

Athens

Gradient 340-040°, The Meltemi

The Meltemi is a warm, dry and very gusty NE wind set up between low pressure over Turkey and high pressure over the Balkans. Speeds can range from 8 to 28 knots, often on the same day.

Occasionally the Meltemi can blow all night, but usually there is a general increase between 0900 and 1100, and a slight shift to the right, from 340-360° to 010-035°.

Winds in the lee of Piraeus can reach the course from 340-360° on the left and 010-035° on the right throughout the day. (*Athens 1*.)

Sea Breezes

Athens has a very unique sea breeze pattern and it is a venue which highlights the necessity to look at not only a local map but also a topographic map of the surrounding area.

Sea Breezes Under A Slack Gradient

On clear cool nights cooled air piles up behind the mountains to the north of Athens. In the early hours of the morning it finds its way downwards to the Saronic Gulf with a north-westerly direction over the water (*Athens 2*). As it warms up it turns more onshore towards the city as a westerly, but weakens until it is replaced by a south-westerly sea breeze, from 200 to 240° and 3 to 8 knots. This sea breeze tries to shift right, as a normal sea breeze in the northern hemisphere would, and pressure often comes from the right. But these early sea breezes are often very patchy and very light offshore, and complicated by a developing easterly sea breeze blowing on to Egina, the island opposite, so that in the shipping lane the wind is particularly fitful and light.

There is yet another sea breeze to occur in the Saronic Gulf, which comes from the south, 140 to 180° (*Athens 3*). This is the strongest sea breeze as it is driven by air rising over the larger land masses to the north compared to the south-westerly sea breeze which is driven by air rising over the city. This latter sea breeze may reach only 8-12 knots in the summer and up to 14-18 knots in the spring and autumn.



Athens 1 The Meltemi



Athens 2 Multiple sea breeze directions



Athens 3 Strongest sea breeze direction

Stronger winds are to be found near Piraeus, and lighter winds with a change of wind direction along the eastern shores of the bay. These step changes in sea breeze direction and speed are typical on most days as successive mountain slopes are exposed to the sun and then move into shade.

Sea breezes rarely occur under moderate to strong Meltemi conditions, despite its offshore component.

When the weather is stiflingly hot and stable the sea breeze really struggles to break through the inversion layers and the resulting breeze is exceptionally light and unstable, making sailing conditions tricky as there is no pattern. The weakest winds occur when the inversion layer is below the tops of the higher mountains and a general sea breeze cannot develop; only a handful of small sea breeze circulations up the various valleys, some more effective than others in drawing air off the water.

Gradient Wind 300-360°

There will be a strong SSE sea breeze, 12 to 17 knots, when the atmosphere is more unstable earlier and later in the year.

A N to NW gradient can also drive an easterly sea breeze on the coast to the east of the International Airport, which can reach more than 15 knots as there is more land to drive it. It can make its presence felt after 1630 on the Saronic Gulf just on the courses closest to the Olympic Sailing Centre.

Gradient Wind 040-100°

You will experience a gusty and shifty wind as it is blowing over rough ground. When sailing off Piraeus winds are channelled down the Athens City valley, and gains can often be made on the right closer to shore. Further south the wind becomes less predictable as it is affected greatly by hills to the south of Athens.

Gradient Wind 250-300°

A reasonable fetch means waters can be quite choppy from this fairly steady direction. Wind tends to be fairly constant across the course, unless sailing close to the Piraeus shore where streamlines are divergent and lighter winds may be found on the right.