



## Corrigendum to “A multiphysical ensemble system of numerical snow modelling” published in The Cryosphere, 11, 1173–1198, 2017

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This corrigendum corrects two typos in the equations describing two physical options implemented in the ESCROC multiphysics system (Lafaysse et al., 2017). There is no impact on the results or conclusions of the article. This corrigendum also includes an update to the new version of the SURFEX code platform.

- Typo in Eq. (1)

Consistently with Vionnet et al. (2012), Eq. (1) must be modified as follows, by including a root square for the wind speed:

$$V12: \rho_n = \max \left( \rho_{\min}, a_{\rho} + b_{\rho} T_a + c_{\rho} \sqrt{U} \right). \quad (1)$$

The symbols of the variables are similar to those in the equations in Lafaysse et al. (2017). The  $d_{\rho}$  parameter mentioned in Table 1 is not used in this article and should be ignored.

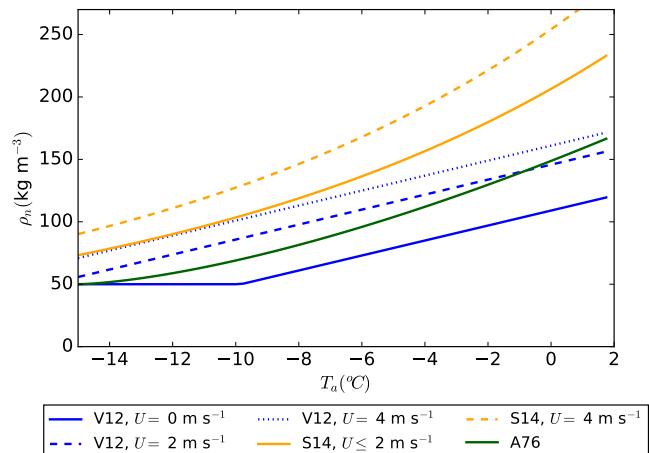
As a consequence, Fig. 3 of Lafaysse et al. (2017) is modified for the V12 option in Fig. 1 of this corrigendum.

- Typo in Eq. (13)

Consistently with Boone (2002), Eq. (13) of Lafaysse et al. (2017) should be modified as follows:

$$B02: w_{\text{liq}, \max} = \rho \left( r_{\min} + (r_{\max} - r_{\min}) \max \left( 0, \frac{\rho_r - \rho}{\rho_r} \right) \right). \quad (13)$$

The correct formulation was used to plot Fig. 6 in Lafaysse et al. (2017).



**Figure 1.** Fresh snow density as a function of air temperature and wind for the three options included in ESCROC.

Since the correct formulations were implemented in the code and used in all simulations for both options, all the results and conclusions of Lafaysse et al. (2017) remain valid.

### Code availability update

ESCROC was developed within the open-source SURFEX project (<http://www.umr-cnrm.fr/surfex>). The control software used to manage this project changed in 2017 from svn to git. For reproducibility of results, the version used in this work is tagged as “ESCROC-1.0” in the SURFEX git repository ([git.umr-cnrm.fr/git/Surfex\\_Git2.git](git.umr-cnrm.fr/git/Surfex_Git2.git)). The full procedure and documentation to access this git reposi-

tory can be found at [https://opensource.cnrm-game-meteo.fr/projects/snowtools\\_git/wiki](https://opensource.cnrm-game-meteo.fr/projects/snowtools_git/wiki). Note that the tagged version of the code is identical to the version used in Lafaysse et al. (2017); only the access has changed.

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