Preliminary active fault mapping of Central Asia countries by ALOS 30 DEM anaglyph images

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Central Asia is a region where the interpretation of the fault displacement topography is relatively easy because the arid region is wide and the vegetation is not remarkable. Active fault interpretation using Landsat images has been performed from an early stage (Molnar and Tapponnier, 1975). In recent years, an active fault database has been created that summarizes more detailed Quickbird, Spot, and Aster images and past research results (Mohadjer, et al., 2018). In addition, field surveys have been carried out (Rust, et al., 2017, Grutzner, et al., 2018), and the full extent of active fault distribution is being elucidated. However, as seen in Mohadjer, et al. (2018), some of the active faults have linear mappings along linear mountainous and lowland boundaries and major geological faults that are prominent in satellite images. It is likely that many geological faults that are not active faults are included because they are not widely unified based on the criteria for fault recognition. The eastern Kyrgyzstan in the study area is located in the western part of the Tien Shan Mountains, and many east-west /

northeast-east-west-southwest active faults have been recognized from Lake Issyk (Mohadjer, et al., 2018), but late Quaternary The Talas-Fergama fault, which runs northwest and southeast, is recognized as an active fault in the southeastern half (Rust, et al. (2017)). In the Kyrgyzstan, the Fergana Basin Fault (Mohadjer, et al., 2018) has only limited nascent activity in the western part in the north, while active faults with active folds are prominent in the southern part. Many of the active faults that have been identified in the past are limited to those with the latest fault displacement topography, and the same is observed in Tajikistan, such as the Tajik Afghan Depression fault (Mohadjer, et al., 2018). Only a few have Late Quaternary activity along these traces.

In the future, we plan to interpret CORONA satellite images, etc., and add more detailed examinations.

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