Underground structure of glacier ice and snow using Ground Penetrating Radar(GPR)

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In the Teskey Range of the northern Tien Shan, a large drainage from west-Zyndan glacial lake on 24 July 2008 caused damages such as farmland, infrastructure, three victims. The lake was a short-lived glacial lake which appeared and drained for two and half month (Narama et al., 2010). The lake water was discharged through ice tunnel (cave) which developed into debris landform in glacier front. To know the development (location and size) of ice tunnel in other glacier fronts, we examined reflection characteristic of glacier ice, snow, firn, cave, debris, and bedrock in the southern Inylchek, Adygene, and Kara-Kungoy Glaciers (Kyrgyzstan) and Shirouma-Daisekkei (Japan) using Ground Penetrating Radar (GPR). The GPR data showed the reflection characteristic differed in size of ice tunnel.

Keywords: Ground Penetrating Radar(GPR), glacier ice and snow, reflection characteristic, ice tunnel

