Supplement of the response to the comment of the Editor Antonella Longo

Below is reported the new version of line 23, page 177:

\[
\begin{align*}
\frac{\partial \rho_g}{\partial t} + \bar{\nabla} \cdot (\rho_g \bar{v}_g) &= 0 \\
\frac{\partial \rho_s}{\partial t} + \bar{\nabla} \cdot (\rho_s \bar{v}_s) &= 0
\end{align*}
\]  
(1a)

\[
\begin{align*}
\frac{\partial (\rho_g \bar{v}_g)}{\partial t} + \bar{\nabla} \cdot (\rho_g \bar{v}_g \bar{v}_g) &= K(\bar{\nabla} \cdot \bar{v}) + \rho_g \bar{g} - \bar{\nabla} p - \bar{\nabla} \cdot \bar{\tau}_g \\
\frac{\partial (\rho_s \bar{v}_s)}{\partial t} + \bar{\nabla} \cdot (\rho_s \bar{v}_s \bar{v}_s) &= K(\bar{\nabla} \cdot \bar{v}) + \rho_s \bar{g} - \bar{\nabla} p - \bar{\nabla} \cdot \bar{\tau}_s
\end{align*}
\]  
(1b)

\[
\begin{align*}
\rho_g C_g \left[ \frac{\partial T_g}{\partial t} + \bar{v}_g \cdot \bar{\nabla} T_g \right] &= \dot{Q} \Delta T + \dot{K}(\Delta \bar{v}) - \bar{v}_g q_g \left[ \frac{\partial \theta_g}{\partial t} + \bar{\nabla} \cdot \theta_g \bar{v}_g \right] \\
\rho_s C_s \left[ \frac{\partial T_s}{\partial t} + \bar{v}_s \cdot \bar{\nabla} T_s \right] &= Q \Delta T - \bar{v}_s q_s
\end{align*}
\]  
(1c)

The equations 1a, 1b, and 1c state that: the density …