

四阿火山を起源とする噴出物の岩石記載的特徴とテフラ分布

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Description of Characteristics of Volcanic Products and Distribution of Tephra from Azumaya Volcano, Central Japan

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Abstract

Azumaya Volcano is a stratovolcano located slightly at the back arc side of the volcanic front in central Japan. Previous studies led to the publication of a geologic map and the K-Ar age of some lavas, but the stratigraphic relationships of the volcanic products and their eruptive history are still unclear. Some tephra that possibly erupted from Azumaya Volcano have been found in the North Kanto region. But, there are relatively few descriptions of pyroclastic products. This study presents the lithological and petrographical characteristics of products from Azumaya Volcano, especially the refractive indices of phenocrysts, because these data are very important for identifying products and reconstructing eruptive history. This study examined the adequacy of the identification of tephra of the previous studies and whether the source of these tephra is Azumaya Volcano from the distribution of tephra and comparing mineral composition and refractive indices of orthopyroxene, plagioclase, hornblende, and cummingtonite phenocrysts in proximal products and distal tephra.

Because the refractive indices of the phenocrysts in the products distributed in Azumaya Volcano have unique characteristics, refractive indices are useful for identifying and correlating products. Distal tephra correlated in previous studies have similar characteristics, increasing the probability that the source of the SgP.2 tephra bed is the Azumaya Volcano. In addition, the volume of the SgP.2 tephra bed was calculated to be 0.85 km³ dense-rock equivalents (DRE) using its distribution.

Key words : Azumaya Volcano, tephra beds, correlation, source, refractive index

キーワード : 四阿火山, テフラ, 対比, 給源, 屈折率

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