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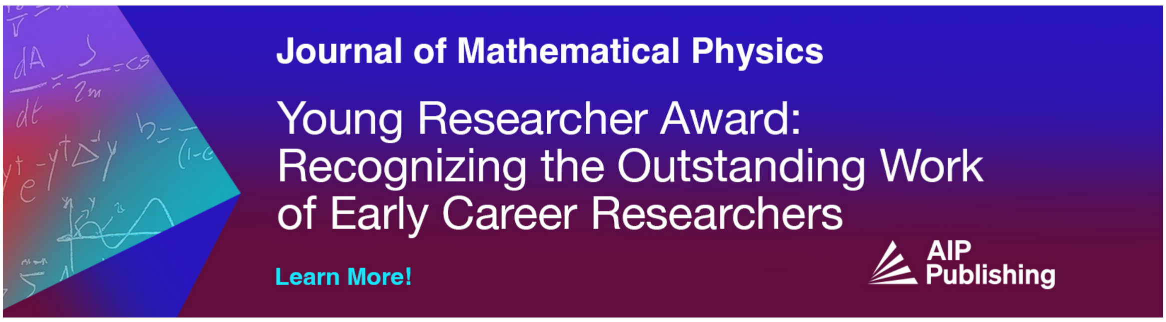

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Erratum: "Self-similar blowup solutions to the 2-component Camassa–Holm equations" [J. Math. Phys. 51, 093524 (2010)]

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As the analysis of the case $\xi > 0$ in Eq. (33) was incomplete, the following corrections of Lemma 3, Lemma 4, and Theorem 1 are needed.

Lemma 3: ...(2) if $\xi > 0$,
(2a) with $a_1 > -\sqrt{3\xi} a_0^{1/3}$ the solution $a(t)$ globally exists, such that

$$\lim_{s\to+\infty} a(s) = +\infty, \tag{34}$$

(2b) with $a_1 \le -\sqrt{3\xi} a_0^{1/3}$, there exists a finite time S, such that $\lim_{s->S^-} a(s) = 0$.

Lemma 4: ...(2) if $\xi > 0$,
(2a) with $a_1 < \sqrt{3\xi} a_0^{1/3}$ the solution $a(t)$ globally exists, such that

$$\lim_{a(s)-s\to+\infty} = -\infty, \tag{58}$$

(2b) with $a_1 \ge \sqrt{3\xi} a_0^{1/3}$, there exists a finite time S, such that $\lim_{s->S^- a(s)} = 0$.

Then, we need the corresponding correction for Theorem 1.

Theorem 1:...(1) for $\sigma = -1$,....
(b) with $\xi > 0$ and $a_0 < 0$,

$$\rho(t,x) = \frac{f(\eta)}{a(3t)^{1/3}}, \quad u(t,x) = \frac{\dot{a}(3t)}{a(3t)}x. \tag{19}$$

If $a_1 < \sqrt{3\xi} a_0^{1/3}$, solution (19) exists globally; If $a_1 \ge \sqrt{3\xi} a_0^{1/3}$, solution (19) blows up in a finite time T.

(2) For $\sigma = 1$,
(a) with $\xi > 0$ and $a_0 > 0$,

$$\rho(t,x) = \begin{cases} \frac{f(\eta)}{a(3t)^{1/3}}, & \text{for } \eta^2 < \frac{\alpha^2}{\xi} \\ 0, & \text{for } \eta^2 \ge \frac{\alpha^2}{\xi} \end{cases}, \quad u(t,x) = \frac{\dot{a}(3t)}{a(3t)}x. \tag{20}$$

If $a_1 > -\sqrt{3\xi} a_0^{1/3}$, solution (20) globally exists; If $a_1 \le -\sqrt{3\xi} a_0^{1/3}$, solution (20) blows up in a finite time T....

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