



Comparison of ERA-interim reanalysis-derived proxy soundings with Collocated Radiosonde Observations

Şeyda Tilev-Tanriover (1) and Bogdan Antonescu (2)

(1) Department of Meteorological Engineering, Istanbul Technical University, Istanbul, Turkey (seydatilev@gmail.com), (2) University of Manchester, School of Earth, Atmospheric and Environmental Sciences, Centre for Atmospheric Science, Manchester, United Kingdom (bogdan.antonescu@manchester.ac.uk)

This study compares reanalysis-derived soundings from the ERA-interim with collocated observed radiosonde data across the Europe during the period of 1980–2014. Thermodynamic parameters such as mixed-layer convective available energy, mixed-layer convective inhibition, and height of mixed-layer lifting condensation level, as well as kinematic parameters such as wind shear and storm relative helicity values for different layers are calculated. Comparisons applied for 112 radiosonde stations to enquire the potential limitations and strengths of using ERA-interim data for the purposes of initializing model simulations and producing climatological information for hazardous convective weather. Statistical analysis of the comparison results will be presented.