



**Forecast guidance for Severe Weather Forecasting Demonstration Project (SWFDP)**

**SHORT RANGE FORECAST DISCUSSION 14H00 EST 21<sup>st</sup> February 2007**

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

**FORECAST DISCUSSION 14H00 EST 21<sup>st</sup> February 2007**

**Valid: 00Z 22<sup>nd</sup> February 2007- 00Z 24<sup>th</sup> February 2007.**

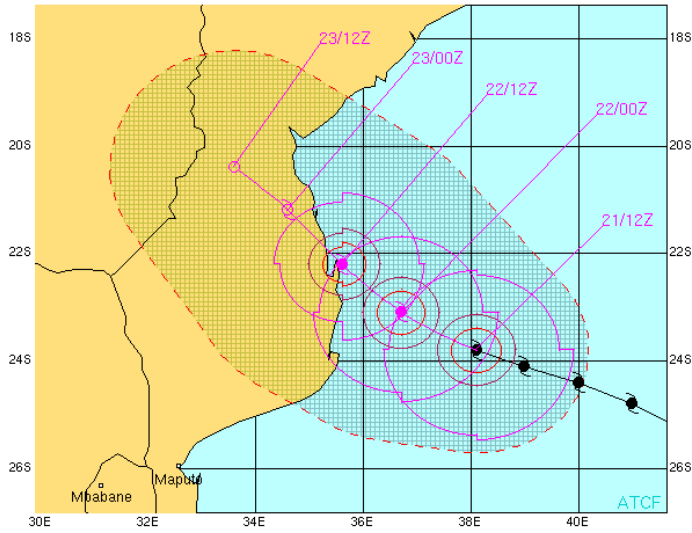
**WARNING:-**

**TROPICAL CYCLONE (TC) 14S (FAVIO), LOCATED APPROXIMATELY 330 NM EAST-NORTHEAST OF MAPUTO, MOZAMBIQUE, HAS TRACKED WEST-NORTHWESTWARD AT 09 KNOTS OVER THE PAST SIX HOURS. TC 14S HAS WEAKENED STEADILY OVER THE PAST 12 HOURS IN RESPONSE TO DECREASING POLEWARD OUTFLOW AND SOME DRY AIR ENTRAINMENT. THE SYSTEM CONTINUES TO TRACK ALONG THE NORTHEASTERN PERIPHERY OF A SUBTROPICAL RIDGE ANCHORED OVER SOUTH AFRICA, AND IS EXPECTED TO TAKE A SLIGHT NORTHWARD TURN OVER THE NEXT 24 HOURS AS THIS RIDGE REORIENTS AND THE RESULTING STEERING FLOW BECOMES MORE MERIDIONAL. THE STORM IS EXPECTED TO WEAKEN SLOWLY THROUGH TAU 24 DUE TO DECREASING UPPER LEVEL OUTFLOW AND INCREASING LAND INTERACTION. THE STORM WILL MAKE LANDFALL ALONG THE MOZAMBIQUE COASTLINE BETWEEN TAU 24 AND TAU 36 AND DISSIPATE OVER LAND THEREAFTER.**

At T+24 hrs, the general flow pattern at 200hpa over Southern Africa (South of the Equator) indicates an anticyclone or high pressure with its centre located at 19°S 19°E and another cell of high pressure centered over the ocean southeast of Madagascar at about 24°S 56°E. A low is situated at about 20°S 40°E and a couple of short wave troughs moving over South Africa. The flow is mainly east-southeasterly 10 to 45KT north of 20°S and by contrast westerly to northwesterly 15 to 55KT south of 20°S. At T+48 a fairly sharp or steep trough is sitting over the central part of S.A. and is linking up with a low situated over the southern part of Zambia. This causes the high pressure system to shift to the west hence its centre will be located at 20°S 10°E and the one which was SE of Madagascar shift to 24°S 47°E. At T+72 the two high pressure cells move closer to each other thus forcing the trough move SE but the flow remains the same with westerly in the south and easterlies in the north.

At 500hpa, the T+24 hrs prognostic chart is depicting a belt of high pressure system over the sub-Saharan Africa with cells centered at about 24°S 12°E and 27°S 32°E. A weak low pressure system can be seen over northern Malawi and another one sitting along the east coast of Madagascar hence a convergence line is observed stretching from northern Angola to northern Mozambique thro' to the northern parts of Madagascar. At T+48 the high is centered at 24°S 25°E and will dominate the flow over most of sub-Saharan Africa whilst the line of convergence or trough line will move southwards as the low over Madagascar move southwestwards and another low developing over northern Angola. At T+72 the high shifts northwards slightly and will be centered at 23°S 22°E as a weak westerly trough over southwestern South Africa is approaching. Two weak lows can be observed one over SW Angola and another one over northern Zimbabwe which causes a line of convergence to continue moving southwards and stretching from southern Angola to central Mozambique. An interesting developing low situated 11°S 52°E which has a potential to become a cyclone or at least a tropical storm/disturbance.

