

SCG008-14

Room:301A

Time:May 26 12:00-12:15

## Multiple collision metamorphism during Asian continental growth with relation to the formation of Kurosegawa tectonic zone

Yasuhito Osanai<sup>1\*</sup>, Nobuhiko Nakano<sup>1</sup>, Owada Masaaki<sup>2</sup>, Satish-Kumar, M.<sup>3</sup>, Kawakami Tetsuo<sup>4</sup>, Yuhara Masaki<sup>5</sup>, Adachi Tatsuro<sup>1</sup>, Yonemura Kazuhiro<sup>1</sup>, Yoshimoto Aya<sup>1</sup>

<sup>1</sup>Kyushu University, <sup>2</sup>Yamaguchi University, <sup>3</sup>Shizuoka University, <sup>4</sup>Kyoto University, <sup>5</sup>Fukuoka University

In E- and SE-Asia, there are at least seven micro-continental blocks of Mongolia, North China, South China, Indochina, Shanthai, Sibumasu and West Burma from N-NE to SW. Geological Research program to realize the tectono-metamorphic processes during continental collision orogen of E- and SE-Asia has been done for the last decade.

Multiple collision boundaries in Asian continent are identified and they are subdivided into following six;

- 1) Siberian craton/Mongolian: 480 ? 500 Ma,
- 2) Mongolian/North China: 280 ? 300 Ma (so called Central Asian Orogenic Belt),
- 3) North China/South China: 240 ? 250 Ma,
- 4) South China/Indochina: 230 ? 250 Ma (Trans Vietnam Orogenic Belt),
- 5) Indochina-Shanthai/Sibumasu: ca. 210 Ma,
- 6) Sibumasu-West Burma/Indian subcontinent: ca. 45 Ma.

Characteristics of constituent rock types and metamorphic processes in each collision boundary were reported by many detailed works (e.g. Osanai et al., 2004, 2008; Nakano et al., 2008, 2009, 2010).

Especially in the collision boundary between the North and the South China blocks (e.g. north Dabie terrane, Imjingang belt), various kinds of Permo-Triassic collision zone metamorphic rocks are identified. The Higo metamorphic complex as well as the Hida-Oki terrane in Japan would also have belonged to this type of collision zone and which experienced a top-to-the-south displacement under extrusion tectonics with forming a regional nappe structure before the Cretaceous granitic activities. The basal portion of this regional nappe extrusion would be considered as a serpentinite diapir derived from relatively ductile mantle beneath the North China craton. The diapir intruded along the collision boundary and included various kinds of metamorphic rocks of HT granulite and amphibolite from the lower crustal portion of obducted North China craton and HP blueschist and eclogite from the shallower portion of subducted South China craton. The Kurosegawa tectonic zone as the serpentinite melange corresponds with this diapir.

In the presentation, we will make a detailed talk on this tectono-metamorphic evolution in eastern Asia.