[JJ] Evening Poster | S (Solid Earth Sciences) | S-GL Geology

[S-GL31]Regional geology and tectonics

convener:Takeshi Yamagata(Department of Natural Sciences, Komazawa university), Makoto Otsubo(National Institute of Advanced Industrial Science and Technology (AIST), Institute of Earthquake and Volcano Geology)

Sun. May 20, 2018 5:15 PM - 6:30 PM Poster Hall (International Exhibition Hall7, Makuhari Messe)

The main aim of this session is to discuss geologic structure and tectonic history of East Asia, especially of Japanese Islands, on the basis of the recent results of geology and other earth sciences.

[SGL31-P12]Geology and paleomagnetism of dikes in the western margin of the Shitara igneous complex

*Kohei Yamamoto[1], Hiroyuki Hoshi[2] (1.Graduate School of Education, Aichi University of Education, 2.Aichi University of Education)

Keywords:Shitara igneous complex, Middle Miocene, dike, Shitara volcanic rocks, paleomagnetism

We have mapped volcanic dikes at the western margin of the Miocene Shitara igneous complex in Aichi Prefecture. The dikes consist mainly of pyroxene andesite and dolerite and intrude into pre-Cenozoic metamorphic and plutonic rocks of the Ryoke belt. At least 20 dikes were found in the mapped area. Interestingly, their attitudes (i.e., dips and strikes) differ significantly from each other, although they exist within a north–south-oriented narrow zone as a whole. These observations lead us to interpret that, when the dikes formed, magmas intruded into the host rock through a north–south-oriented planar fracture at greater depth and, at shallower depth, intruded through fractures having extremely different attitudes, possibly due to higher magma pressure than principal stresses. Directions of remanent magnetization determined for 11 dikes are classified into three groups. Site-mean directions tightly or moderately cluster at each group, whereas there are significant differences in direction between groups. This suggests that dikes of each directional group formed within a geologically short period ($<10^2$ years) compared to the timescale of geomagnetic secular variation, whereas there was a relatively long interval ($>10^2$ years) between groups so that mean directions for groups differed significantly due to the influence of secular variation.