

THE ELECTRICAL STRUCTURE BENEATH WUDALIANCHI VOLCANIC CLUSTER AND ITS COMPARISON WITH THAT BENEATH TIANCHI VOLCANO IN NORTHEAST CHINA

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Wudalianchi volcanic cluster in northern part of North-East China consists of 14 cones. The last eruption of the volcanoes was in the year of 1719 to 1721. MT measurement are recently carried out at 71 sites along 3 EW profiles and 4 NS profiles in the volcanic cluster and the vicinity to study the magma chamber and deep structure. The distribution of real part of magnetic induction arrows at most of MT sites shows that there is a resistive body beneath the cluster in the upper crust and a lower resistivity body in the deeper depth in upper mantle. The 2-D inversion results by RRI method for EW profiles show that there is a high resistivity body like rivet form from surface to about 20 km depth. The width of the body in EW direction for depth less than 5 km is about 20 km. The width for the lower part of the body is less than 10km. The tip of the rivet body extends continuously down to several tens kilometers and resistivity decreased with increasing depth. It is postulated that a high resistivity body is a cooling magma chamber. A passage of magma existed in the deeper depth. The crust electrical structure beneath Tianchi volcano in eastern margin of Jilin province has been also studied recently. It is found that there is low resistivity body appeared at depth of about 15 km, which is suggested as magma chamber.