



History of early isoseismal maps

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It was recognized during the early stage of seismological investigations that for interpretation of the earthquake phenomenon the spatial distribution of its effects are of significant importance. Dolomieu (1784) and other investigators of the Calabrian earthquake (1783) found: the surface effects caused by a seismic event have a spatial distribution which depends on the types of rocks at the surface. In case of this earthquake Schiantarelli (1783) made a quantification of damage: he applied different symbols for settlements according to the amount of observed damage. The first earthquake map which consists isoseismal line based on a simple intensity classification, i.e. the first isoseismal map, was completed by P. Kitaibel and A. Tomcsányi, professors of Pest (today Budapest) University in 1814. Their map (which was completed in two different forms) beside the isoseismal line circumscribing the area of strongest damages which occurred during the Mór earthquake (14 January 1810, I0≈8) consists also fault lines generated by this event and the direction of the main shock. In the paper by Egen (1828) the first attempt to complete a more sophisticated intensity scale is described on the basis of a moderate earthquake which occurred in Netherlands (today Belgium) in 1828. Egen’s scale practically coincides with the first six lower degrees of the Rossi-Forel scale of 1883. On the map that accompanies the contribution of Egen the places are underlined with different colours: intensities 6 and 5 are denoted by red, while 4-3 with blue and 2-3 with yellow. Map of Nöggerath (1847) contains an isoseist in a form of polygonal broken line which joint the outermost places at which the shock was felt. Maps of Volger (1856) and Mallet (1862) for the Visp valley earthquake (1855) and for the great Neapolitan event respectively comprise several lines of isoseists, but their intensity scales are still based on the data collected from a single seismic event alone. Sebach drew two different maps (1873) of the Middle-German earthquake of 1872. The first contains the pleioseist zone and the isoseists, while the second one the homoseists. The importance of Seisbach work lies in the fact, that his data are based on accurate time determinations, what allowed

him to estimate the depths of the focus of the investigated earthquake. The birth of isoseismal maps in their present-day sense is connected to the first intensity scales by Rossi (1874), Forel (1881), Forel-Rossi (1883) and Mercalli (1897) which are based on generalization of experience of many different seismic events.