

Chemical analysis for ice core drilled on Aurora Peak, Alaska

Akane Tsushima^{1*}, Sumito Matoba², Sachiko Okamoto³, Hirotaka Sasaki¹, Takehiro Fukuda¹, Shin Sugiyama², Takayuki Shiraiwa⁴, Dan Solie⁵, Kenji Yoshikawa⁵

¹Hokkaido Univ, ²ILTS, Hokkaido Univ, ³Nagoya Univ, ⁴RIHN, ⁵University of Alaska, Fairbanks

In 2008, a 180m ice-core was drilled on Aurora Peak, Alaska Range, internal region of Alaska in order to reconstruct decadal or interdecadale environmental variations. We present data of stable water isotope(dD , $d^{18}O$), melt-layer content and major ions(Cl, NO_3 , SO_4 , Na, NH_4 , K, Mg, Ca) from this ice core. dD value fluctuated widely from -234 permil to -133 permil and from -210 permil to -153 permil in upper layer (~35m) and lower layer (166.2~178.9m), respectively. Annual accumulation rate estimated from seasonal variation of dD was 2.9m w.eq., and was higher than that of 2.6m at Mount Wrangell in Saint-Elian Range, where locates closer to Pacific Ocean than Alaska Range. We assume that the high accumulation rate of Aurora Peak is caused by other moisture source than Pacific Ocean. In this presentation, we would like to discuss chemical characteristics of the ice-core.

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