Marine weather supplier
Marine Weather supplier

Race Support  Major Sailing Teams  Naval Architects  Cargos  Squid Routing  Squid (Weather data)  Pre Race Weather Analysis
Official supplier of many offshore events

• Official supplier of the Volvo Ocean Race
  (for the second edition)

• Official supplier of the Vendée Globe

• Official supplier of the Mini Transat
Software used to request Weather data
- Grib files (more than 30 models)
- Fronts
- Observations
- Currents
- Colorized sat pictures

- 30 000 users
- In more than 50 countries
- 1 000 new users every month
Squid-Mobile

Iphone, Ipad and Android devices
Pre Race Weather Support
Analysis of the historical data
Pre Race Support

• **Principle**
  • Simulation of a start every day during the last 13 years
  • 15 days prior to the date and 15 days after the date
  • Total: 390 simulations

• **The output is a PDF file which includes**
  • All the routes
  • The average elapsed time
  • The standard deviation
  • The wind conditions
The elapsed time

<table>
<thead>
<tr>
<th>Statistics</th>
<th>t (hours)</th>
<th>t (days)</th>
<th>dist (NM)</th>
<th>boat speed (kt)</th>
<th>max wind (kt)</th>
<th>max wave (m)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>205.38</td>
<td>8.55</td>
<td>3093.50</td>
<td>15.22</td>
<td>26.78</td>
<td>3.62</td>
</tr>
<tr>
<td>Stddev</td>
<td>23.87</td>
<td>.99</td>
<td>207.52</td>
<td>1.67</td>
<td>5.62</td>
<td>1.12</td>
</tr>
<tr>
<td>Q10</td>
<td>174.53</td>
<td>7.27</td>
<td>2861.06</td>
<td>13.22</td>
<td>20.87</td>
<td>2.31</td>
</tr>
<tr>
<td>Q50</td>
<td>205.88</td>
<td>8.57</td>
<td>3053.21</td>
<td>14.95</td>
<td>25.54</td>
<td>3.33</td>
</tr>
<tr>
<td>Q90</td>
<td>233.05</td>
<td>9.71</td>
<td>3432.68</td>
<td>17.28</td>
<td>35.37</td>
<td>5.07</td>
</tr>
</tbody>
</table>
Pre Race Support

Wind conditions: TWA and TWS distribution

Figure 6: Frequency (%) for each TWA

Figure 7: Frequency (%) for each TWS
# Pre Race Support

## Wind conditions: TWS / TWA

<table>
<thead>
<tr>
<th>TWS</th>
<th>0-5</th>
<th>5-10</th>
<th>10-15</th>
<th>15-20</th>
<th>20-25</th>
<th>25-30</th>
<th>30+</th>
<th>∑</th>
</tr>
</thead>
<tbody>
<tr>
<td>0-10</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>10-20</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>20-30</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>30-40</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>40-50</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>50-60</td>
<td>0.4</td>
<td>1.0</td>
<td>1.2</td>
<td>0.9</td>
<td>0.5</td>
<td>0.6</td>
<td>0.1</td>
<td>4.5</td>
</tr>
<tr>
<td>60-70</td>
<td>0.5</td>
<td>1.9</td>
<td>2.0</td>
<td>1.0</td>
<td>0.6</td>
<td>0.4</td>
<td>0.2</td>
<td>6.8</td>
</tr>
<tr>
<td>70-80</td>
<td>0.4</td>
<td>2.5</td>
<td>3.1</td>
<td>1.3</td>
<td>0.7</td>
<td>0.4</td>
<td>0.3</td>
<td>8.7</td>
</tr>
<tr>
<td>80-90</td>
<td>0.4</td>
<td>2.2</td>
<td>3.1</td>
<td>1.6</td>
<td>0.6</td>
<td>0.3</td>
<td>0.1</td>
<td>8.4</td>
</tr>
<tr>
<td>90-100</td>
<td>0.3</td>
<td>2.4</td>
<td>2.6</td>
<td>0.8</td>
<td>0.3</td>
<td>0.1</td>
<td>0.1</td>
<td>6.7</td>
</tr>
<tr>
<td>100-110</td>
<td>0.5</td>
<td>3.6</td>
<td>3.1</td>
<td>1.0</td>
<td>0.2</td>
<td>0.2</td>
<td>0.0</td>
<td>8.7</td>
</tr>
<tr>
<td>110-120</td>
<td>0.5</td>
<td>4.4</td>
<td>4.4</td>
<td>1.9</td>
<td>0.2</td>
<td>0.0</td>
<td>0.0</td>
<td>11.5</td>
</tr>
<tr>
<td>120-130</td>
<td>0.2</td>
<td>3.7</td>
<td>8.5</td>
<td>3.0</td>
<td>0.9</td>
<td>0.1</td>
<td>0.1</td>
<td>16.4</td>
</tr>
<tr>
<td>130-140</td>
<td>0.1</td>
<td>2.0</td>
<td>9.3</td>
<td>9.2</td>
<td>1.8</td>
<td>0.2</td>
<td>0.1</td>
<td>22.8</td>
</tr>
<tr>
<td>140-150</td>
<td>0.1</td>
<td>0.1</td>
<td>0.9</td>
<td>2.6</td>
<td>0.7</td>
<td>0.3</td>
<td>0.0</td>
<td>4.7</td>
</tr>
<tr>
<td>150-160</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.1</td>
<td>0.1</td>
<td>0.3</td>
</tr>
<tr>
<td>160-170</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>170-180</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
<td>0.0</td>
</tr>
<tr>
<td>∑</td>
<td>3.6</td>
<td>23.9</td>
<td>38.3</td>
<td>23.6</td>
<td>6.6</td>
<td>2.8</td>
<td>1.1</td>
<td>100.0</td>
</tr>
</tbody>
</table>
Pre Start Weather Support
We work with around 100 Professional teams
We provide weather analysis to around 1 000 cruising boats

