

Data description - pure snow band albedo (Broadband and RRTM narrowband)

The datasets described in this file provide coefficients (m_i) to calculate the broadband and RRTM narrowband albedo of pure snow as a function of snow grain radius r , relative to $r_0 = 100$ μm . Part of these data is published in Table 1 of paper *Dang et al., 2015, JGR*. Please refer to this paper for the development of parameterization and relevant figures.

1. Description of variables and functions:

- Variables:
 - Broad albedo of pure snow: α
 - Snow grain radius r
 - Reference snow grain radius used in this work: $r_o = 100$ μm
 - $r_n \equiv \log_{10}(r/r_o)$
- Functions:
 - Broadband: $\alpha = m_0 + m_1 r_n + m_2 r_n^2$
 - Narrowband: $\alpha = m_0 + m_1 r_n + m_2 r_n^2 + m_3 r_n^3$

2. Coefficients m_i (given in .txt files)

- Name of files: Puresnow_XXXX_YY.txt
 - XXXX:
 - Broad - broadband albedo
 - RRTM - RRTM narrowband albedo
 - YY:
 - CS - clear sky
 - OC - overcast cloud

For example

PureSnow_RRTM_OC.txt: coefficients to calculate RRTM narrowband albedo of pure snow

- Data contained in each file:
 - Broadband: PureSnow_Broad_xx.txt
 - Row 1-3 are coefficients for all wave, visible, and near-IR bands respectively.
 - Column 1-3 are coefficients for r_n^2 , r_n , and constant (i.e. m_2 , m_1 , and m_0).
 - Narrowband (RRTM): PureSnow_RRTM_xx.txt
 - Row 1-5 are coefficients of RRTM bands 2-6 respectively.
 - Column 1-4 are coefficients of r_n^3 , r_n^2 , r_n , and constant (i.e. m_3 , m_2 , m_1 , and m_0).