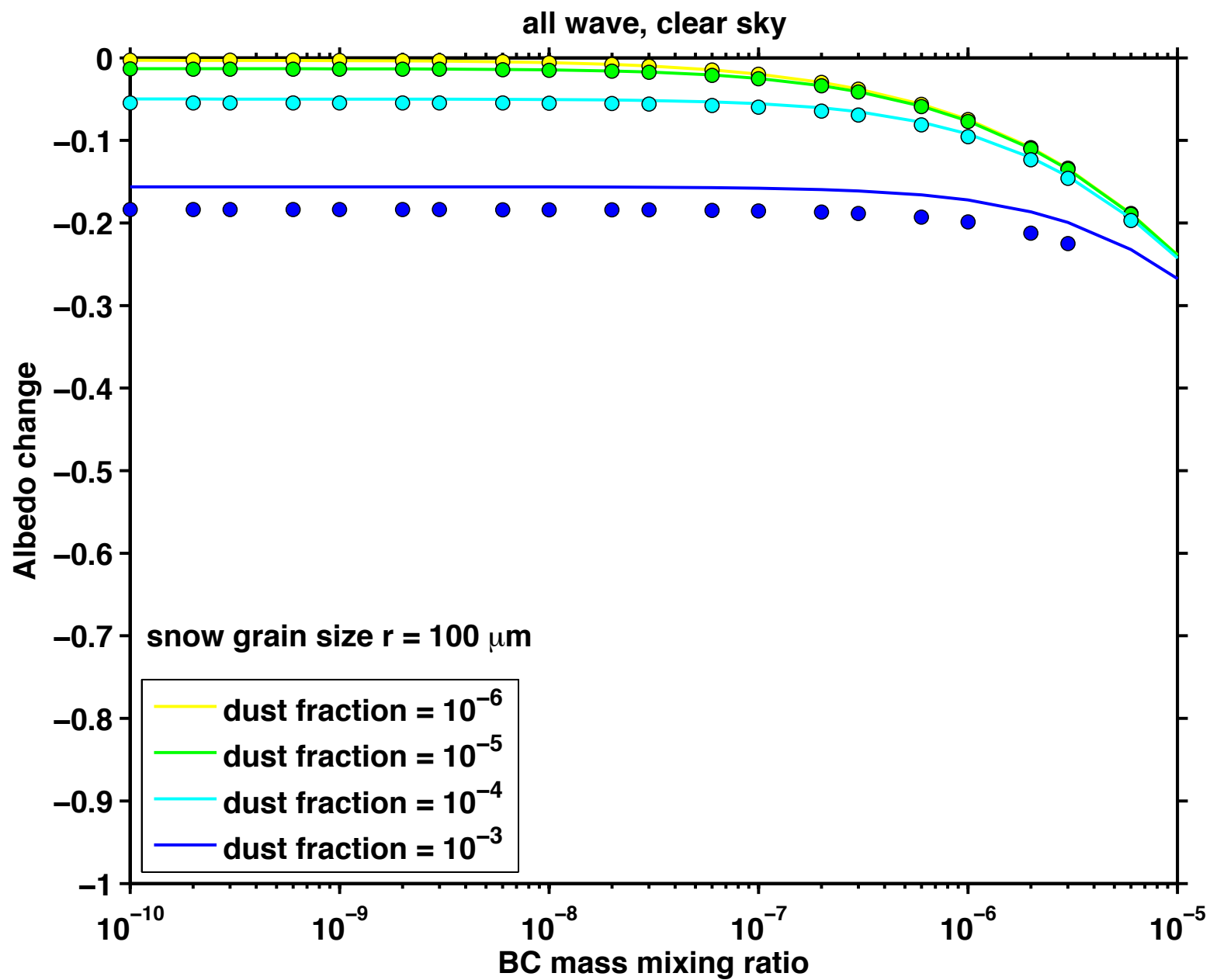


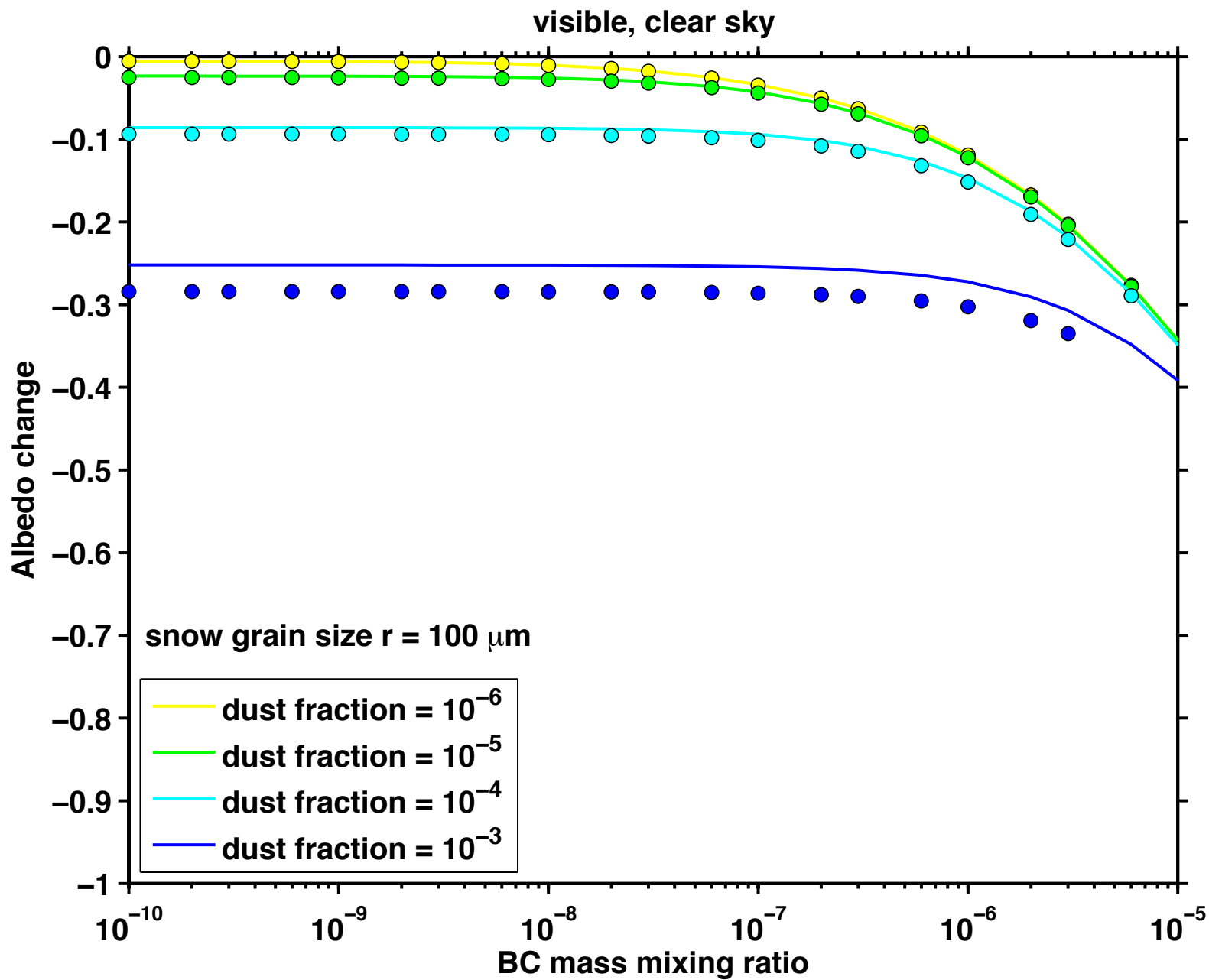
Evaluation of BC equivalent

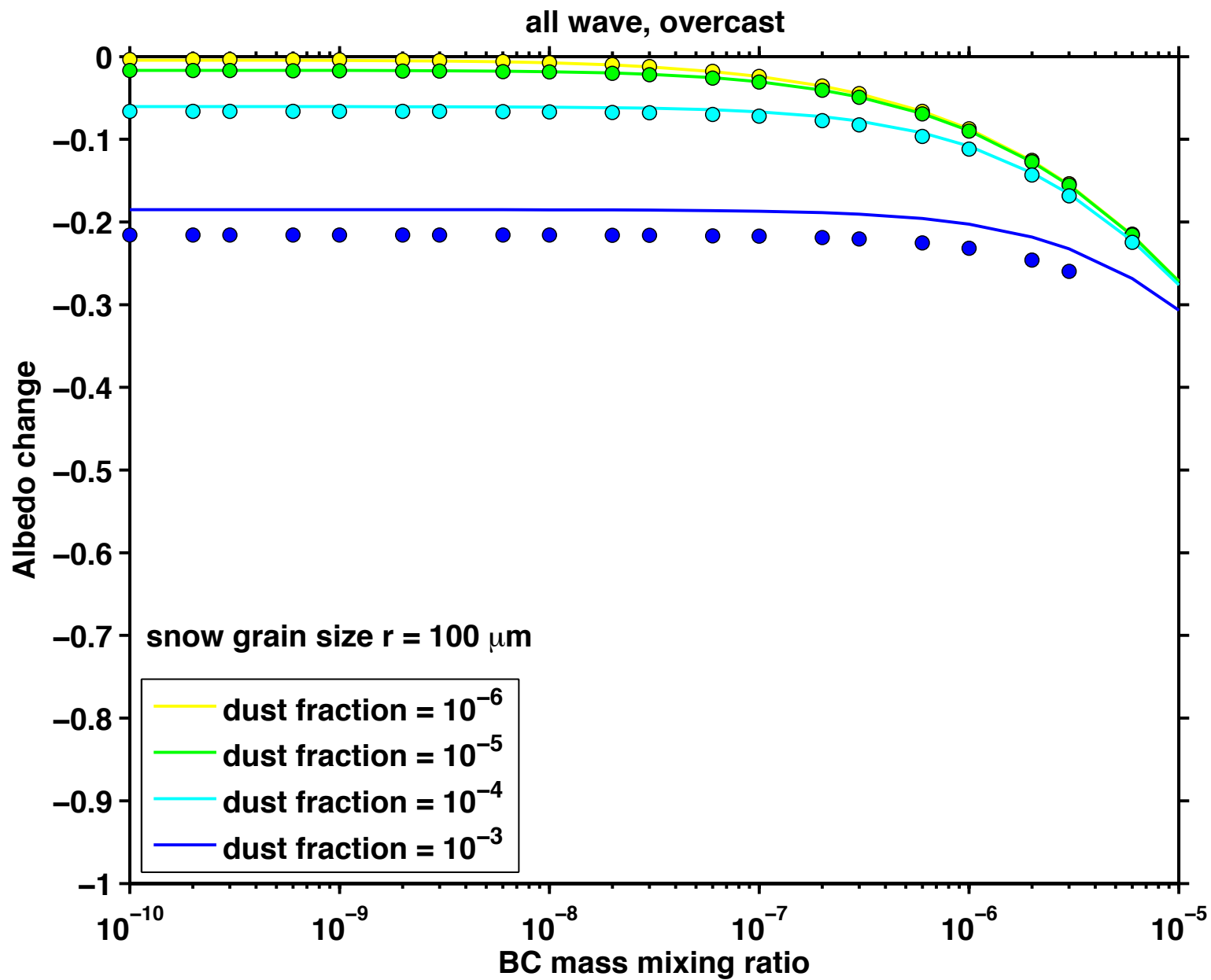
- snow containing both BC and dust

