



The effects of solar activity on the precipitation and drought/flood conditions in Greece

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An investigation of possible effects of the 11-year sunspots' cycle upon climatic parameters such as precipitation as well as a drought/flood index is presented for Greece. The selected index for drought/flood monitoring can assess the long term (monthly) meteorological drought, providing a measurement of the abnormality of recent weather for each region. Furthermore the selected index is standardized and can be used for the spatial and temporal representations of droughts. For the performance of the above investigation the number of the monthly sunspots and their correlation with the monthly total precipitation amount as well as values of monthly drought indices are utilized for the years 1875-2004. The regions under consideration are represented with 5 meteorological stations covering different climatic regions of Greece: one continental, two islands and two urban coastal stations. Data processing was enhanced with selected statistical methodologies.