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Audio frequency Magneto-Telluric Survey on Tatun Volcanic Group, Taiwan.

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Tatun volcanic group (TGV) is located at northern Taiwan. More than 20 volcanic domes and cones have been created within and around Tatun Graben, which is bounded by Chinshan Fault in the north and Kanchiao Fault in the south. Most volcanoes have been created before 0.3 M (Wang and Chen, 1990), and no historical record of eruption at TVG. However, eruptions in 18 ka BP (Chen and Lin, 2002) and 3 ka BP (Chen, unpublished data) have been identified. Yang et al.(1999) found magmatic contribution in fumarolic gas. In our study, we would like to carried out MT (Magneto-Telluric) survey around TVG to clarify subsurface electrical conductivity distribution, which is the sign of degassing around volcanoes. On TVG area, we made Audio-frequency Magneto-Telluric(AMT) survey on 10 points. All points are located inside the Yanminshan national park. On this survey, survey line is arranged to cross Seven-star volcano north-west to south-west. The total length of survey line is about 10km. The purpose of this survey is to clarify the geothermal distribution beneath the active area of this volcano. We used three MTU-5A equipments (Phoenix Geophysics Inc.), and made observation during 5-6 hours on each points.

Keywords: Audio fiequency Magneto-Tellric survey, Tatun volcanic group