1. Albedo change due to both BC and dust

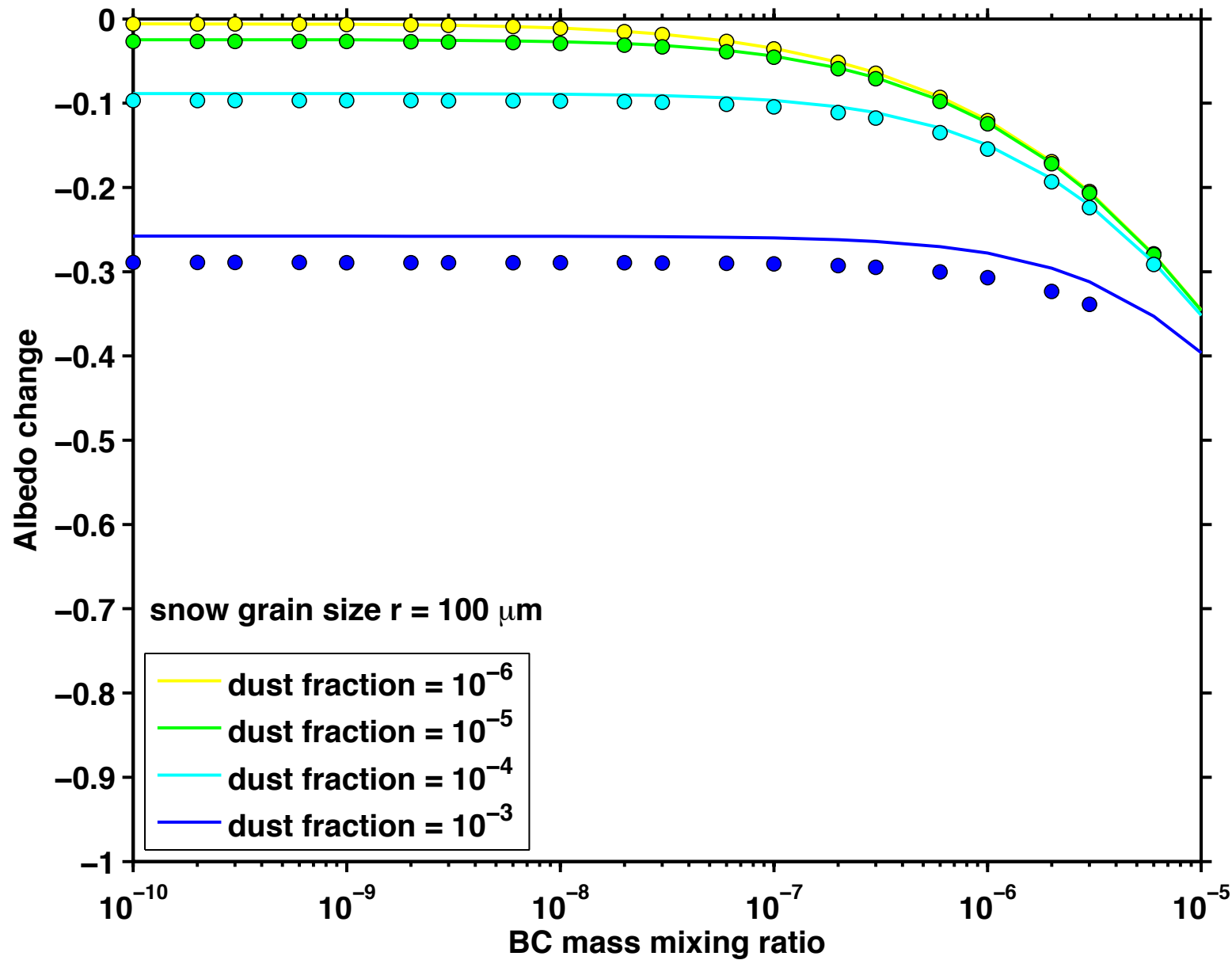
- Solid curves: DISORT output
- Dots: albedo change calculated using BC albedo reduction parameterization and BC equivalent factor f



