INVESTIGATION OF RECENT MOLODOY SHIVELUCH VOLCANO EXTRUSIVE ACTIVITY ON THE BASE OF GEOMORPHOLOGICAL ANALYSIS AND PHOTOGRAMMETRIC PROCESSING OF STEREO IMAGES

A.V. Shevchenko[1,2], I.Yu. Svirid[1,2], V.N. Dvigalo[1]

[1]The Institute of Volcanology and Seismology FEB RAS, Piip avenue 9, Petropavlovsk-Kamchatskiy, 683006, Russia
[2]Vitus Bering Kamchatka State University, Pogranichnaya str. 4, Petropavlovsk-Kamchatskiy, 683032, Russia
e-mail: shevchenko@kscnet.ru

The paper considers new features of Molodoy Shiveluch Volcano extrusive activity over the newest period since 2001. The authors have made the morphological and volcanological descriptions of the lava dome over the study period using geomorphological interpretation of stereo imagery. By means of photogrammetric method the precise morphometric characteristics of the dome were obtained for the different stages of its growth. On the basis of derived materials the authors have made interpretation of the ongoing extrusive activity. Three stages of the exogenous dome growth were described. Revealed morphological and physical criteria of the difference between extrusive and effusive activity show that despite expectations, recently no lava flows have been detected at the dome.

Keywords: exogenous dome growth, crease structures, activity type criterion.