- Vendée Globe
- Sydney Hobart in 2017
- Mini Transat
- Fastnet
- Newport – Bermuda race
- Transpac
- Figaro Race
- Volvo Ocean Race
Full analysis of the race

- Downwind to Block Island mainly on starboard tack. The wind increases from 8-10 knots at the start up to 20 knots with gusts at 25-28 knots as you get closer to Block Island.
- The tidal stream current is mostly favorable on the way to Block Island.

- In case you do not lay on one tack, it is better to gybe once you are out of the sound (About 5 to 10 miles from Block Island). There will be more wind.
- If counterclockwise course, furl the gennaker.

- Wind backs from WSW to SSW as you approach the finishing line. If this left shift is confirmed, you should finish on a long port tack.
- Wind decreases from 20+ knots down to 5-8 knots close to the finish.
- Mainly sunny with showers.

- Adverse tide on the first part of the leg back home. Not much to do about it.
- It will be easier to play the current once in the sound.
Pre Start

Full analysis of the race

Sud Grande Bretagne les 28 et 29 Mai

- Anticiper le courant à Start Point
- De nuit, peu de dévient à la côte. Rester dans la veine de courant.
- De jour, soit à la côte pour jouer la brise, soit bien au large

- Rester dans le Chenal jusqu’au Sud des Shingles si courant favorable.
- La brise tourne à droite dans l’après-midi.
- Anticiper courant Portland (au large si courant contraire)
- Le vent de Nord-Est revient plutôt par la côte dans la soirée
Pre Start Support

Ensemble routing with 70 models

Average time for the 1st Proto: 13d 6 hours
Average time for the first « Séries »: 14d 3 hours
Ensemble routing with 70 models – wind along the route
Weather Support to race organizers during the Race
During the Race

Probability: Wind Speed higher than 35kt

Dec 27 at 00Z

Dec 27 at 12Z
During the Race

Probability: gusts (>50kt) – 13 to 14 dec
During the Race

Possible trajectories of a low
During the Race

Risk of heavy weather for each of the boats (based on the Ensemble models)

<table>
<thead>
<tr>
<th>TEAM</th>
<th>MODELE</th>
<th>Toute la route</th>
<th>0 - 24h</th>
<th>24 - 48h</th>
<th>48 - 72h</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Q25 Q50 Q75</td>
<td>Q25 Q50 Q75</td>
<td>Q25 Q50 Q75</td>
<td>Q25 Q50 Q75</td>
</tr>
<tr>
<td>Gitana</td>
<td>ENS-CEP</td>
<td>10.90 14.60 19.40</td>
<td>24.1 26.7 27.6</td>
<td>15.40 16.50 18.45</td>
<td>12.125 12.250 16.000</td>
</tr>
<tr>
<td>MaîtreCoq</td>
<td>ENS-CEP</td>
<td>10.3   15.1  20.6</td>
<td>21.8 27.0 29.9</td>
<td>15.00 17.00 18.80</td>
<td>12.40 14.45 16.20</td>
</tr>
<tr>
<td>SMA</td>
<td>ENS-CEP</td>
<td>9.15   15.65 23.30</td>
<td>22.1 22.9 27.5</td>
<td>26.275 30.500 32.800</td>
<td>13.700 16.500 17.675</td>
</tr>
<tr>
<td>Initiative</td>
<td>ENS-CEP</td>
<td>10.3   16.7  23.7</td>
<td>20.900 22.500 26.375</td>
<td>33.800 24.50 27.00 30.40</td>
<td>13.975 16.500 19.800</td>
</tr>
<tr>
<td>SpiritOfYorkoh</td>
<td>ENS-CEP</td>
<td>9.725 17.950 25.250 40.000</td>
<td>25.0 25.5 30.0 34.9</td>
<td>25.230 30.50 34.225 40.000</td>
<td>17.00 19.95 21.95 20000</td>
</tr>
</tbody>
</table>

Winds > 30 knots 0-24h

Winds > 30 knots 24-72h
During the Race

Analysis and Forecast issued 24/12/2016 at 07h00 Z