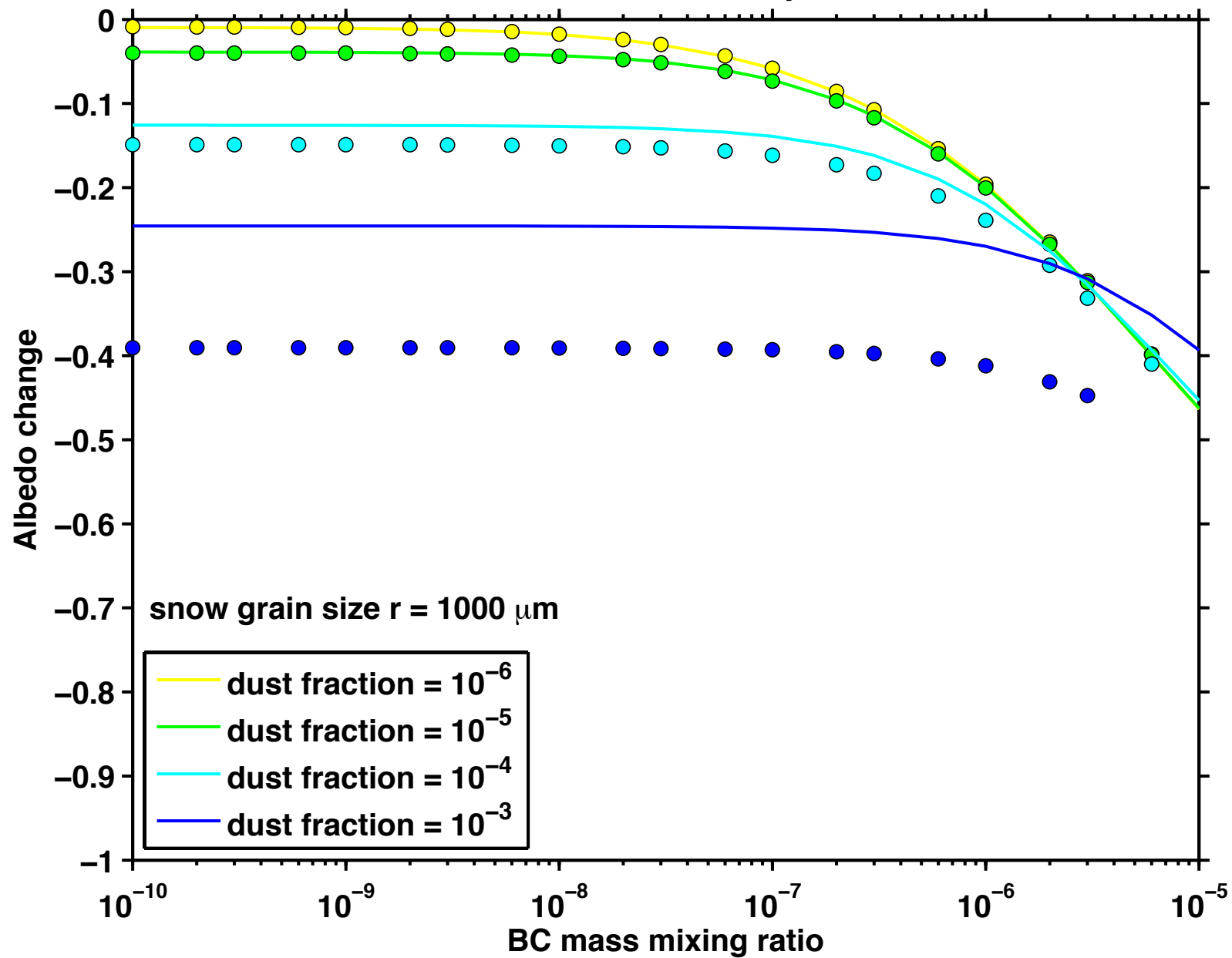


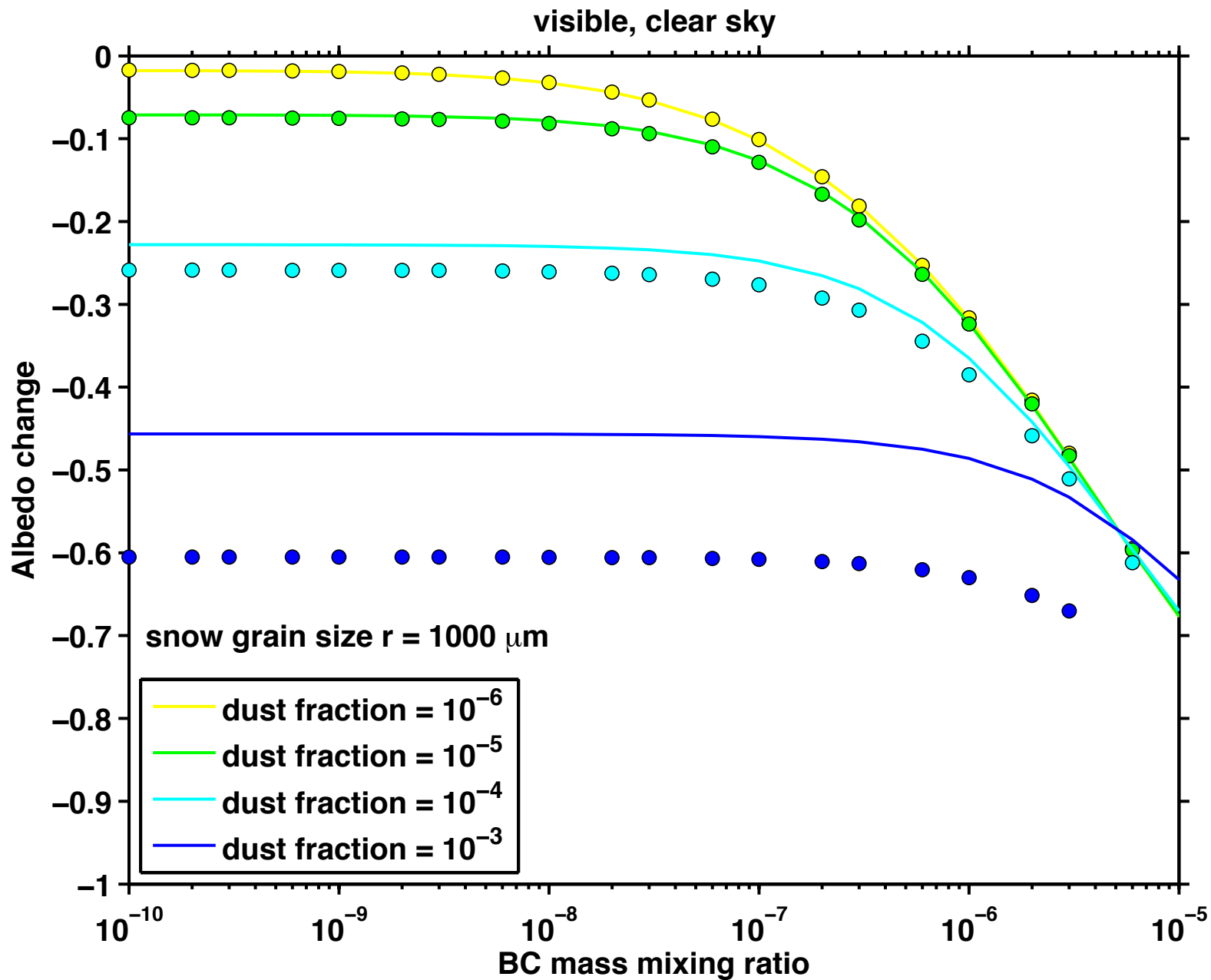


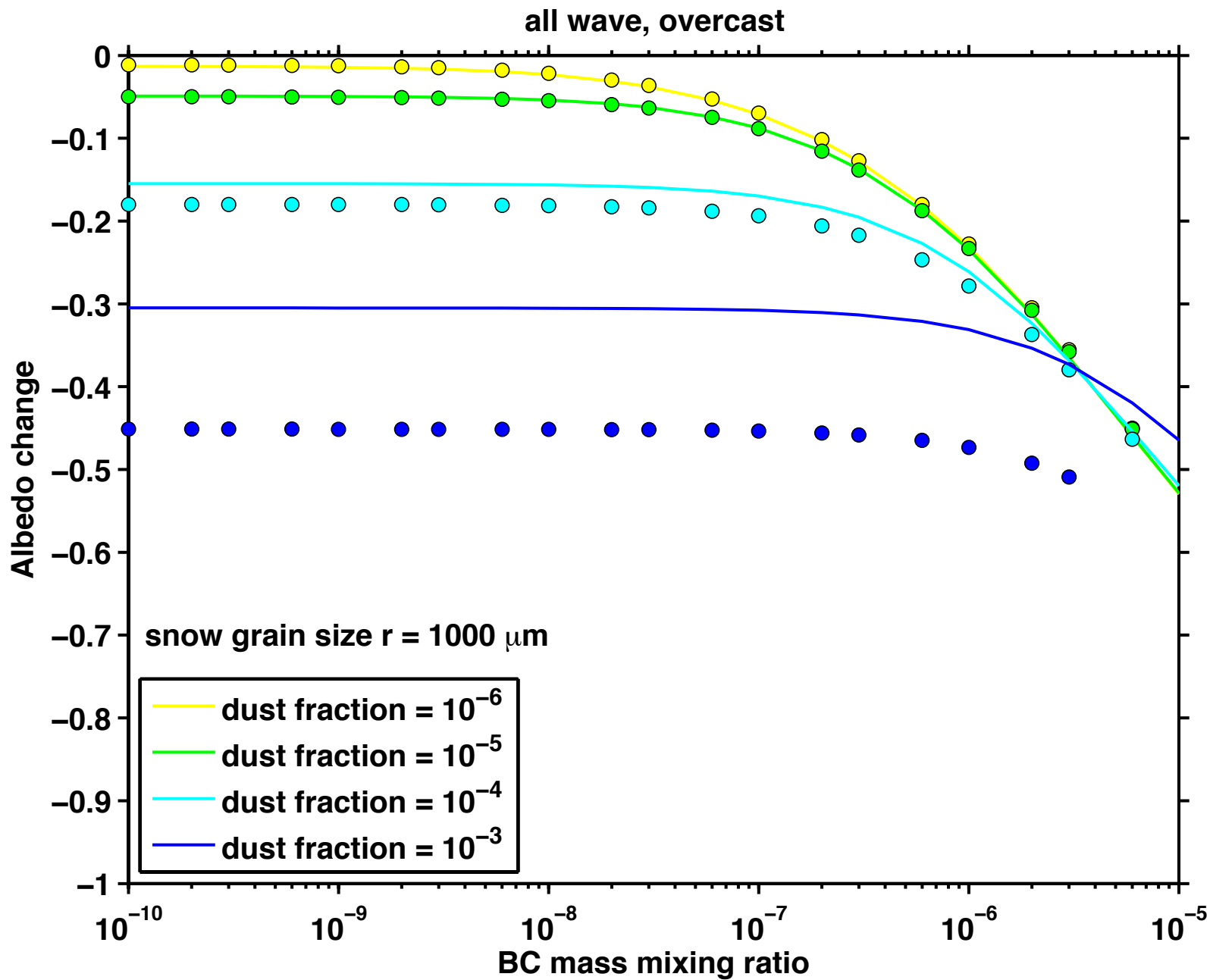
visible, overcast

