

Variability of sea ice distribution and polar front in the Southern Ocean since the last glacial period

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The Southern Ocean has played a significant role in the global climate system during the geologic past. In order to understand the paleoceanographic variations with the polar front system and Antarctic Circumpolar Current (ACC), we conducted the paleoceanographic studies using two piston cores COR-1bPC (54 deg S) from the Conrad Rise and DCR-1PC (46 deg S) from the Del Cano Rise. Based on our paleoceanographic researches, a winter sea ice limit and the Antarctic Polar Front were migrated to the north during the last glacial period.

Keywords: Southern Ocean, sea ice, Antarctic Circumpolar Current, polar front