



## **Empirical relations to convert magnitudes of the earthquake catalogue for the north western of Algeria**

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North Algeria is one of the most seismically active regions on the western Mediterranean basin and it is related with the boundaries of the Eurasian and Nubian plates. We compiled an earthquake catalogue for the north western of Algeria, within the area  $-2^{\circ}\text{W}-1^{\circ}\text{E}$  and  $34^{\circ}\text{N}-37^{\circ}\text{N}$  for the time span 1790 – 2016. To compile the earthquake catalogue we merge all available catalogues either national and international. Then we remove all duplicates and fake earthquakes. The lower level of the catalogue entries is set at  $M = 2.5$ . Nevertheless, the magnitudes reported on the catalogue are  $M_L$ ,  $M_s$ ,  $M_b$ ,  $M_w$  and macroseismic intensity. Thus, we develop new empirical relations to calculate the  $M_w$  from the different magnitudes and intensity suitable to the seismic hazard and geodynamic context of North Algeria.

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