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Middle to Late Pleistocene coastal deposits of Eivissa (Western Mediterranean): Chronology and evolution.

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This study deals with the sedimentary and stratigraphical description of Pleistocene deposits from seven coastal areas of Eivissa (Balearic Islands). Twenty two sedimentary facies have been described involving the succession of eolian, colluvial and edaphic environments. Carbonate sandstones, breccias and silty deposits are the main component of these sequences. Despite the extensive eolian systems outcropping along the coast of Eivissa, there are very few studies performed to chronological framework of these deposits. Luminescence measurements were carried out using an automated RisØ TL/OSL-DA-20 reader in the Luminescence Dating Laboratory of Babes-Bolyai University (Cluj-Napoca, Romania) under low intensity red light. OSL dating of nineteen eolian levels indicate that their deposition took place between the Middle and Late Pleistocene, establishing a paleoclimatic evolution of Eivissa Island since 755 ka to 70 Ka. Eolian activity in the Eivissa Island can be correlated with regression episodes which took place during cold periods associated with different isotopic stages, concretely the MIS 18, 16, 12, 10, 8, 6 and 4. Similar results have been obtained from many sites along the western Mediterranean Sea such as Mallorca (Pomar i Cuerda, 1979; Nielsen et al, 2004; Fornós et al, 2009), Sardinia (Andreucci et al, 2009; Pascucci et al, 2014), Liguria (Pappalardo et al., 2013).

Keywords: Eolian dunes, Pleistocene, Climatic evolution, Eivissa.

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