



The Imprints of the Solar Activity during the Little Ice Age and the Medieval Climatic Anomaly in SW Anatolia from Lake Sediments

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Due to the variability of the Little Ice Age (LIA) and Medieval Climatic Anomaly (MCA), several climatic forcing mechanisms have been invoked to enlighten the issue. The focus of this study is on the influence of the solar activity proxy (Total Solar Irradiance) during the LIA and MCA in a high altitude Lake Salda in south-western Anatolia. In order to understand this, we recovered 5 gravity cores with various lengths and from various locations in the lake. We used high-resolution multi proxy approach which includes Itrax XRF scanner at a resolution of 2mm, Multi Sensor Core Logger (MSCL) at a resolution of 5 mm and TOC/TIC analysis at a resolution of 30 mm. ^{210}Pb - ^{137}Cs methods were employed for dating and afterwards were tuned with solar activity proxy (Total Solar Irradiance) data for age improvement. As a result, the sediment records cover the last millennium. We have observed the effect of the solar activity throughout the LIA and MCA in Lake Salda, with wet and dry spells corresponding to high and low TSI respectively. In addition, the Dalton Minimum, Maunder Minimum, Spörer Minimum, Wolf Minimum, the Medieval Maximum and the Oort Minimum have been observed.