

# Some consideration on the uplift of the Antarctic inland mountains as passive continental margin: Influence for the Cenozoic Antarctic Ice Sheet reconstruction

\*Hideki Miura<sup>1</sup>

1. National Institute of Polar Research

Antarctic inland mountains at the passive continental margin (ex. Transantarctic Mountains, Queen Maud land Mountains including Sør-rondane Mountains, Gamburtsev Mountains) have been drawing attention since long ago. The origin of the mountain range at the active continental margin can be explained as the current orogenic belt accompanying the subduction zone. On the other hand, how can we explain the origins of these mountains at passive continental margin? When were these Antarctic passive margin mountains formed and uplifted? What does the uplift history of the mountains mean for the Cenozoic Antarctic Ice Sheet history? The details of the bathymetry around Antarctica and the basement topography beneath the ice-sheet have gradually been clarified by recent seabed and ice radar exploration. In this presentation, we will present related geological and geophysical data on Antarctica (basement topography, submarine topography, gravity anomaly map, ice sheet flow velocity distribution map) for discussing the above-mentioned questions.

Keywords: Antarctica, Inland mountains, uplift history, passive continental margin, Cenozoic, Antarctic Ice Sheet history