

How generated the cracks in the Aso valley, Japan, caused by the 2016 Kumamoto earthquake?

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Many cracks generated by the 2016 Kumamoto earthquake appeared in the Aso Valley. It can be classified into two types from the origin. One is a crack group of backfill traces such as old river channel and mining areas. Example of Yakuinbaru area is a typical one. It showed displacement along the old riparian line due to subsidence and slip. Another collapse crack appeared in Uchinomaki, Kario and Matoishi. The S wave structure up to hundreds of meters underground was determined by the representative line, confirming the geologic structure leaning loosely to the north. At the time of the earthquake the ground up to the depth of about 60 m underground moved to the north. It ranged from 1 to 2 km per square. The cause of the crack group is Lateral-spread graben generated in the tension part of the moving region. Joined the subsidence of mining ruins in Matoishi area, it was expanded further displacement.

Keywords: 2016 Kumamoto earthquake, crack, Lateral-spread graben



