Cloud phase identification over Arctic boundary layer clouds from airborne spectral cloud top reflectance measurements

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1. Introduction

Cloud Thermodynamic Phase
- Increasing ice fraction (ice-water content/total water content)
- Increasing cloud top reflectance
- Increasing cloud absorption in near infrared wavelength

Identification of cloud phase is a key point for remote sensing of cloud properties.

2. SMART-Albedometer

(Spectral Modular Airborne Radiation measurements sysTem)

3. ASTAR 2007 (Arctic Study of Tropospheric Aerosols, Clouds and Radiation)

4. Definition of Ice Indices

5. Case Study on April 7th

6. Outlook

[References and additional details about each section and measurement techniques]