

セールロンダーネ山地中央部のユニット境界に関する新たな知見

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Newly obtained data for geologic unit boundaries at central part of Sør Rondane Mountains

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Recent geochronologic studies combined with metamorphic data indicated that granulite-facies metamorphic events at c.640 Ma are recorded in the Austkampane - Brattnipane areas, and that relatively lower-grade (greenschist-amphibolite-facies) metamorphism with its timing at c.550 Ma is predominant in southern and southwestern part of the Sør Rondane Mountains (Asami et al., 2005; Shiraishi et al., 2008; Osanai et al., 2008; Baba et al., 2008; Adachi 2010; Adachi et al., 2009; 2010, Hokada et al., 2009; Nakano et al., 2010). It is also estimated two contrasting P-T evolutions for granulite-facies areas; CW P-T path for Austkampane and CCW P-T path for Brattnipene, respectively.

We have conducted U-Th-Pb monazite dating along with petrological study covering the area around Nipebreen (Austkampane – Menipa – Brattnipane), where is the boundary of juxtaposed three different geologic units (namely A, B and L-types of Adachi, 2010) in central part of Sør Rondane Mountains. Accumulated U-Th-Pb dates suggest to constrain the timing of metamorphic events around this area as follows. From easternmost part of Brattnipene area, we have obtained ~550 Ma U-Th-Pb ages for monazites in biotite gneiss interpreted as timing of metamorphic event which is contrary to the previously interpreted c.640 Ma granulite-facies metamorphic record in the Brattnipene area. From eastern part of Austkampane area, c. 800Ma~ monazites are relatively large proportion along with ~c.640 Ma monazites. Based on these newly obtained data, we will discuss the nature of geologic unit boundaries at central part of Sør Rondane Mountains, and further on to the evolution of this part of Gondwana.

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