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UNIFIED LOCAL MAGNITUDE SCALE FOR EARTHQUAKES OF SOUTH BALKAN AREA

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A homogeneous earthquake catalog for the time period 1964-1995 for the southern Balkan area is presented, by expressing the size of the earthquakes in a unified local magnitude scale. The strategy followed in order to produce this catalog is also presented. Local magnitudes estimated by six Balkan seismological centers (ATH, THE, ISK, TIR, TTG, SKO) have been used in order to obtain relations between the estimated M_L values from the Greek seismological centers (ATH and THE) and the rest four Balkan stations. Since it was found that local magnitudes estimated by ATH and THE are almost identical, they have been used as one data set in order to be correlated with the data of each one of the rest four seismological stations. Based on the proposed relations a unified local magnitude, M_{LGR}, is given for each earthquake of the regional catalogue. A relation between the M_L values from ATH and THE networks and the corresponding seismic moment magnitude, M_w, was used in combination of the above relations, in order to express any M_L value from any station as M_w.