



## **Change in pore composition of forest soil as structure development**

**Y Hayashi**, K. Kosugi, T. Mizuyama

Kyoto Univ., Japan([h\\_yuki@kais.kyoto-u.ac.jp](mailto:h_yuki@kais.kyoto-u.ac.jp) / Fax +81 75 753 6088)

For developing a quantitative method measuring the forest functions on hydraulic cycle, we examined how forest vegetation affects pore-size distribution of soils. Undisturbed soil samples were collected at nine forests at Mt.Rokko and Sakurajima Island, and disturbed soil samples were prepared from the same soil. We measured water retention curves, saturated hydraulic conductivities and particle size distribution. Then, soil pores of each sample were classified based on the pF value, and the changes of soil pore distribution from disturbed- to undisturbed-soils were examined. As a result, in undisturbed soils, pores between pF1.7-2.7 (3-30 $\mu$ m radius) are significantly less than those in disturbed ones. Pore-size distributions of disturbed soil samples were categorized in three types according to the location of sampling, but those of undistributed samples were similar to each other. Then we concluded pore-size distributions of disturbed soils were mainly influenced by particle size distribution, and became similar under the influence of forest vegetation.