



## **Climatology of severe convective storm environments from ERA-interim**

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A climatology is constructed of various environmental parameters associated with severe convective storms for a domain covering Europe, Middle East and North Africa for the 35-year period of 1979–2014 from ERA-interim. Specifically, surface-based convective available potential energy (SBCAPE), convective inhibition energy and wind shear values for different layers were calculated. Long-term monthly means show that in the cold season there is only small amount of SBCAPE over the Mediterranean Sea and Atlantic Ocean while there is no SBCAPE over Europe, Turkey and Arabian Peninsula in general. Abundant SBCAPE is available over the ITCZ region and Red Sea, even in the cold season. In early spring, SBCAPE becomes much more widespread around the Mediterranean coasts, southern Europe and interior Turkey. Highest European average SBCAPE values occur on June, July and August over Iberian Peninsula, Italy and Balkans. Meanwhile maximum average SBCAPE values exceed only 100 J/kg over some regions of Scandinavian Peninsula and UK and 200 J/kg around the Baltic coasts. With the strengthening of the jet stream during winter, highest average 0–6-km wind shear values occurs beneath the jet regions. Overlapping of ingredients seems most probable at spring over a zonal belt including southern Europe, northern Africa and Turkey. Another finding is large 0–1-km wind shear values over the Arabian Sea and Somalia from June to September, related to the Somalia low-level jet. This region is notable considering the extreme SBCAPE values available at that time of the year together with this large wind shear values. Monthly means, variability range and extremes occurrence of these and some other fields will be presented.