

**METEOROLOGICAL GUIDE**

**LA ROUTE DES TAMARINS**

**PWC 2014**

**REUNION ISLAND**

From the 14<sup>th</sup> to 18<sup>th</sup> of November 2008

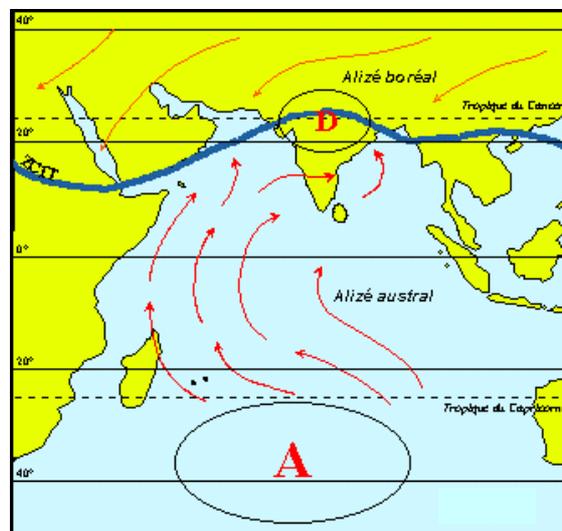


**METEO FRANCE**  
Toujours un temps d'avance

## 1. PREVAILING WINDS

The Reunion island is situated on the 21<sup>st</sup> parallel south. Its climate as a whole is influenced by a prevailing wind, the trade wind. The trade wind is generated by sub-tropical anticyclones whose centres move from west to east between 30°S and 40°S depending on the season. The speed and direction of the trade wind vary depending on the position and strength of the anticyclone.

*Fig 1 : Mascareignes anticyclone in November*



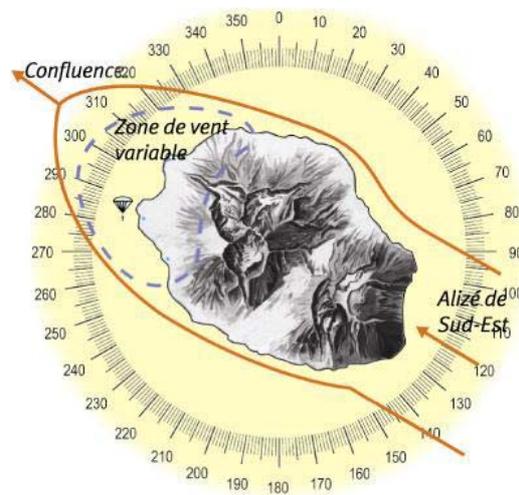
The prevailing wind on the island is the east-south-easterly trade wind, but depending on the position of the anticyclone the wind direction may vary from north-easterly to southerly.

Winds may also come from other sectors, but they are weaker and their occurrence is related to tropical phenomena arising from the Inter-tropical Convergence Zone (ITCZ).

## 2. CHANGES IN THE SYNOPTIC FLOW DUE TO THE RELIEF

When passing over the island, the air flow must circumvent its coasts and/or mountains. Once it has crossed the island, the wind resumes its initial direction at a distance from the island of between 0.5 and 1.5 times its size.

*Fig 2. the flow circumvents its coasts. Confluence by south-east trade wind.*



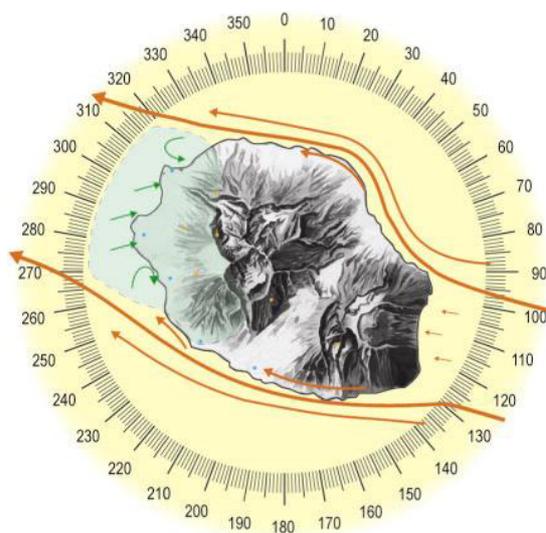
Between the confluence zone and the island's coasts, there is an area of varying size within which the synoptic wind is less influential. In this zone of variable and low wind dynamic and thermal phenomena occur which will be of interest to paragliders, because the winds are viable. It is here that the rounds of the World Cup series will be held. Obviously the location of this zone varies depending on the meteorological conditions of the day.

