

The screenshot above is the equation as it is now presented. The second term on the right-hand side represents the divergence of heat advection. It is a function of temperature, and, by omitting this, we made an error when writing it originally. See eq. (40) in the model documentation: <https://www.ars.usda.gov/ARSUserFiles/20520000/shawdocumentation.pdf>. There are some slight differences in our nomenclature (we use lambda rather than kappa for thermal conductivity and the subscript w rather than l for liquid water). But, when comparing the equations, clearly there should be a T in the heat advection term. That is the only change. I have rewritten it correctly below. The T should **not** be bold, I have just made it bold to indicate the change. Also, I changed one set of brackets to parentheses, but that’s up to you.

$$C\_{a}\frac{∂T}{∂t}-L\_{i}ρ\_{i}\frac{∂θ\_{i}}{∂t}=\frac{∂}{∂z}\left(λ\_{e}\frac{∂T}{∂z}\right)-ρ\_{w}c\_{w}\frac{∂q\_{w}T }{∂z}-L\_{v}\left(\frac{∂q\_{v}}{∂z}+\frac{∂ρ\_{v}}{∂t}\right)$$