

Integrated multidisciplinary study in Antarctica and next six-year Japanese Antarctic Research Project phase IX

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The changes in the Antarctic ice sheet and the Southern Ocean most likely indicate the precursor and driving force of the global environmental changes, and these changes are essential for future projection of the Earth system. The six-year Japanese Antarctic Research Project phase IX centered on main scientific theme of "Investigation of changes in the Earth system from Antarctica" will be commenced from 2016/2017 austral summer season with the three subthemes. The three subthemes are followings, "Investigation of the whole global atmospheric system through precise observation of the Antarctic atmosphere", "Investigation of the interaction of atmosphere, ice sheets, sea ice, and ocean from integrated research in areas bordering ice sheets and sea ice" and "Reconstruction of the Antarctic paleoclimate to elucidate changes in the Earth system." Integrated multidisciplinary study are required to promote these subthemes under the main scientific theme in order to elucidate changes in the Antarctic subsystem and its effect to the Earth system. Especially, multidisciplinary study is key to understand the interactions around the boundary between ice sheet and ocean, namely ice shelf and sea ice areas, in the context of the Southern Ocean and the Antarctic ice sheet, which correspond to the second subtheme. We will present the outline of the six-year Japanese Antarctic Research Project phase IX briefly and the necessity of integrated multidisciplinary study in Antarctica is discussed.

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