At 850 hPa, T + 24 Hrs St. Helena high has its centre is located at 29°S 18°W with a ridge extending to the western part of South Africa and the Mascarine high has its centre located at 34°S 63°E with a ridge extending mainly over the Indian ocean (i.e. south-eastern part of South Africa), between these two cells is a well defined trough from the south in phase with the meridional arm of the ITCZ, also there is a high over north of Madagascar and off the coast of Tanzania. A Tropical cyclone (Flavio) can be seen over Mozambique channel and a low can also be seen over northeast of Madagascar. Areas of convergence can be seen over Namibia down to the central part of SA along the deep trough line and also over central Congo and Lake Victoria basin over Tanzania. At T + 48 Hrs the St. Helena high shifts even further to the west as the trough overland intensifies even further and pushes southwards causing more tropical air to move southwards and in phase with the meridional arm of the ITCZ, the high over north of Madagascar and off the coast of Tanzania is still persisting, cyclonic circulations can be seen over Angola and northeast of Madagascar in the Indian ocean. Area of convergence can be seen over central Uganda. At T + 72 Hrs there is no significant change. 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.



TROPICAL CYCLONE 14S (FAVIO) WARNING #15  
 211200Z POSIT: NEAR 23.8S 38.1E  
 MOVING 290 DEGREES TRUE AT 09 KNOTS  
 MAXIMUM SIGNIFICANT WAVE HEIGHT: 33 FEET  
 21/12Z, WINDS 100 KTS, GUSTS TO 125 KTS  
 22/00Z, WINDS 095 KTS, GUSTS TO 115 KTS  
 22/12Z, WINDS 080 KTS, GUSTS TO 100 KTS  
 23/00Z, WINDS 055 KTS, GUSTS TO 070 KTS  
 23/12Z, WINDS 030 KTS, GUSTS TO 040 KTS

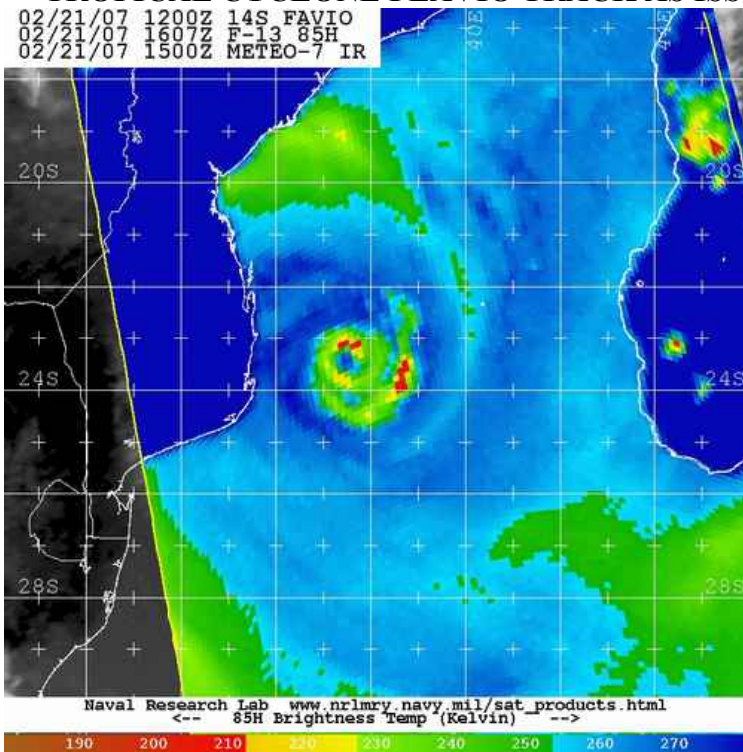
BEARING AND DISTANCE	DIR	DIST (NM)	TAV (HRS)
EUROPA_ISLAND	269	256	24
	285	384	48

