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The Sea Surface Wind and Sea Surface Temperature Field
about Iberia

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Summary:- Average annual and monthly charts have been constructed representing the surface wind field and surface temperatures about the Iberian peninsula.

In an area bounded by parallels 20°N . and 50°N . and by meridians 20°W . and 10°E . the surface temperature and wind fields over the sea have been examined from files of data (TDF 11 tapes) consisting of a total of 1,114,971 observations compiled during the period 1941-1972. In general one can say that the Atlantic surface isotherms parallel the latitudes, progressively warming towards the equator with the exception that, as they approach the continent at a distance of a few hundred miles or less, the isotherms dip southward setting up anomalously cooler water along the coasts. In the Western Mediterranean, surface isotherms appear to be strongly influenced by land-forms with degrees of temperature warmer than those of the Atlantic within the same parallels of latitude and more representative of the Atlantic temperature distribution 200 or 300 miles further south.

The surface wind field in the Atlantic is directed easterly onshore to the continent in the northern sector. However, at 40°N . the predominant direction is southerly

with coastal components towards the east except for Africa, between 20°N. and 30°N. , where wind directions parallel the coast. Wind force is strongest in the north with an annual average velocity of 9 meters per second. Wind force decreases progressively southward but picks up speed again in the southernmost sector. The Western Mediterranean shows a remarkable consistency in direction from the northwest to the southeast. The stronger the average winds the more persistent and uniform is the direction; however, when wind force diminishes surface streamlines show a fan-like distribution emanating from the Pyrenees and French sectors with wide divergencies about the periphery of the fan. The Iberian peninsula, for the most part, is affected by onshore winds on the Atlantic side and by offshore winds on the Mediterranean.

Note: This paper not to be cited without prior reference to the author.