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Room:Convention Hall

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## OSL dating using fine quartz grains of Atotsugawa Fault

Yoshihiro Ganzawa<sup>1\*</sup>

<sup>1</sup>Hakodate Campus Hokkaido Univ. of Edu.

An age evaluation of an active fault has been carried out tentatively using OSL signals emitted from crushed fine quartz grains. The tested sample was collected from Atotsugawa Fault located in southern part of Toyama prefecture, which was the origin of the Hietsu earthquake in 1858.

The OSL equipment, designed by MEDC Co., Ltd and our lab, is composed of IR laser stimulation unit (wave length:852nm) and detection unit cooperating DUG 11 filter (detection wave length:320-380nm). Different quartz grain samples in size, 63-125, 125-250, 250-355, 355-500 micron meter, were prepared for SAR dating method. Ten quartz grains were prepared for one aliquot to obtain sufficient OSL signal.

The expected equivalent dose ( $D_e$ ) is calculated about 0.26Gy using the dose rate (1.68Gy/ka), which was estimated by U, Th, K and water content of the sample. The OSL  $D_e$  values lead by SAR method shows the centered value between 0.1 and 0.2Gy or value less than 0.1Gy.

Keywords: OSL dating, active fault, quartz grain, SAR method