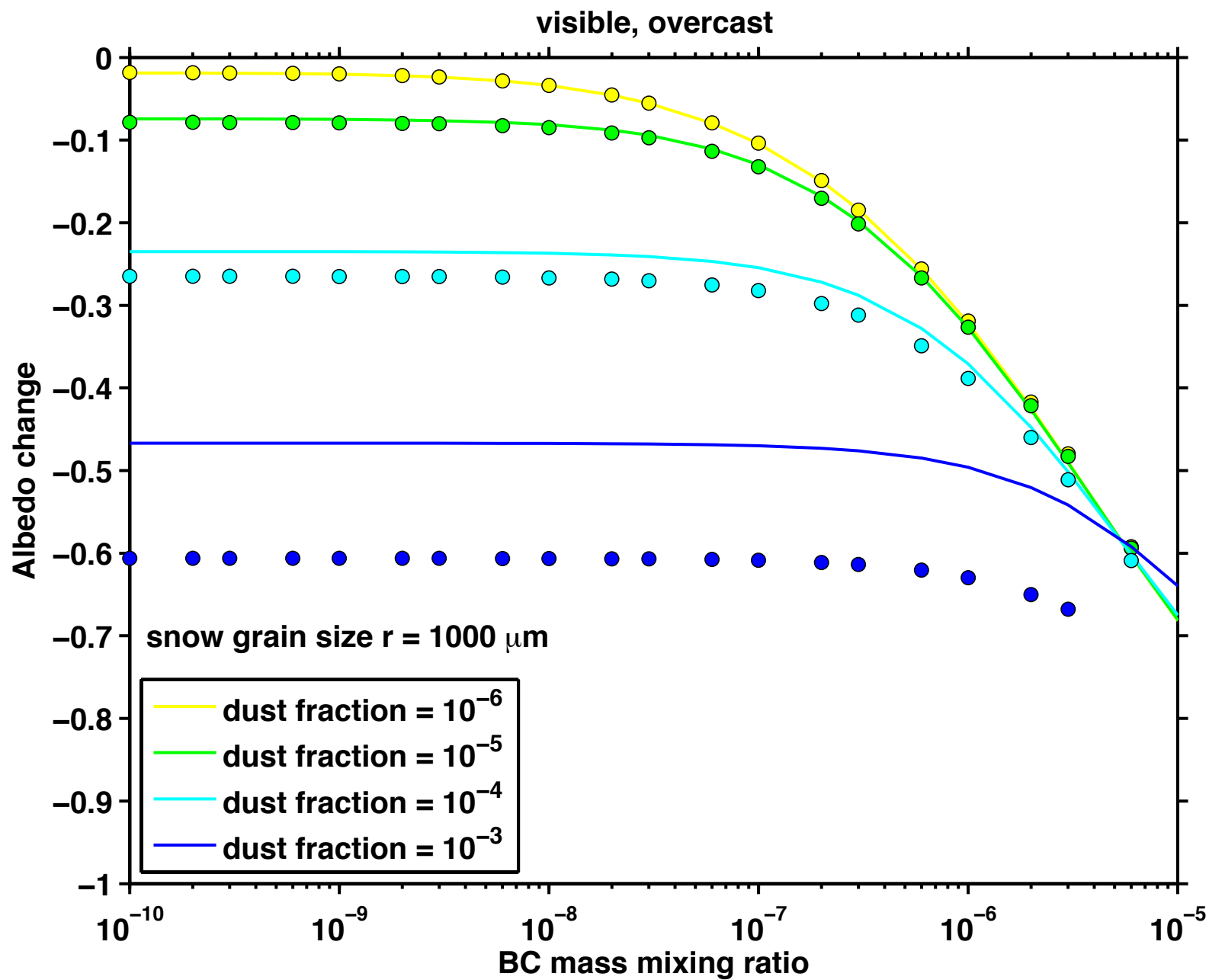


all wave, clear sky





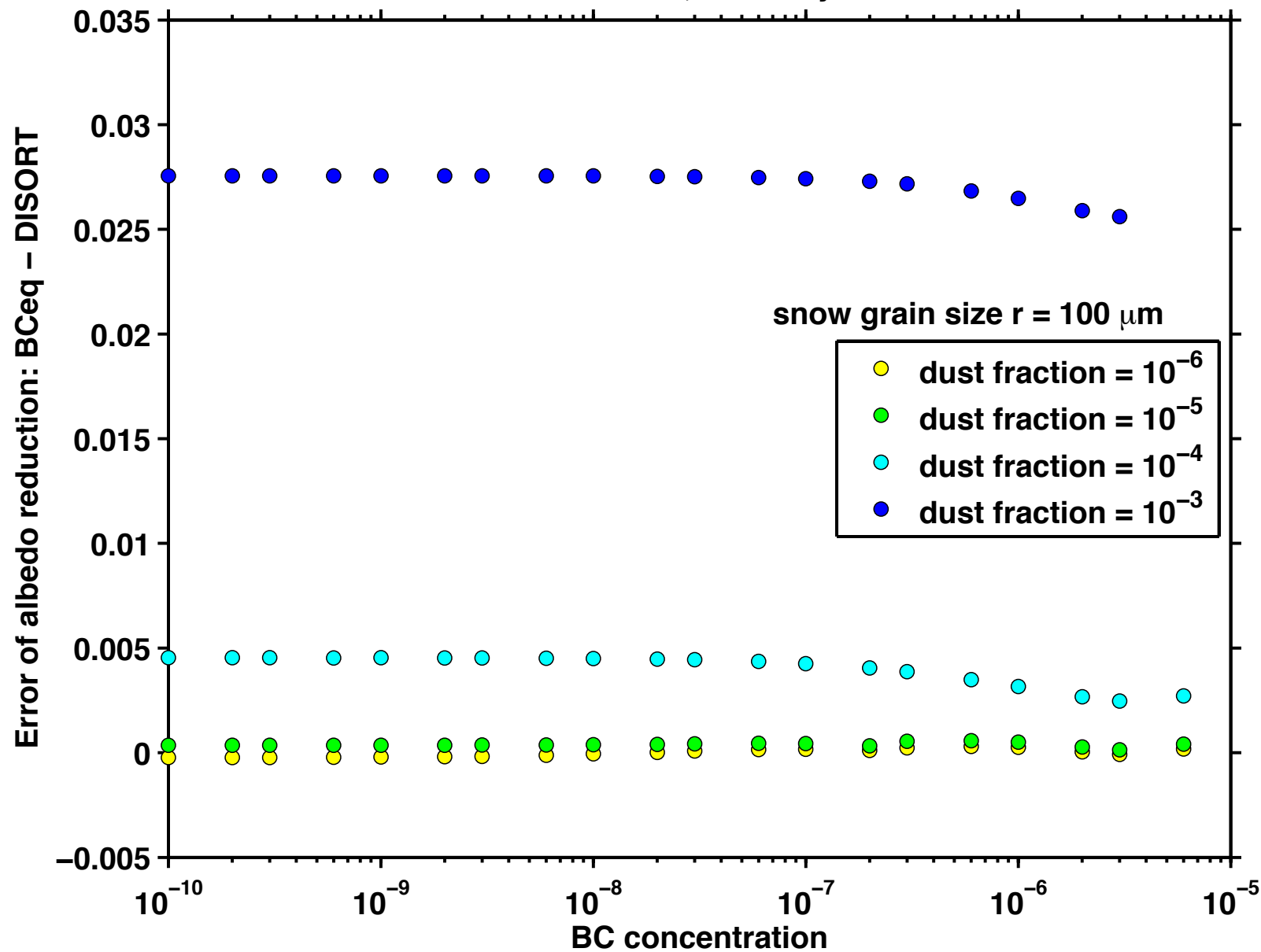




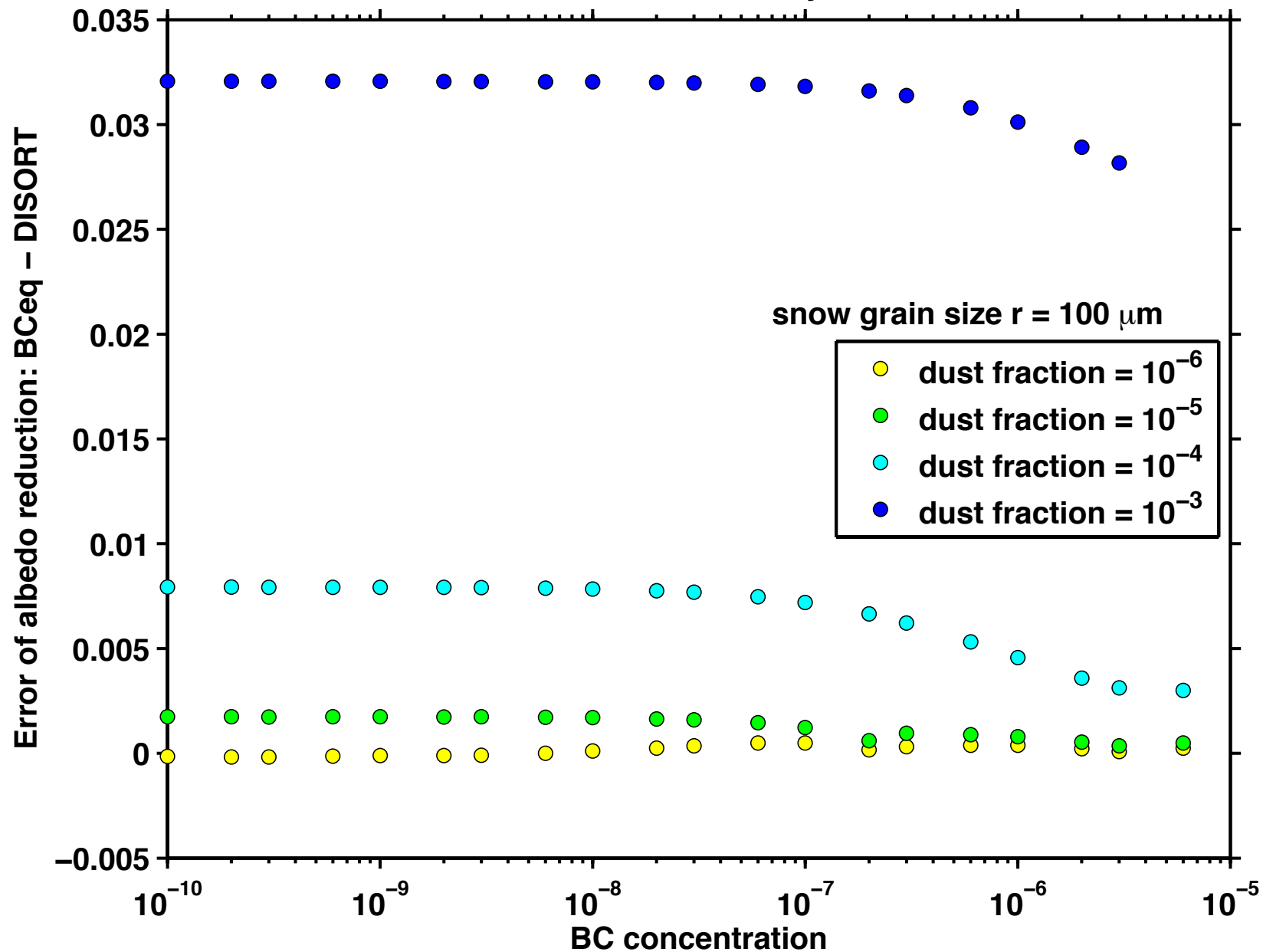
2. Error

- Error in albedo reduction if albedo reduction is calculated using BC equivalent factor and parameterization

