



## **Application of Structure From Motion (SFM) to volcano monitoring at Popocatépetl (México).**

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Aerial photographs obtained during reconnaissance flights to observe the growth of lava domes inside the crater of Popocatépetl volcano were used to analyze the feasibility of using the photogrammetric technique called structure from motion (SFM) to volcano monitoring. The photographs were used to obtain complete georeferenced 3D models of the volcano, particularly of the inside of the crater.

We show here an analysis of the explosive event occurred in the crater of the Popocatépetl volcano on May 14, 2013 applying the SFM technique. Also, an estimate of the volume of the lava dome in the crater and the amount of material expelled during the explosion was estimated.

A comparison of their basic needs is presented here, together with their pros and cons in order to provide a perspective on its possibilities and limitations.