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## Decay of macroseismic intensities for france:importance of epicentral intensity

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The evaluation of the ground response to seismic motion needs some geological, accelerometric and macroseismic data. Respective limits and complementarity of instrumental and macroseismic methods have been reviewed by several authors. Because of a great spatial as well as temporal coverage, macroseismic data have been widely used to study attenuation properties of several regions, to detect site effects, and to determine magnitude and depth of historical earthquakes. Ambraseys set up an intensity decay law for Northwestern Europe, based on Sponheuer's model. This kind of model implicitly assumes that the decrease of the intensity as a function of distance is independent of the epicentral intensity. The main result of our work is to show that the intensity decay actually strongly depends on the latter parameter. A new empirical reference relationship is thus proposed and discussed for France. On a regional scale, the decay of intensity values is slightly more effective in the Eastern part of France, but no obvious correlation appears between the age of the geological formations and the spatial variations of intensity decay.