프로
그램

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대한지질학회 제74차 정기총회

The 74th Annual Meeting of the Geological Society of Korea and
2019 Fall Joint Conference of the Geological Sciences

일자	장소
2019 10. 23 수 — 26 토	RAMADA PLAZA JEJU 라마다프라자 제주호텔

주최
대한지질학회

주관
대한지질학회, 대한자원환경지질학회, 한국고생물학회
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극지연구소, 한국수력원자력(주), 한국가스공사, 한국석유공사, 네이버, (사)제주컨벤션뷰로

15:15~15:30 **남극대륙 북빅토리아랜드 후기 고생대 빙하퇴적체의 층서와 퇴적환경**
우주선*, 오재룡, 오창환, 박태윤, 최문영

15:30~16:00 Coffee Break

광물학 및 암석학

좌장 : 박창근

16:00~16:15 **Early Paleozoic metamorphism in the Mountaineer Range of northern Victoria Land, Antarctica**
Sang-Bong Yi*, Mi Jung Lee, Seunghee Han

16:15~16:30 **Microstructures of mantle xenoliths from the Mt. Melbourne, northern Victoria Land, Antarctica**
Daeyeong Kim*, Munjae Park, Yongcheol Park , Hwayoung Kim, Mi Jung Lee, Katsyoshi Michibayashi

16:30~16:45 **Onset of the Ross orogeny, Antarctica: a northern Victoria Land perspective**
Taehwan Kim*, Yoonsup Kim, Moonsup Cho, Jong Ik Lee

16:45~17:00 **백령도-평택-아산 지역 후기 신생대 알칼리 현무암의 근원 물질에 대한 지구화학적 연구**
김선규*, 최성희

17:00~17:15 **밀도범함수이론 연구를 통한 황화철광물의 상전이 현상 예측**
손상보*, 권기덕

17:15~17:30 **동적 충격 변성 과정으로 인한 비정질 산화물의 고밀도화의 미시적 원인 규명**
김효임*, 이성근

17:30~17:45 **핵과 맨틀 경계부의 초저속도층 마그마의 원자 환경 연구**
김용현*, 이유수, 김효임, Paul Chow, Yuming Xiao, Guoyin Shen, 이성근

17:45~18:00 **Low melting temperature of anhydrous mantle materials at the core-mantle boundary**
Taehyun Kim, Byeongkwan Ko, Eran Greenberg, Vitali Prakapenka, Sang-Heon Shim, Yongjae Lee*

일반세션 논문초록

Early Paleozoic metamorphism in the Mountaineer Range of northern Victoria Land, Antarctica
Sang-Bong Yi* · Mi Jung Lee · Seunghee Han
Division of Polar Earth-System Sciences, Korea Polar Research Institute, handjive@kopri.re.kr

논문초록

The northern Victoria Land of Antarctica is composed of the Neoproterozoic-early Paleozoic Wilson Terrane and the early Paleozoic Bowers and Robertson Bay terranes accreted to the Wilson Terrane. In the Mountaineer Range, various rock units related to the early Paleozoic Ross orogeny, such as the Murchison migmatitic gneiss (Wilson Terrane), the Dessent Ridge amphibolite, the Bowers Terrane metasedimentary rocks and mafic/ultramafic rocks in the Tiger Gabbro Complex crop out. This study investigates the early Paleozoic metamorphism (Ross orogeny) of the northern Victoria Land in terms of formation and evolution of the Dessent Ridge Unit in the Mountaineer Range, and the results are as follows. (1) The protolith of Dessent Ridge amphibolite formed at 514.6 ± 2.0 Myr ago. Although its metamorphic time is unclear, the distinctive c. 500 Ma igneous and metamorphic ages reported in the Mountaineer Range makes it possible to assume that the metamorphic age of the Dessent Ridge amphibolite could also be c. 500 Ma. (2) The Dessent Ridge amphibolite underwent an intermediate-P/T type metamorphism characterized by the peak pressure of c. 10 kbar (c. 600 ˚C) and the peak temperature of c. 700 ˚C (c. 7 kbar). (3) This is interpreted as a result that a mafic crust (i.e., Dessent Ridge Unit) accreting to continental Wilson Terrane margin experienced the high temperature metamorphism at the middle deep arc environment (c. 7 kbar, c. 25 km) after the subduction (c. 10 kbar, c. 35 km).

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