The 2023 Morocco earthquake sequence started on 8 September 2023 at 11:11 p.m., local time, with a MW 6.8 event, followed by a magnitude 4.9 aftershock 19 min later, striking the western sector of the High Atlas Mountains in Morocco (Figure 1), characterized by low geodetic strain rates (Koulali et al., 2011; Serpelloni et al., 2007). Previous geological studies (e.g., Bernard et al., 2010; Sebrier et al., 2006) have identifies several SW–NE trending compressive and transpressive fault systems, some of which were considered active in this area, often representing structures inherited from the Triassic extensional tectonic phases. According to the Centre Sismologique Euro-Mediterraneen (CSEM), to the Portuguese Institute for Sea and Atmosphere (IPMA) and to the United States Geological Survey (USGS), the earthquake's hypocenter was located at a depth of about 20–25 km with its epicenter in the High Atlas Mountains, 70 km southwest of the city of Marrakesh. The earthquake was felt as far away as Portugal and Algeria.

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