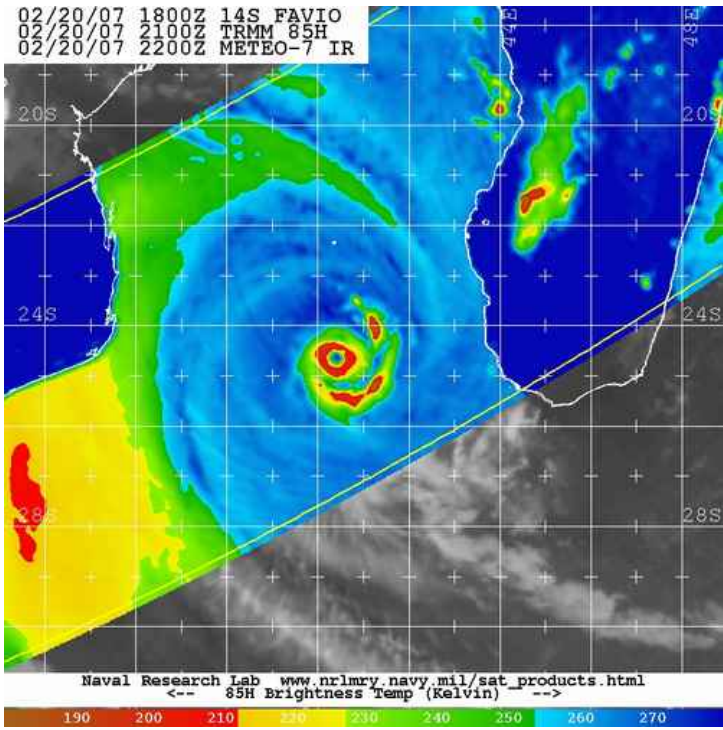
○ TROPICAL DEPRESSION  
 ○ TROPICAL STORM  
 ● TYPHOON  
 PAST 6 HOURLY CYCLONE POSITS IN BLACK  
 FORECAST CYCLONE POSITS IN COLOR



