

The Behavior of O₃ and Its Nitrogen and Sulfur Precursors in Sea Breeze Scenarios on the Coast of Gabès (Tunisia)

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Abstract : The study of the concentrations of atmospheric pollutants is analyzed during two days of sea breeze (April 26, 2010, and January 11, 2008) on the Mediterranean coasts, just in front of Gabès (33 ° 53 'N, 10 ° 07' E), Tunisia. During these two cases, we found that Gabès was contaminated by a coastal sea breeze. On April 26, 2010, the terrestrial synoptic wind admitted a maximum speed of about 6 m / s and was approximately perpendicular to the coast and making the breeze easier. On January 11, 2008, the terrestrial wind was local. Under these conditions, O₃ and, therefore, the concentrations were multiplied by the factors 0.1 and 2, respectively. The episodes of ozone concentrations faithfully follow the sea breeze circulation. These sea breeze events can be responsible for high concentrations of NO, NO₂, and SO₂ as air pollutants in this area.

Keywords : sea breeze, O₃, cost town, air quality

Conference Title : ICEMP 2022 : International Conference on Environmental Meteorology and Pollution

Conference Location : Paris, France

Conference Dates : November 14-15, 2022