### 3. WHICH WINDS IN THE LOW-WIND ZONE?

The two phenomena that dominate in this low-wind zone are the sea breeze and rotors, which become combined. These phenomena vary depending on the type of air mass, the speed and direction of the forecast wind, the time of day, the season, cloud cover, orography, and so on.

Details of these and many other island phenomena are set out in a **Guide météorologique du vol libre à la Réunion** (Meteorological Guide to Paragliding on Réunion), currently being prepared by the forecasting service of **Météo-France**.

*Fig. 3: ex :South-easterly trade wind 100-110°*



*The wind stay off la  
Pointe au sel and  
off la Grande  
Chaloupe.*

*Viables north rotor  
over la Pointe des  
Châteaux and sea  
breeze near Saint-  
Gilles.*

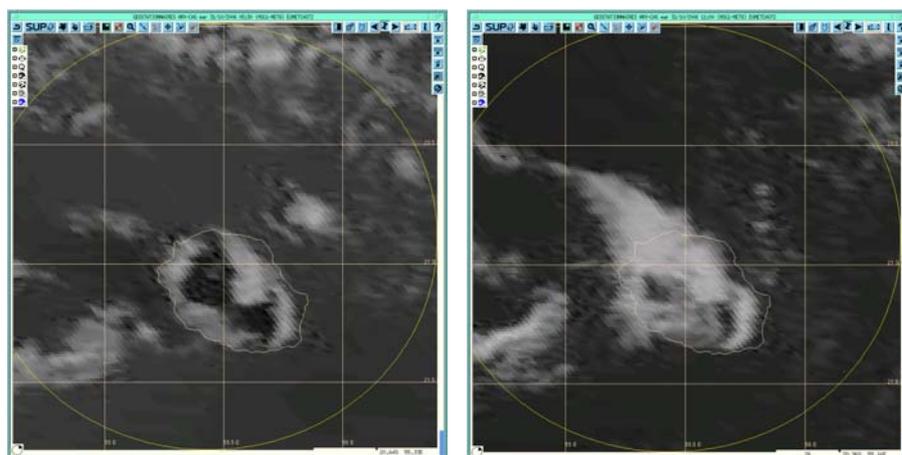
The trade wind circumvent the island preferably by the coasts. Its speed increase in certain part as north-east or south-east near Saint-Pierre. In green is the low-wind zone, where blow sea breeze, rotors and others small scale phenomena.

## 4. CHANGES DURING THE COURSE OF THE DAY

After the wind itself, what interests paragliders is how the situation changes during the course of the day.

The usual course of events on the island is as follows: the relief of Reunion island generates thermals, the presence of which is indicated by the daily formation of cumulus clouds on the hills. During the day, once the cumulus clouds have reached a certain height, they are caught by the trade wind at an altitude above the sides of the cirques. The layer of cloud extends towards the coasts, pushed by the wind. Thus, a kind of hat is created on the lee side of the island, a hat made up of stratocumulus clouds, which are much more stables and produces thermals that are less pronounced.

*Fig. 4: Clouds overflow*



*In the morning around 10am. Cumulus in formation on the hills.*

*In the afternoon, clouds extend towards the coasts.*

Two phenomena can prevent the cumulus clouds from rising upwards: the inversion of the trade winds and/or the inversion of temperature. If the air mass is unstable these inversions are fairly clear-cut, although the chaotic relief of the island may help to weaken them. In such cases cloudy overdevelopment is possible, creating updrafts and downdrafts that are dangerous to paragliders.

## 5. FORECASTING FOR THE WORLD CUP SERIES

The forecasters at Météo-France will be issuing reports several times a day for the various different rounds of the World Cup series, ” la route des tamarins”.

**Good flights, with good meteorological conditions!!!**

### **Météo-France**

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