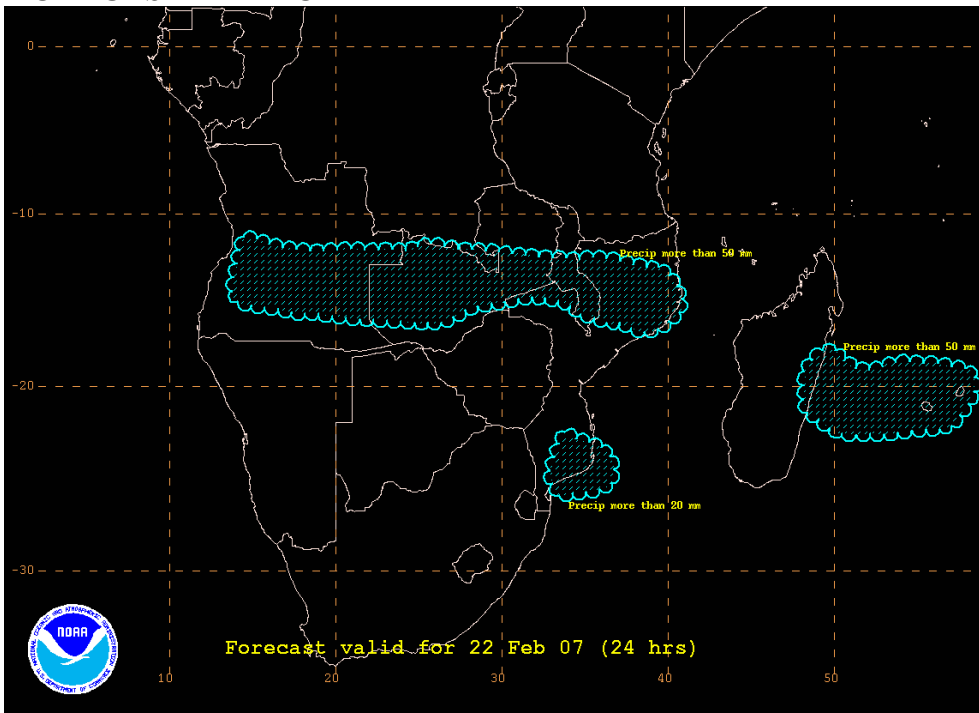
### TROPICAL CYCLONE FLAVIO TRACK AS ISSUED BY JTWC

02/21/07 1200Z 14S FAVIO  
 02/21/07 1607Z F-13 85H  
 02/21/07 1500Z METEO-7 IR

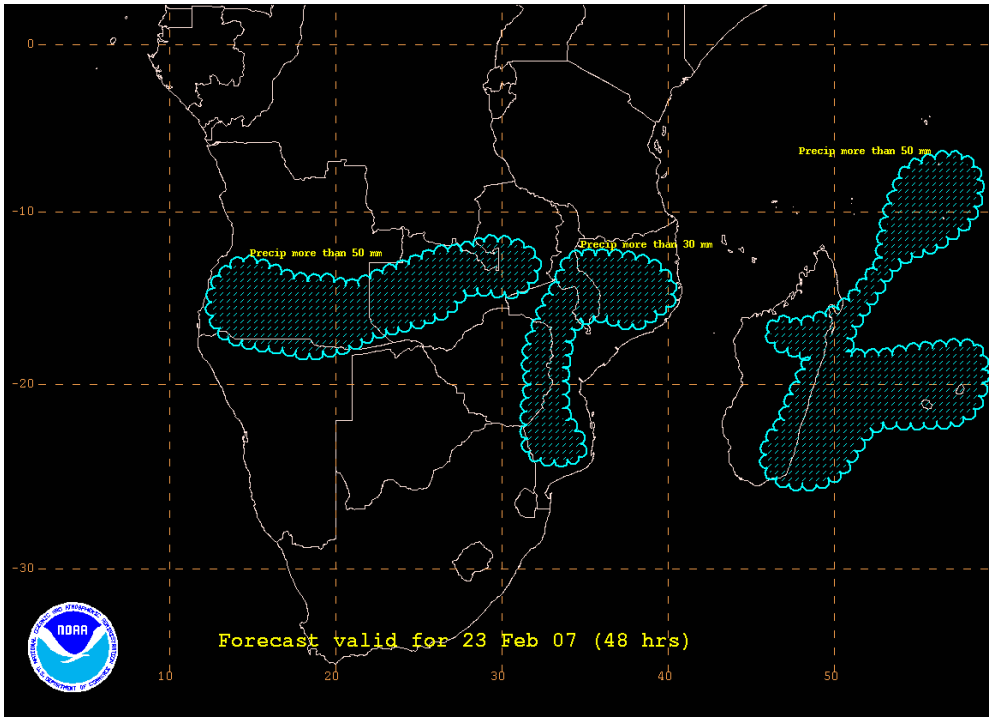




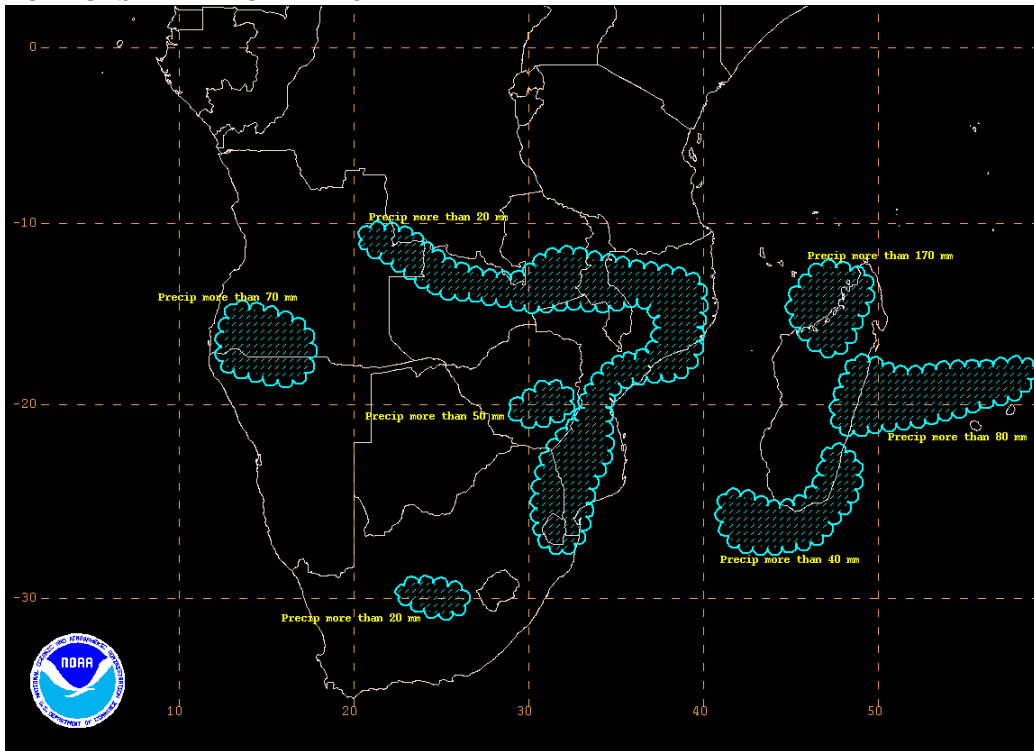
**FORECAST MAP FOR DAY 1**



**FORECAST FOR DAY 2**



**FORECAST MAP FOR DAY 3**



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