Istituto di Geoscienze e Georisorse

Webinar
Giovedì 18-03-2021
Ore 11:00 GoToMeeting

Consiglio Nazionale delle Ricerche

Monte Amiata volcano (Tuscany, Italy) in the history of volcanology - Its role in the definition of "ignimbrite" concepts and in the development of the "rheoignimbrite" model of Alfred Rittmann

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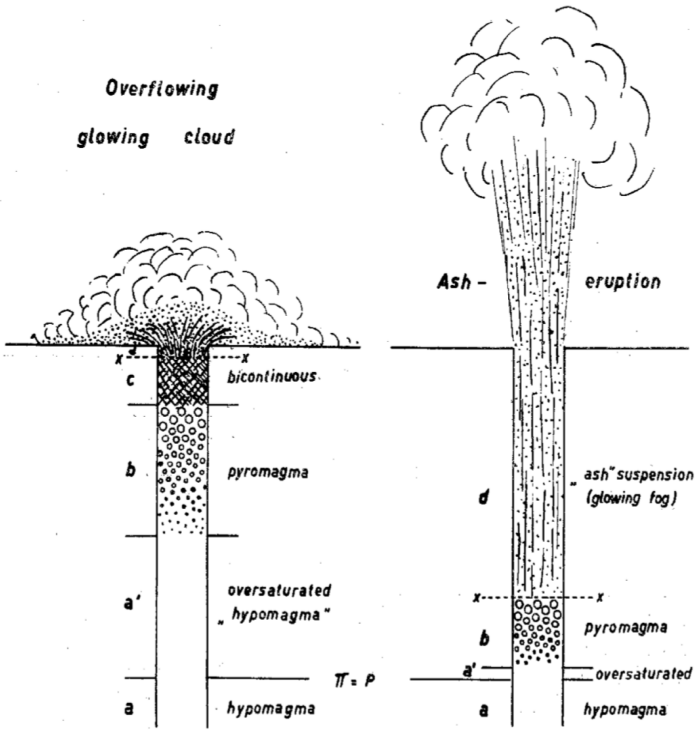

Between nineteenth and twentieth centuries pyroclastic products and ignimbrites features start to be at the base of an international volcanological debate. Various descriptions of explosive eruptions, and a new terminology of their products, such as *nuée ardente* and ignimbrite, are defined, and Ignimbrite deposits are at first assimilated to welded tuffs. That attention to explosive volcanism was the context in which has matured the Alfred Rittmann model of rheoignimbrite as welded ignimbrite showing secondary flowage structures. This term introduced by Rittmann in 1958, and shared by Giorgio Marinelli in 1961, was intended to describe the extensive sheet of acidic vitrophyric volcanic rocks of Monte Amiata volcano, interpreted as lava flows by all previous authors. Rheomorphic ignimbrites, in the Rittmann model, have features that strongly differentiate them from normal ignimbrites and that are very similar to what shown by acidic lava flows, as fluidal structures and wrinkles. The concept of rheomorphic ignimbrite is still in use into the volcanological literature, even if not for the Monte Amiata volcanics, nowadays definitively considered to be built by lava flows and domes.