

## Chemical and isotopic mapping of surface waters from the Abukuma granitic field

# Kohei Kazahaya[1], Masaya Yasuhara[2], Akihiko Inamura[3], Hiroshi Takahashi[4], Noritoshi Morikawa[5], Kiyoshi Kikkawa[6], Carmelo Bellia[2], Tadashi Kono[7], Yuichi Suzuki[8], Mitsuo Manaka[9], Masahiko Makino[10]

[1] Geol. Surv. Japan, AIST, [2] Geol. Surv. J., [3] Geol.Surv.J., [4] Res. Center for Deep Geol. Environ., GSJ, AIST, [5] Deep Geol. Eviron., AIST, [6] Deep Geol. Env. Res. Center, AIST, [7] Nippon Bunri Univ, [8] Geo-Environmental Sci., Rissho Univ., [9] Research Center for Deep Geological Environments, AIST, [10] GSJ,AIST

To understand subsurface water flows and chemical features in a combined horizontal aquifer and vertical crack system, we have been investigating the waters from river, spring water, precipitation and shallow groundwater aquifer, in a model field of Abukuma granitic field. Totally, over 1000 samples of those waters were collected in 2000, and measured for chemical and isotopic compositions. Despite the similarity in rocks in the field, we found varieties in both chemical and isotopic compositions. These varieties are likely to be caused partly by human activities but some might be a result from interactions with deep-seated water through crack system.