

# CORRECTION TO “GRAVITY WAVE DYNAMICS AND EFFECTS IN THE MIDDLE ATMOSPHERE”

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[1] In the paper “Gravity wave dynamics and effects in the middle atmosphere” by David C. Fritts and M. Joan Alexander (*Reviews of Geophysics*, 41(1), 1003, doi:10.1029/2001RG000106, 2003), we had noticed a few minor errors in the equations of the original paper, and several others had also pointed these out, prompting this correction. The authors would like to acknowledge Claudia C. Stephan in particular, who was instrumental in helping to identify additional errors and sign ambiguities, and for her work in preparing the corrigendum.

[2] We would like to note the following corrections and addenda:

[3] 1. Following equation (6), the definition of  $\kappa$  is incorrect and should read  $\kappa = R/c_p$ .

[4] 2. For completeness, after equation (12) add  $c_s^2 = (c_p/c_v)(\bar{p}/\bar{\rho})$ .

[5] 3. There is a sign error in equation (28). The correct formula should read

$$\tilde{w} = \frac{\left(-m - \frac{i}{2H}\right)\hat{\omega}}{N^2 - \hat{\omega}^2}\tilde{p}. \quad (28)$$

[6] 4. Equation (31) is valid for  $k_h \geq 0$ . A more general version can be written as

$$(c_{gh}, c_{gz}) = (\tilde{u}_h, 0) + \frac{k_h}{|k_h|} \frac{Nm}{k_h^2 + m^2} \frac{(m, -k_h)}{(k_h^2 + m^2)^{1/2}}. \quad (31)$$

[7] 5. Equation (35) should be replaced by

$$\tilde{p} = -\frac{m}{k_h}\hat{c}_h\tilde{w}. \quad (35)$$

[8] 6. To generalize equation (36) for waves propagating in any direction, it should be written

$$\tilde{w} = -\frac{k_h}{m}\tilde{u}_h, \quad |\tilde{w}| = \frac{\hat{\omega}}{N}|\tilde{u}_h|. \quad (36)$$