



Impacts of BC Deposition and 3D Topography on Regional Climate Change

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Highlights of glacier retreat and snow albedo reduction are first presented, followed by a discussion on parameterization of BC deposition and absorption in snow and its impacts on precipitation and radiative forcing based on WRF-Chem (with Noah-MP LSM) simulations over the Tibetan Plateau. We then report on the importance of 3D radiative transfer over mountain-snow areas using CCSM (no chemistry) 10-year simulation results to understand winter-time snow albedo reduction over southern Tibet and the potential impact on Indian summer monsoon. Finally, we will briefly introduce our future work on this challenging research.



The Roger Revelle Medal from the AGU, 2013
The Carl-Gustaf Rossby Medal from the AMS, 2018

