

be obtained after approximately 10^4 years when started from 1000 m ice thickness all over the basin. The obtained stable surface topography shows its sensitive dependence on the bedrock topography. There appeared a tendency that the bottom temperature of the downstream of the Glacier is higher than the melting point, which may conform the suggested instability of the ice sheet near the central stream line of the Shirase Glacier (S. MAE: *J. Glaciol.*, **24**, 53, 1979).

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ASSUMPTION OF SNOW TEMPERATURE NEAR SHIRASE
GLACIER FROM ANALYSIS OF RADIO ECHO
SOUNDING DATA (Abstract)

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Radio echo sounding was carried out in 1980 near the Shirase Glacier in East Antarctica. As radar echo intensity observed from a layer depends on refractive index which is a function of density, temperature and depth, intensity is a function of temperature and depth in the region where the density is nearly constant. As temperature is a function of depth, a relationship between temperature and depth was calculated using an intensity of radar echo and a value of surface temperature (actually snow temperature at 10 m depth) which had already been surveyed in a position. The profile of complex dielectric constant and temperature were calculated in other positions where radio echo soundings had been carried out in 1980 using the relationship between temperature and depth. In this calculation $\epsilon_r = 3.168 + 0.535 \times \epsilon_i$ was supposed when $\epsilon_i \geq 5.6 \times 10^{-3}$ and $\epsilon_r = 5.6 \times 10^{-3}$ was supposed when $\epsilon_i < 5.6 \times 10^{-3}$, where ϵ_r and ϵ_i were real and imaginary parts of dielectric constant, respectively. As snow temperature near the Shirase Glacier was assumed by these calculations, the comparison between this result and actual measurement in future will be necessary.

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NEUTRON ACTIVATION ANALYSIS OF SPHERULES FROM BARE
ICE NEAR THE ALLAN HILLS AND AN ICE CORE
FROM MIZUHO STATION (Abstract)

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Spherules contained in the Antarctic ice at two sites are studied in terms of their concentrations of refractory trace elements by means of instrumental neutron activation analyses (INAA). Results of INAA are consistent with those of