

A new parameterization of hydrous mantle melting (doi:10.1029/2002GC000433)

ERRATA

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- Just below equation (3) the temperature T is reported to be in Kelvin. It is actually in Celcius, consistent with the parameters of Table 2.
- Equation (7) should read

$$R_{cpx}(P) = r_1 + r_2 P.$$

(A correction of subscripts of r .)

- The caption of Figure 2 should say that the modal cpx of the unmelted rock is 17 wt%, rather than 15.
- The value of K in Table 2 should be 1360 (instead of 43) for the units given ($^{\circ}\text{C wt}\%^{-\gamma}$) to be correct.
- In equation (20), the factor multiplying $(1 - F)$ should be α_s/ρ_s , rather than α_f/ρ_f as written.
- Equation (21) should be a partial derivative.
- Equation (22) should read

$$\left. \frac{\partial T}{\partial P} \right|_F = F^{1/\beta} \left(\frac{\partial T_{liquidus}^{lherz}}{\partial P} - \frac{\partial T_{solidus}}{\partial P} \right) + \frac{T_{solidus}}{P}.$$

(A correction to the way that β enters the equation and partial derivative on the LHS.)

- Equation (23) should read

$$\left. \frac{dT}{dP} \right|_S = T \left(\frac{F \frac{\alpha_f}{\rho_f} + (1 - F) \frac{\alpha_s}{\rho_s} - \Delta S \left. \frac{\partial F}{\partial P} \right|_T}{c_P} \right).$$

(A correction to the thermodynamic derivative in the numerator.) One way that this equation can be evaluated is by numerically differentiating F to obtain $\partial F/\partial P|_T$.

- Solving equation (23) is not necessary. Given a solution to (20) as $F(P)$, the temperature $T(P)$ should be reconstructed using equation (19).