



Comparative analysis of wind climate and breeze circulation at Ahtopol (Bulgarian Black sea coast) and at Lamezia Terme (Calabria, Italy)

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The wind energy potential in Mediterranean and Black Sea coastal zones is still not widely exploited, due to limited number of sites with measurements and in particular sites with intensive vertical wind profiles measurements. With the modern ground based remote sensing technology, new high time resolution information on wind in coastal areas is retrieved by the operation of sodars, wind Doppler lidars, ceilometers, etc. Here, we present a comparative study between two coastal sites: Ahtopol, Bulgaria, at the west coast of the Black Sea, and Lamezia Terme in Italy, located at the Tyrrhenian coast of the Calabrian Peninsula. The characteristics of the onset, duration, wind direction of sea breeze and the interaction of synoptic and local processes and the development of low level jets are studied. The comparison is performed considering the role of orography, coast line orientation at the two sites.