

Erratum

In the article "Fluid Dynamics in Higher Order Gravity", which appeared in the June issue of the *GRG Journal*, p.599-614, the last term in eq. (19) and two terms in eq. (21) were missing. These equations should read as follows:

$$\begin{aligned}
 & h^{ab} E_{bc;d} h^{cd} - \eta^{abcd} u_b \sigma_{ce} H^e{}_d + 3H^{ab} \omega_b \\
 &= (1 + 2\alpha R)^{-1} \left[\frac{1}{3} h^{ab} \rho_{;b} - \frac{1}{2} h^{ab} \pi_{b;c} + \frac{1}{2} \pi^{ab} \dot{u}_b + \frac{1}{2} (\sigma^{ab} - 3\omega^{ab}) q_b - \frac{1}{3} \theta q^a \right] \\
 &+ \frac{1}{2} (1 + 2\alpha R)^{-1} h^{ab} \left[h^{cd} \{ \beta \square R_{cd} - (2\alpha + \beta) R_{;cd} - 2\beta R_{cdef} R^{ef} \}_{;b} \right. \\
 &\quad \left. + \{ (2\alpha + \frac{1}{2}\beta) \square R + \frac{3}{2} \beta R_{cd} R^{cd} \}_{;b} - \dot{S}_{bc} u^c \right. \\
 &\quad \left. - 2\alpha \{ (R_{cd} u^c u^d + \frac{1}{3} R) R_{;b} - \dot{R} R_{bc} u^c \} \right]. \tag{19}
 \end{aligned}$$

$$\begin{aligned}
 & h^{ac} h^{bd} \dot{E}_{cd} + h^{c(a} \eta^{b)def} H_{cd;e} u_f - 2H_c^{(a} \eta^{b)cde} u_d \dot{u}_e \\
 &+ h^{ab} E^{cd} \sigma_{cd} + \theta E^{ab} - 3E^{c(a} \sigma^{b)c} - E^{c(a} \omega^{b)c} \\
 &= (1 + 2\alpha R)^{-1} \left[-\frac{1}{2} (\rho + p) \sigma^{ab} - q^{(a} \dot{u}^{b)} \right. \\
 &\quad \left. - \frac{1}{2} h^{c(a} h^{b)d} q_{c;d} - \frac{1}{2} h^{c(a} h^{b)d} \dot{\pi}_{cd} + \frac{1}{2} \pi^{c(a} \omega^{b)c} \right. \\
 &\quad \left. - \frac{1}{2} \pi^{c(a} \sigma^{b)c} - \frac{1}{6} \theta \pi^{ab} + \frac{1}{6} h^{ab} (\pi_{cd} \sigma^{cd} + q^c{}_{;c} + \dot{u}^c q_c) \right] \\
 &+ \frac{1}{2} (1 + 2\alpha R)^{-1} h^{c(a} h^{b)d} \left[\{ S_{de;c} - 2\alpha R_{;c} R_{de} \} u^e - \dot{S}_{cd} \right. \\
 &\quad \left. + \{ \frac{1}{6} \beta (\square R) - \frac{1}{2} \beta (R_{ef} R^{ef}) \} g_{cd} + 2\alpha \dot{R} (R_{cd} - \frac{1}{3} R g_{cd}) \right]. \tag{21}
 \end{aligned}$$

The references for this article should read in full:

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