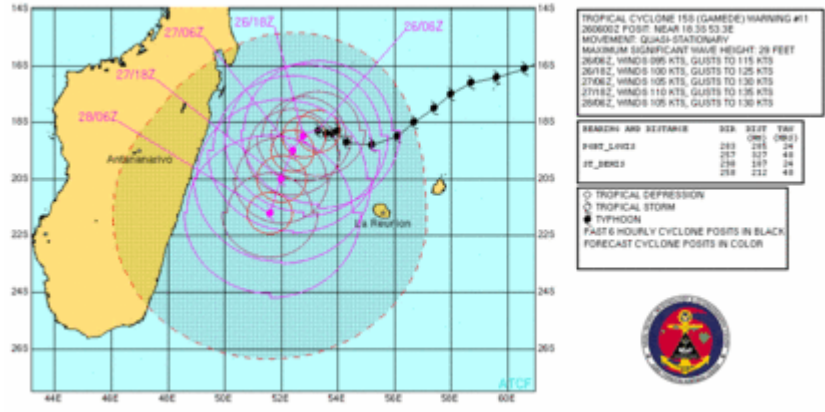
At 850hPa, the T + 24 hrs prognostic chart shows that the St Helena high has its centre located at 29°S 15°W with a ridge extending to the western coast of South Africa, and the Mascarene high has its centre located at 30°S 68°E with a ridge extending up-to northern Botswana. Between these two cells is a trough in phase with the meridional arm of the ITCZ. Also, there is a high over north of Madagascar and off the coast of Tanzania, cyclonic circulations can be seen over Zimbabwe, Angola coast and the eastern coast of Madagascar. Area of convergence can be seen over southern Sudan. At T + 48 Hrs there is a slight eastward shift of the St Helena high. Its centre is located at 28°S 12°W with its ridge extending to the western part of South Africa. Also, there is a slight westward shift of the Mascarene high with its ridge extending to northeastern Botswana. Between these two cells there is a squeezed trough from the south which has also slightly shifted to the east and in phase with the meridional arm of the ITCZ. The high over north of Madagascar and off the coast of Tanzania is persistent. Cyclonic circulations can be seen over eastern coast of Madagascar in the Indian ocean, Zambia and Angola coast. Area of convergence can be seen over southern Ethiopia. At T + 72 Hrs there is no significant change.

Generally there is a resemblance in the patterns of UK- Met, ECMWF and GFS models.

