

With radiation,  $ap$  is defined as (lines 284,296):

$$ap = \left( T_c + \frac{S_h}{A_s h} \right) + \frac{s}{h}$$

$bp$  is defined as (lines 285,297,299):

$$bp = \frac{\left( 6 \left( \frac{S_h}{A_s} + h(T_c - T) \right) \right) + 6s}{\rho d C_p (ap - T)}$$

This can be written alternatively:

$$\begin{aligned} bp &= \frac{\left( 6 \left( \frac{S_h}{A_s} + h(T_c - T) \right) \right) + 6s}{\rho d C_p (ap - T)} = \frac{6}{\rho d C_p} \frac{\frac{S_h}{A_s} + h(T_c - T) + s}{\left( \left( T_c + \frac{S_h}{A_s h} \right) + \frac{s}{h} - T \right)} = \frac{6}{\rho d C_p} \frac{h \left( \frac{S_h}{A_s h} + (T_c - T) + \frac{s}{h} \right)}{\left( \frac{S_h}{A_s h} + (T_c - T) + \frac{s}{h} \right)} \\ &= \frac{6h}{\rho d C_p} \end{aligned}$$