

Age estimation of composite volcano using gully morphology

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We proposed geomorphological parameters to estimate age of composite volcanoes. They are (1) ratio of current (dissected) contour line length to the original one, and (2) ratio of area of contour line retreat to the area of a sector surrounding original contour line. Both parameters show positive correlation against age of lava composing the sector of volcano. However, the correlation is more distinct for different volcano types, i.e. pyroclastics-dominated volcanoes, stratovolcanoes, and shield volcanoes (lava-dominated volcanoes). If more reliable radiogenic ages of volcanoes become available, the better calibration of these parameters will be obtained.