

SMP046-11

会場:201B

時間:5月27日 11:15-11:30

## 沈み込み帯の温度構造と変成岩：三波川泥質岩の例

## Metamorphism and thermal structure of subduction zone: a case study on the Sanbagawa pelitic rock

大森 聡一<sup>1\*</sup>, 青木 一勝<sup>2</sup>

Soichi Omori<sup>1\*</sup>, Kazumasa Aoki<sup>2</sup>

<sup>1</sup> 東京工業大学地球惑星科学専攻, <sup>2</sup> 東京大学広域科学専攻

<sup>1</sup>Earth & Planetary Sciences, Tokyo Tech., <sup>2</sup>The University of Tokyo

The thermal structure of the present subduction zones has been a focus of geophysical studies regarding the origin of arc magma, transportation of volatile component such as H<sub>2</sub>O and CO<sub>2</sub> into the deep mantle, and origin of the subduction zone earthquakes. Many studies employing numerical modeling have been done for the aim estimating the thermal structure of the subduction zone. The results contributed semi-quantitative understanding of the thermal structure of the subduction zone, however, diversity of the results among the models is not negligible to be applied to the natural system.

It has also been one of the motivations of metamorphic geology that analysis of prograde metamorphism of a suite of metamorphic rocks in a metamorphic belt yields information of the subduction geotherm. Recent advance in decoding metamorphic P-T condition enabled revealing true peak P-T condition and prograde P-T path excluding extensive retrograde hydration. Therefore, now, we can discuss the subduction geotherm of past subduction zone in a context of metamorphic geology.

In this presentation, we review nature of the thermal structure in the subduction zone, and prograde- and progressive-metamorphism, at first. Then a case study on the Sanbagawa pelitic rock is demonstrated with implications to the mantle-wedge dynamics and the material transportation.

キーワード: 沈み込み帯, 温度構造, 変成岩, 変成岩の上昇

Keywords: subduction zone, thermal structure, metamorphic rock, exhumation