

Interactive comment on “The role of a mid-air collision in drifting snow” by Shuming Jia et al.

Anonymous Referee #2

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Review of the paper “The role of mid-air collisions in drifting snow” by Jia et al.

In this paper a process is proposed that should improve the simulation of the transport of blown snow particles. The paper is interesting but as it is submitted to TC, some terms must be defined. Also the role of atmospheric turbulence should be discussed, and not only implicitly linked to the friction velocity.

In the whole paper: “drifting snow” has different meanings in the literature so that it must be defined. What is its difference with saltation and suspension?

p.2, line 18 and p.15, line 261: “particle activity” should be defined.

p.3, line 44: a reason should be cited why the process is important.

p.5, line 6: what is the meaning of F_{di} ?

p.7, line 105: γ is not defined and λ is not used.

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p.7, line 119: the surface boundary conditions of the model should be specified.

p.9, line 144: why “obviously”?

p.9, line 149: “critical friction velocity” should be defined.

p.9, lines 152-154: the slowing down of the airflow by the blown snow particles is not discussed.

p.10, line 168: the sentence “The reason could be ...” is not clear; what is the link between the particle activity and the friction velocity?

Interactive comment on The Cryosphere Discuss., https://doi.org/10.5194/tc-2018-113, 2018.