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Nota di contenuto	Meteorology and Climatology of the Mediterranean and Black Seas: Introduction -- An Extreme Hailstorm on 27 July 2017 in Istanbul, Turkey: Synoptic Scale Circulation and Thermodynamic Evaluation -- Hydraulic and Wave Aspects of Novorossiysk Bora -- Waterspout Forecasting Method Over the Eastern Adriatic Using a High-Resolution Numerical Weather Model -- Study of the Western Black Sea Storms with a Focus on the Storms Caused by Cyclones of North African Origin -- Operational Wave Modelling in the Adriatic Sea with the Wind Wave Model -- Atmospheric Forcing Conducive for the Adriatic 25 June 2014 Meteotsunami Event -- Impact of Geomorphological Changes to Harbor Resonance During Meteotsunamis: The Vela Luka Bay Test Case -- Analysis of long-term changes in extreme climatic indices: a case study of the Mediterranean climate, Marmara Region, Turkey -- Observed Changes in Daily Precipitation Extremes at Annual Timescale Over the Eastern Mediterranean During 1961–2012 -- Modelling Dry Spells by Extreme Value Distribution with Bayesian Inference -- Analyzing the Mediterranean Water Cycle Via Satellite Data Integration -- Impact of the Surface–Atmosphere Variables on the Relation Between Air and Land Surface Temperatures -- Assessing Shifts of Mediterranean and Arid Climates Under RCP4.5 and RCP8.5 Climate Projections in Europe -- Mediterranean Sea-Level Variability in the Second Half of the

Twentieth Century: A Bayesian Approach to Closing the Budget -- Mediterranean Surface Geostrophic Circulation from Satellite Gravity and Altimetry Observations -- Variability of Wind-Driven Coastal Upwelling in the North-Eastern Black Sea in 1979–2016 According to NCEP/CFSR Data -- Sea Surface Temperature in the Mediterranean: Trends and Spatial Patterns (1982–2016) -- Long-Term Trends, Variability and Extremes of In Situ Sea Surface Temperature Measured Along the Eastern Adriatic Coast and its Relationship to Hemispheric Processes -- Water Masses in the Eastern Mediterranean Sea: An Analysis of Measured Isotopic Oxygen -- Modelling Interannual Changes in Dense Water Formation on the Northern Adriatic Shelf -- Mediterranean Thermohaline Response to Large-Scale Winter Atmospheric Forcing in a High-Resolution Ocean Model Simulation -- Role of the Oceanic Vertical Thermal Structure in the Modulation of Heavy Precipitations Over the Ligurian Sea.

Sommario/riassunto

The Mediterranean Sea, as a “centre” of the ancient world, has been early recognized as a laboratory basin for a variety of atmospheric, ocean and climate studies. Its uniqueness is manifested in its geographical position, a mid-latitude region connecting three continents, orography that affects cyclogenesis, precipitation and winds, ocean bathymetry that is shaped by narrow and shallow straits, passages and sills, and other. Its both atmospheric and oceanic climate is distinctive and, while differing substantially from neighbouring continents and oceans, it strongly interferes and shapes their properties. One of such adjacent basins is the Black Sea, which is, albeit minor in quantity, providing a noteworthy impact to the Mediterranean and vice versa. This topical volume of Pure and Applied Geophysics is presenting recent investigations of atmospheric and ocean properties, processes and climate of both basins, being inspired by presentations given in the Joint Congress of the 6th International Conference on Meteorology and Climatology of the Mediterranean & Challenges in Meteorology 5, held in Zagreb, Croatia, on 20-22 February 2017. The volume comprises 22 papers that are classified in three research categories: (1) storms, extremes and mesoscale processes, (2) atmospheric climate, variability and climate change, and (3) ocean climate and variability. The papers investigate processes occurring over a variety of spatial and temporal scales, from hemispheric processes that drive the observed changes in the Mediterranean and Black Sea, through phenomena that are influencing the whole basin or its sub-basins, to local and mesoscale extreme events that are affecting large cities and local populations in the region. The volume is of interest to atmospheric and oceanic researchers involved in a variety of processes that are occurring over the Mediterranean and Black Sea region. This particularly refers to young researchers and PhD students that are yet to enter to research of this unique and exciting region full of challenges that need an interdisciplinary, innovative and state-of-the-art approaches in solving actual research problems.