$$\mathcal{T}_i(z,z') = \exp(-W_i/\Delta\nu), \quad W_i = \frac{S_i u^*(z,z')}{\sqrt{1 + S_i u^*(z,z')/\alpha_i^*}},$$

$$u^*(z,z') = \int_z^{z'} 1.67\rho_0\, dz, \quad \alpha_i^* = \alpha_i \overline{p}/p_0, \quad \overline{p} = \int_z^{z'} p\, du/u.$$