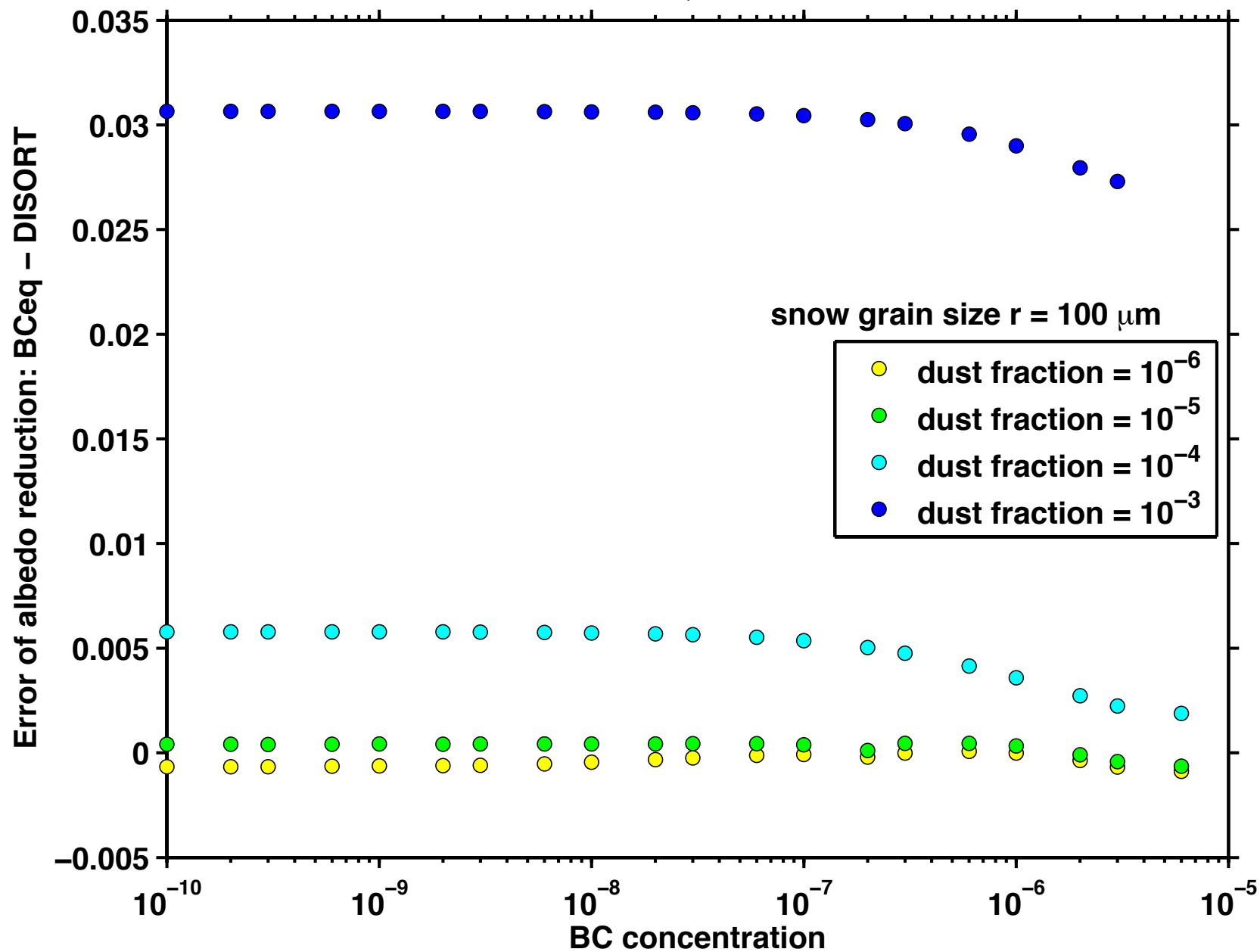
all wave, clear sky

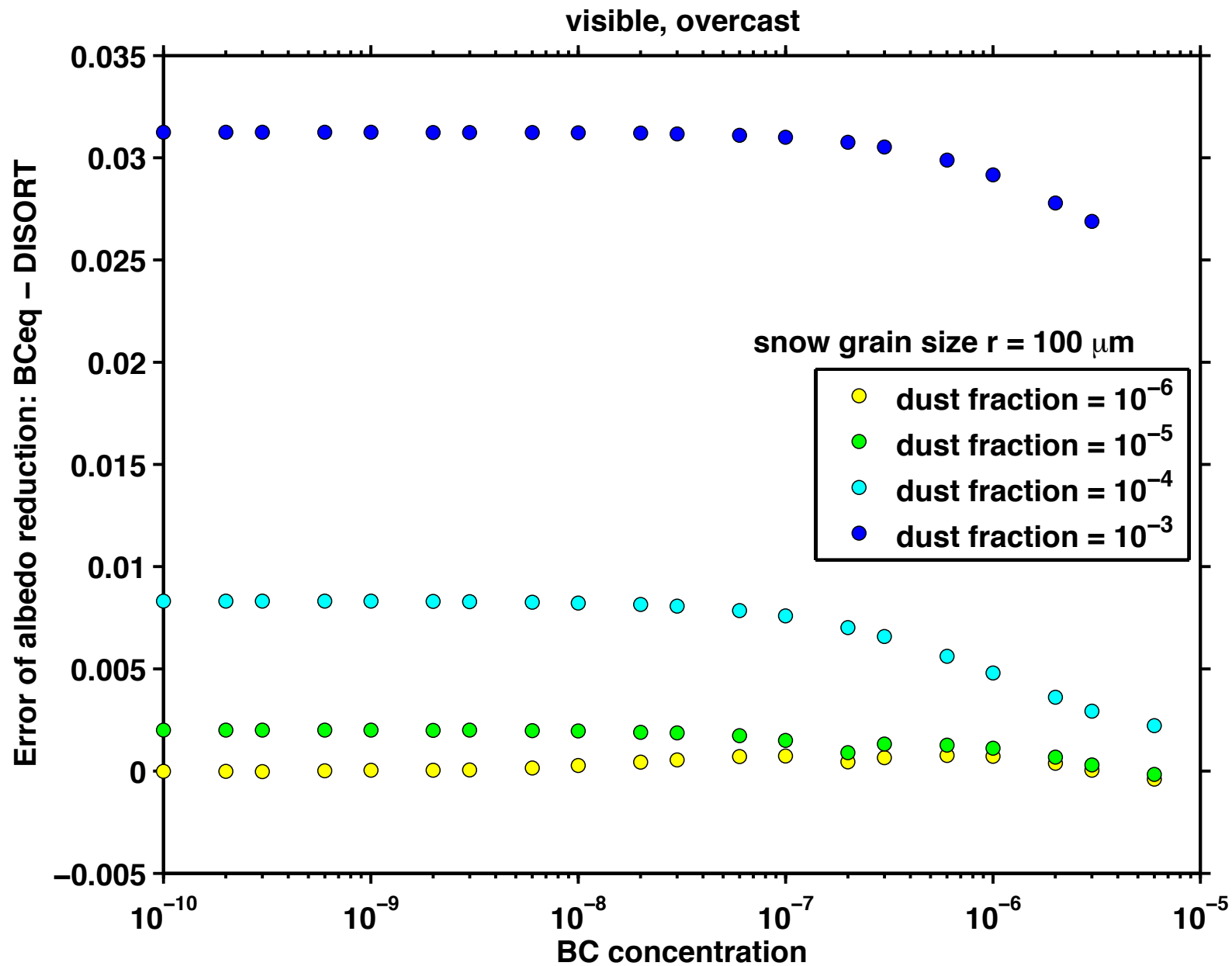


visible, clear sky

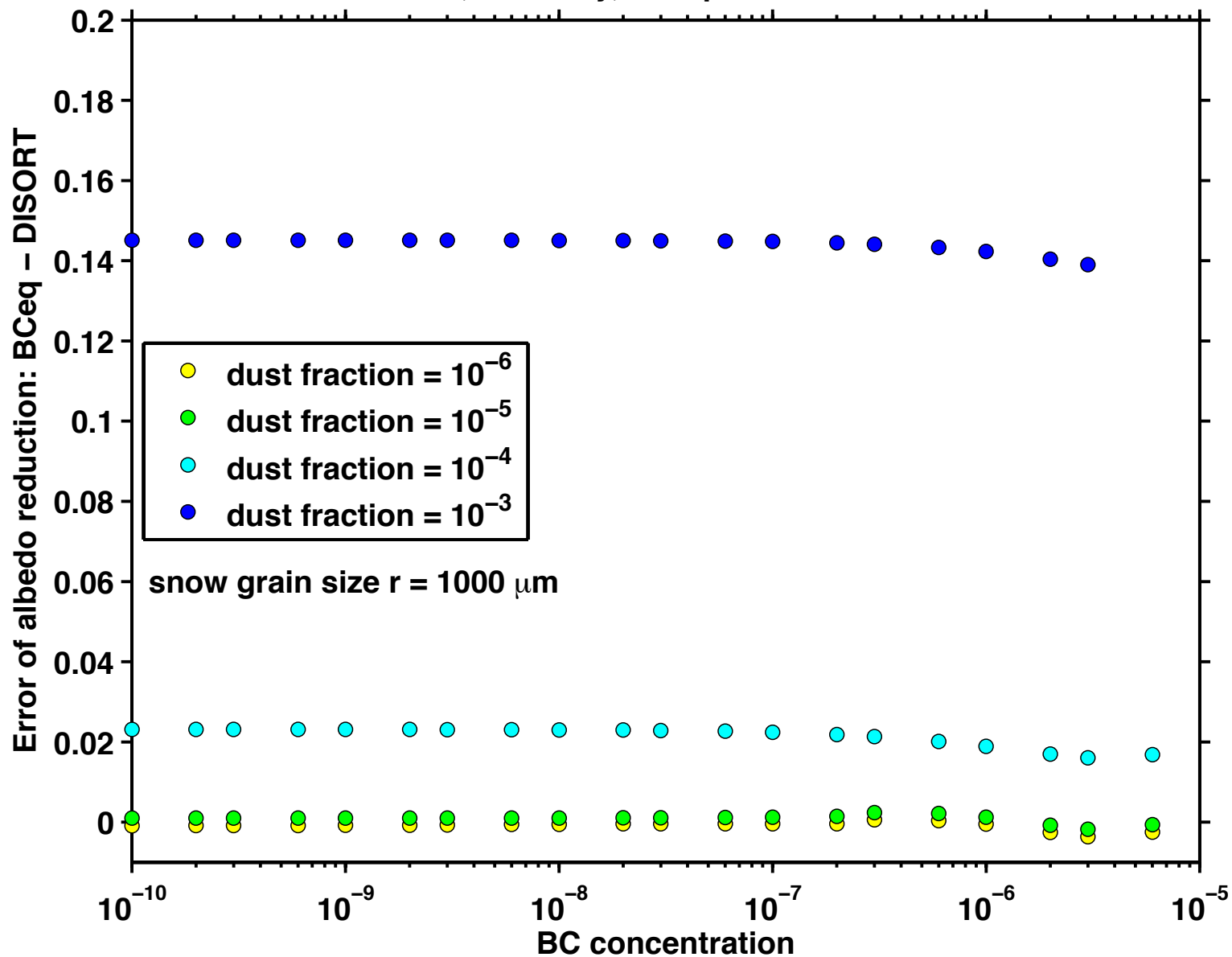


