

## The relationship between metal composition and climate change derived from the Dome Fuji ice core

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Aerosol was deposited into the surface of the ice sheet and preserved in the ice layer. The study of particulate matters in the ice sheet is important in understanding for the past climatic change because aerosol originated from various sources on the Earth, this chemical composition reflects the environmental change. Previously, several studies have reported about the physical and chemical properties of Dome Fuji ice core. Significant parts of the metallic elements in the ice core are insoluble particle. However, the study of metallic elements of insoluble particle is not sufficiently achieved, because previous studies have focused on dissolved components. In this research, we measured total (particulate + dissolved) concentration of metallic elements in the Dome Fuji ice core by applying a full-digestion analysis, and clarified the climate change.

The composition of metal components is close to the average of the crustal composition during the glacial, and close to the average of the ocean composition during the interglacial. Metal elements can be divide into two categories, (1) Group of elements composition between the crust and the ocean, and (2) Group of elements that is large variation range and unstable. These results suggest that response to change in source is different for each element. In addition, it was found that the fluctuation pattern of Sr and Ba were different boundary about 340 kyr. In this report, we discuss the relationship of these metal composition and environmental change.

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