Advanced discrimination of paleo-tsunami deposits using data-driven geochemical analysis

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It is useful to utilize geochemical analysis of sampled cores for the discrimination of tsunami deposits at coastal areas. In the study, we collected precise geochemical data of paleo-tsunami deposits using ITRAX analysis and analized the obtained big data by data-driven geo-statistical analysis, in order to discriminate sandy, muddy and coastal materials. As a result, the proposed numerical method can be applied for more precise discrimination of paleo-tsunami deposits, so that some extracted layer data from the data-driven analysis are well matched with the teacher data of the known paleo-tsunami deposits.

Keywords: tsunami deposits, geochemical analysis, data-driven analysis