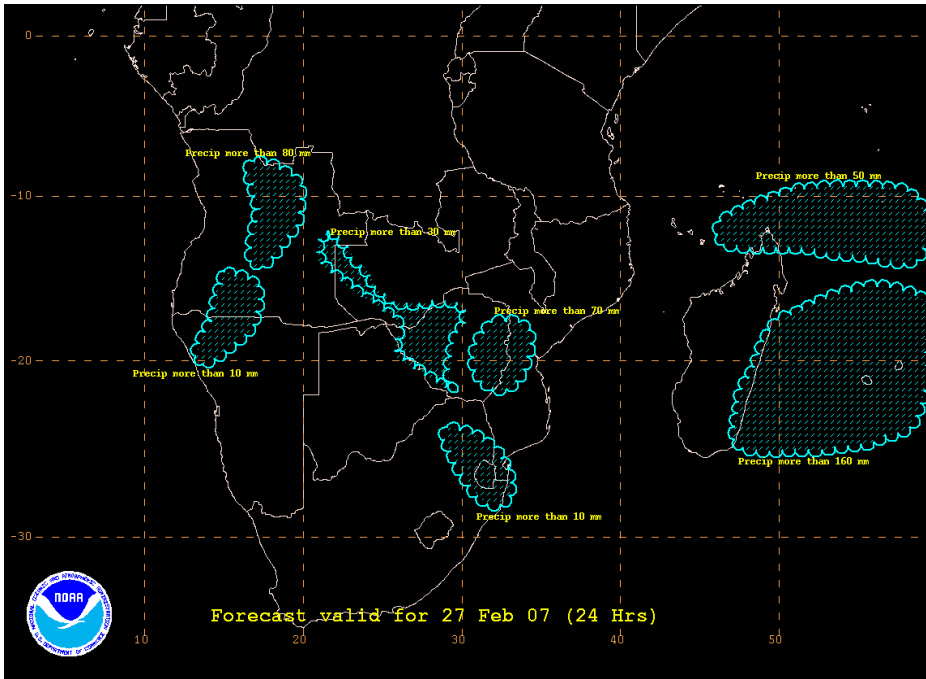
SATELLITE IMAGERY OF THE TROPICAL CYCLONE GAMEDE



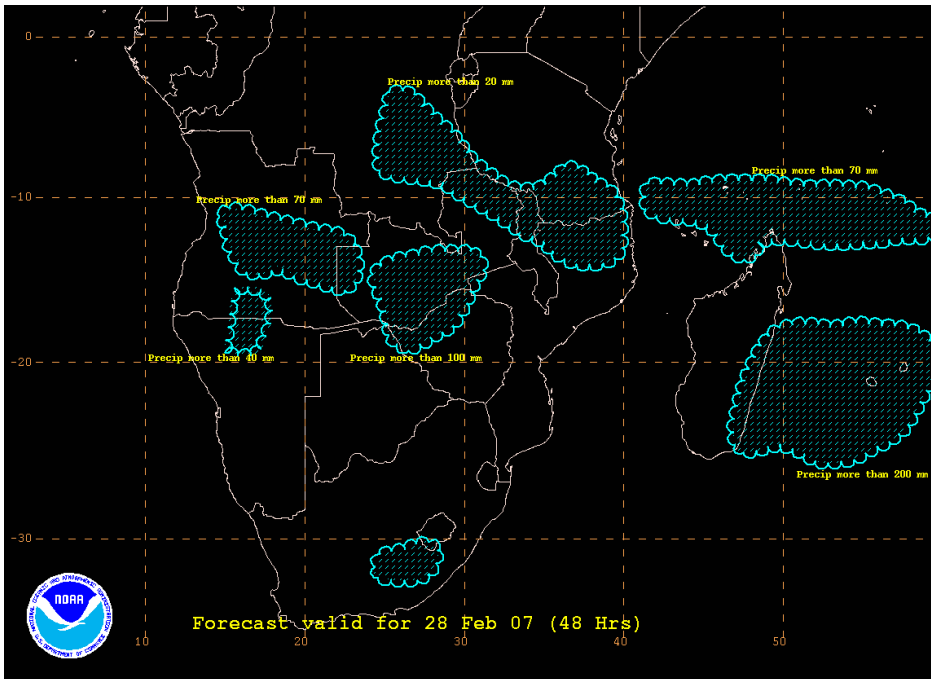
TROPICAL CYCLONE GAMEDE TRACK AS ISSUED BY JTWC



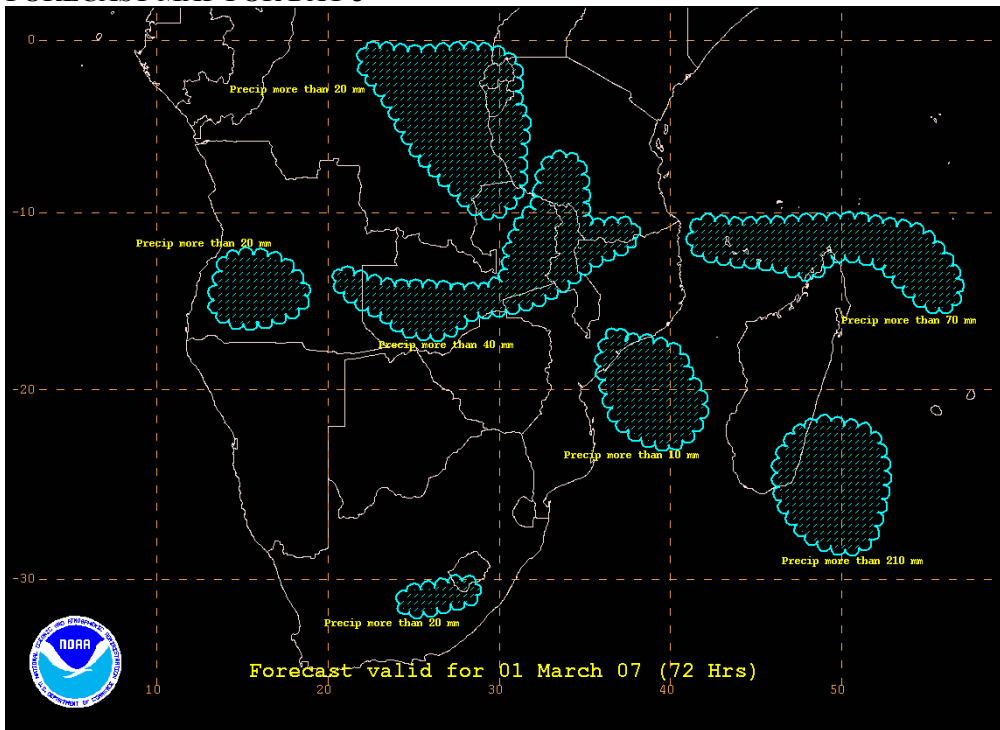
FORECAST MAP FOR DAY 1



FORECAST FOR DAY 2



FORECAST MAP FOR DAY 3



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