all wave, overcast

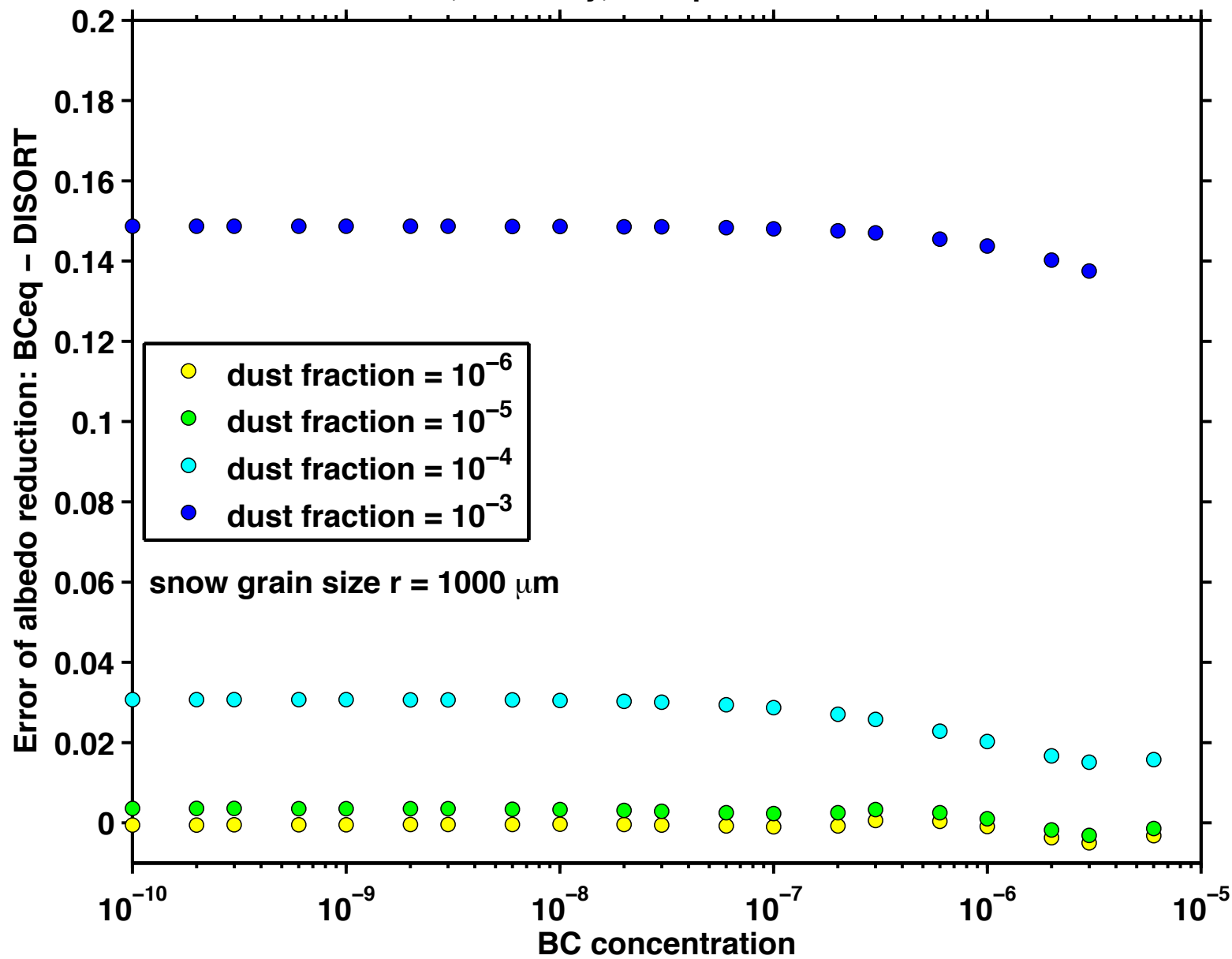




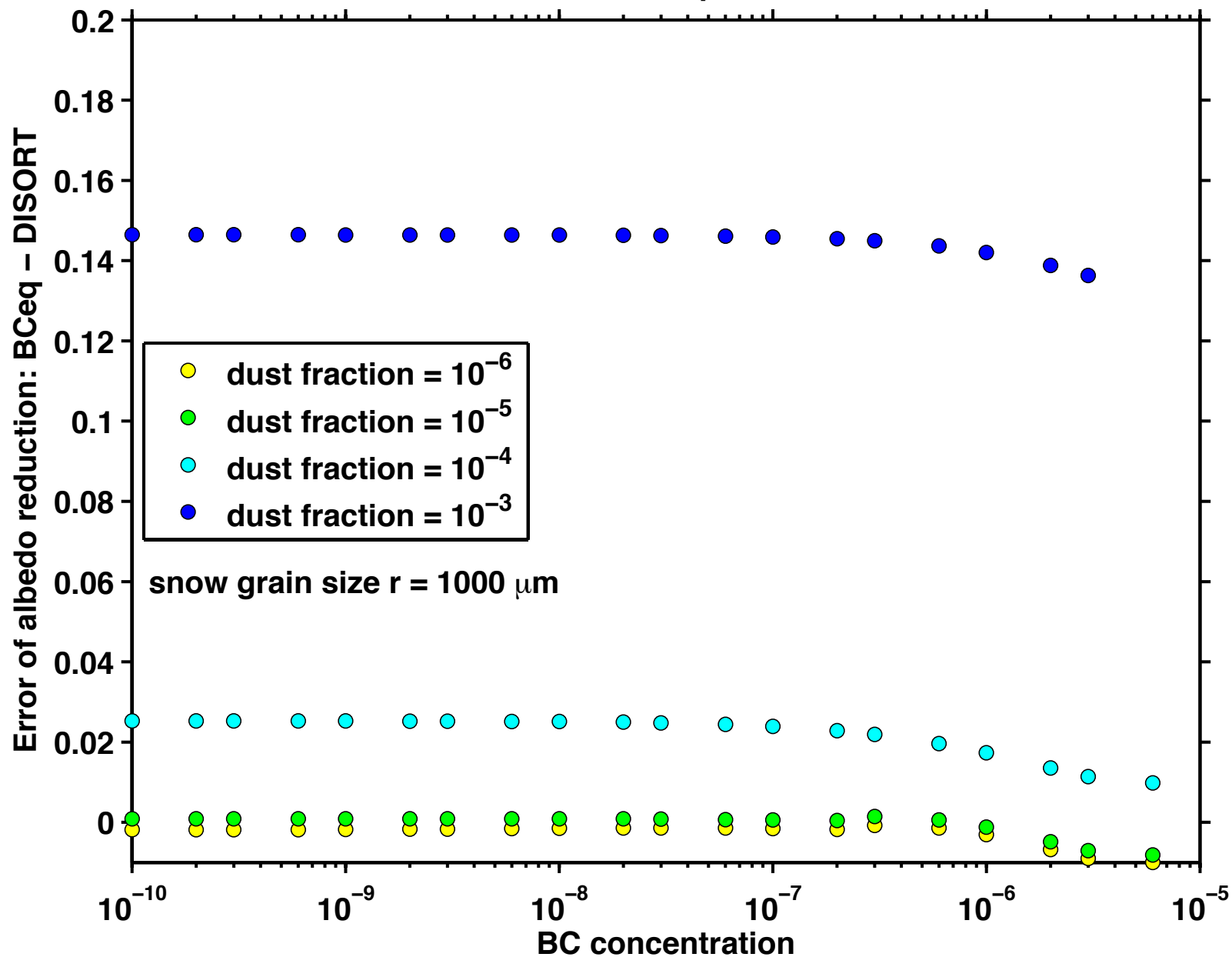
all wave, clear sky, BCeqv = BC + 176 * Dust



visible, clear sky, $\text{BCeqv} = \text{BC} + 157 * \text{Dust}$



all wave, overcast, BCeqv = BC + 165 * Dust



visible, overcast, $\text{BC}_{\text{eqv}} = \text{BC} + 153 * \text{Dust}$

