

Integrated volcanic monitoring at Tatun volcano group, Taiwan

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In the Tatun volcanic area, just north to the Taipei metropolitan, the geothermal and seismic activities are still very strong. Although there was no volcanic eruption in human history, recent studies including geochemical analyses, crustal deformation, seismic data and volcanic ash strongly indicate that the volcanoes in the Tatun area might be considered as “dormant active volcanoes”. Thus, the possibility of re-eruption in the Tatun volcanic group is not only a scientifically interesting topic but also an important issue related to the safety in the whole Taipei area. In order to improve the capability of volcanic monitoring in the Tatun volcanic area, the Taiwan Volcano Observatory at Tatun (TVO) has been established in the Yan-Min-Shan National Park since 2011. At TVO, we have successfully installed some real-time monitoring systems such as seismic, GPS, tilt-meter, geothermal and geochemical observations as well as some other site analyses nearby volcanoes. All of the observed results are demonstrated in real-time at TVO for mitigating any possible volcanic activity in the future. In the meanwhile, all of collected data and analyzed results at TVO provide for both basic research and education purposes.