Japan Geoscience Union Meeting 2010
(May 23-28 2010 at Makuhari, Chiba, Japan)

HDS021-04 Room: Exibition hall 7 subroom 3 Time: May 24 09:45-10:00

Geologic causes of the landslides induced by heavy rainfall around at Mount Gozaisyo-yama, Suzuka Range, Mie Prefecture

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Precipitation over 500 mm recorded during 2nd and 3rd September, 2008, at Suzuka Range caused many landslides including debris flows. Around at Mount Gozaisyo-yama, a rock slide occurred at the cut slope along the Route 477, and collapsed debris of Kitadani valley slope flawed down 2.2 km. In the Cretaceous Suzuka Granite composed of the landslides occurrence areas, three sets of joint-minor fault system accompanied with lamination joint individually are recognized. Weathering featured by disintegration ("Masa") does not reach so deep. Topographically, low relief slope with ridge top depressions exists around the summit of Mount Gozaisyo-yama, while thick debris deposits at valleys. Loosening of rock mass appeared as the generating and opening of cracks and thick deposition of debris accompanied with denudation that are induced by rapid uplift of Suzuka Range during Quaternary are the geologic causes of the landslides.

Keywords: September 2008, heavy rainfall, landslides, Mount Gozaisyo-yama, Suzuka Granite, geologic causes