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Glacial melting and uplift estimations around the Sor Rondane Mountains of the East Antarctica since the Pliocene

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The role of the East Antarctic Ice sheet for several global climatic events such as Mid-Pleistocene Transition and Mid- Brunhes Event during the Quaternary era is a great issue for elucidating the global systems. A large part of the Sor-Rondane Mountains in the East Antarctica has been covered by the East Antarctic ice sheet. The glacial geomorphology in this region and Glacial isostatic adjustment model (GIA model) can lead to estimate the glacial melting volume of East Antarctic Ice sheet and its contribution to the global sea-level changes, and the amount of glacial isostatic uplift since the Pliocene.

Keywords: Antarctica, East Antarctic Ice sheet, Glacial fluctuation, Sor-Rondane Mountains, Glacial isostasy, Quaternary