

Surface albedo over snow-covered boreal forests, Alaska

SUGIURA, Konosuke^{1*} ; KITAHARA, Yujiro² ; NAGAI, Shin³ ; SUZUKI, Rikie³

¹Univ. of Toyama/JAMSTEC, ²Univ. of Toyama, ³JAMSTEC

Previous research has demonstrated the high variations of the surface albedo in winter/spring in snow-covered regions in various global climate models. In this study, we focus on the surface albedo over snow-covered forests which is suggested probably too high in various global climate models. This study was carried out to verify the occurrence frequency of ice accretion and snow accretion in the boreal forest regions. Using the interval camera installed on the observation tower of 16 m in height at the site located to the north of Fairbanks, Alaska, ice accretion and snow accretion in black spruce forest regions were measured. Based on the results, the surface albedo variation of snow-covered forests and differences in the snow albedo parameterization are discussed to contribute to a better understanding of the role of snow in the climate system.

Keywords: ice accretion, snow accretion, albedo, boreal forest