

OES006-03

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## Catastrophic eruption; what is it?

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The catastrophic eruption is a huge volcanic event producing several hundreds to thousands of cubic kilometers of magma by explosive eruption, but it is an event of very low frequency. Although the direct volcanic hazard caused by voluminous eruptive products of catastrophic eruption is severely dangerous to human being, it also has fatal effects upon the earth environment. The fine ash and acid aerosol injected into stratosphere by the eruption form veils, which reflect significant amount of solar radiation and prevent its warmth from reaching the earth surface; average surface temperatures lower extremely and hazardous volcanic winter comes. The civilized human being has not yet experienced the catastrophic eruption. It is very important for humankind to provide against future catastrophic eruption to survive.

Keywords: catastrophic eruption, volcano, pyroclastic flow, volcanic hazard, magma, earth environment