Regional distribution and petrologic characteristics of the high-pressure metamorphic rocks in the Omi area, Itoigawa, Niigata Prefecture, Japan

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The Omi area, located in the west of Itoigawa city, Niigata Prefecture, forms a part of the Hida Gaien belt. The rocks exposed in this area are crystalline schists, serpentinite, limestone and Jurassic sediments (Banno, 1958). The crystalline schists in the Omi area are named Omi schists, which are exposed in three metamorphic zones biotite zone, garnet zone and chlorite zone (Banno, 1958, Matsumoto, 2011 and references therein). Omi schists are exposed within serpentinite melange and tectonic blocks of garnet-amphibolite, metagabbro, albitite and sometimes jadeite rocks are also observed (Matsumoto et al., 2011). In this area, the highest grade metamorphic rock is eclogite. Eclogite is found as a boulder in westen area in Omi district (Tsujimori, 2002). This discovery led to the demarcation of eclogite unit (EC-unit) and non eclogite unit (N-EC unit) in the Omi area and the tectonic implication of high pressure rocks were discussed (Tsujimori, 2002).

In the Omi area, thin linear belts of serpentinite layers are distributed in the NW-SE direction and this trend is mostly common with the strike of the tectonic blocks (Matsumoto 1980, Matsumoto., 2011 and references therein). In the western area where eclogite boulder was discovered (EC unit) in the Chl zone, many garnet-glaucophane schist occur as boulders (Tsujimori, 2002). However, boundary between EC unit and N-EC unit is not clear.

This study is aimed in understanding the high pressure metamorphism in the western of Omi area, where high pressure rocks are distributed. During the field surveys, a new eclogite outcrop was found, which has not been reported previously. We also investigated EC/N-EC unit boundary in the area. In this presentation we will discuss the occurrence of the high pressure metamorphic rocks and their petrographic characteristics.

References

Banno, S., 1958. Glaucophane schists and associatited rocks in the Omi district, Niigata Prefecture, Japan. *Japanese Journal of Geology and Geography,* **29**, 29-44

Matsumoto, K., Sugimura, K., Tokita, I., Kunugiza, K. and Maruyama, S., 2011, Reconstruction of the oldest Pacific-type high P/T type metamorphism and hydration metamorphism during exhumation. *Journal of Geography,* **120**, 4-29

Tsujimori, T,. 2002. Prograde and Retrograde P-T Paths of the Late Paleozoic Glaucophane Eclogite grom the Renge Metamorphic Belt, Hida Mountains, Southwestern Japan. *International Geology Review*, **44**, 797-818