Correction to "Pressure-driven and ionosphere-driven modes of magnetospheric interchange instability"

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[1] In the paper "Pressure-driven and ionosphere-driven modes of magnetospheric interchange instability" by A. Miura (*Journal of Geophysical Research*, *114*, A02224, doi:10.1029/2008JA013663, 2009), there were several printing errors in in-line and numbered equations.

[2] In the third sentence in paragraph 18, the correct sentence should read "Therefore, $\nabla \cdot \mathbf{J}_\perp$ can change sign at the ionosphere according to the change of ∇B^{-1} and therefore $\nabla \cdot (J_\parallel \mathbf{b})$ can also change sign at different places in the ionosphere."

[3] In the second term of the integrand of equation (21), dot products were mistakenly printed as vector products. The correct equation (21) should read

$$\begin{aligned}\delta W_F = \frac{1}{2\mu_0}\int d\mathbf{r}\Big[&\left|(\nabla\times(\boldsymbol{\eta}_\perp\times\mathbf{B}))_\perp\right|^2\\ &+B^2|i\mathbf{k}_\perp\cdot\boldsymbol{\eta}_\perp+\nabla\cdot\boldsymbol{\eta}_\perp+2\boldsymbol{\kappa}\cdot\boldsymbol{\eta}_\perp|^2\\ &+\mu_0\gamma p|\nabla\cdot\boldsymbol{\xi}|^2-2\mu_0(\boldsymbol{\eta}_\perp\cdot\nabla p)\left(\boldsymbol{\eta}_\perp^*\cdot\boldsymbol{\kappa}\right)\\ &-\mu_0 J_\parallel\left(\boldsymbol{\eta}_\perp^*\times\mathbf{b}\right)\cdot(\nabla\times(\boldsymbol{\eta}_\perp\times\mathbf{B}))_\perp\Big].\end{aligned}$$

[4] In equation (121) the special character "×" was missing. The correct equation (121) should read

$$J_z = 2\mathbf{e}_z\cdot(\nabla V\times\nabla p).$$

[5] In equation (131) the subscript "⊥" on $(\nabla \times \mathbf{B}_{1\perp})$ was missing. The correct equation (131) should read

$$\mathbf{J}_{1\perp} = \mu_0^{-1}(\nabla\times\mathbf{B}_{1\perp})_\perp + \mu_0^{-1}B_{1\parallel}\mathbf{b}\times\boldsymbol{\kappa} - \mu_0^{-1}\mathbf{b}\times\left(\nabla B_{1\parallel}\right).$$

[6] In equation (134) the last term was mistakenly printed as $\gamma\, p\nabla \cdot P\boldsymbol{\xi}$. The correct equation (134) should read

$$\begin{aligned}\mathbf{J}_{1\perp} = &-B^{-1}\omega^2\rho\mathbf{b}\times\boldsymbol{\xi}_\perp - B^{-2}\left(B_{1\parallel}\mathbf{J}_\perp - J_\parallel\mathbf{B}_{1\perp}\right)\\ &-B^{-1}\mathbf{b}\times\nabla(\boldsymbol{\xi}\cdot\nabla p+\gamma p\nabla\cdot\boldsymbol{\xi}).\end{aligned}$$

[7] In the second term on the right hand side of equation (A4), the special character "×" was missing. The correct equation (A4) should read

$$\tilde{\mathbf{u}}_2 = \frac{\gamma}{\gamma-1}(\tilde{p}_1\tilde{\mathbf{v}}_1) - \frac{1}{\mu_0}\left[\left(\tilde{\mathbf{v}}_1\times\tilde{\mathbf{B}}_1\right)\times\mathbf{B}_0 + (\tilde{\mathbf{v}}_1\times\mathbf{B}_0)\times\tilde{\mathbf{B}}_1\right].$$

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