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Subterranean electric fire: Giuseppe Saverio Poli and the first Italian way to scientific studies of seismology

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In the second half of the XVIII century, during a period that was strongly characterized by studies on electric phenomena, a hypothesis appeared about an electric origin of earthquakes, based on empirical evidence considered solid, and apparently also confirmed by model experiments. While developing into an explanatory theory of a strongly empirical nature, it nevertheless presented a “clean” scientific reasoning and referred to Franklin’s studies on atmospheric electricity. The electric hypothesis about the causes of earthquakes was particularly supported by Italian scholars, well accustomed to observations of seismic events. Among these the Franklinist Giuseppe Saverio Poli was able to provide an accurate and comprehensive explanation of both the disastrous Calabrian earthquake of 1783 and the equally ruinous “St. Anne earthquake” of 1805, making use of all the relevant phenomenology available, not limited to the electric one. In the present contribution we reconstruct the birth, development and subsequent evolution of the “electric earthquake” paradigm until the beginning of the XIX century. We focus on several works by Poli, including a previously unknown manuscript containing an in-depth account of the Calabrian earthquake, prepared by the Neapolitan scholar for the Royal Society of London.

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