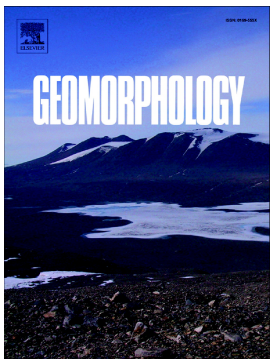

Localized and distributed erosion triggered by the 2015 Hurricane Patricia investigated by repeated drone surveys and time lapse cameras at Volcán de Colima, Mexico

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Localized and distributed erosion triggered by the 2015 Hurricane Patricia investigated by repeated drone surveys and time lapse cameras at Volcán de Colima, Mexico

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Abstract. In October 2015, Patricia, a major category 5 hurricane, made landfall in western Mexico, resulting in 500mm cumulated rainfall and lahar generation along the southerly directed Montegrande valley of Volcán de Colima. We monitored lahar deposition and erosion using time-lapse trail cameras and conducted repeated camera drone overflights, two days before and after the hurricane. Using photogrammetric processing we derive a unique dataset of high resolution digital terrain models and study the geomorphologic impacts of a single lahar event. Results reveal different types of erosion at 8 km distance from the volcano, with