

Dispersive water-wave equations: a paradigm of the Painlevé conjecture

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CORRIGENDUM

Dispersive water-wave equations: a paradigm of the Painlevé conjecture†

S Roy and A Roy Chowdhury 1988 *J. Phys. A: Math. Gen.* **21** L585-91

These revisions pertain to the above recent Letter to the Editor. These equations are only a portion of the equations in the letter requiring revision.

$$2f' = -(1/z^2)(2g - g^2) + (2/z)(g' - gg') - g' - 4g'' \quad (2')$$

$$f + zf' = 2f' + 4zf'' + fg/z - 2(gf)'$$

$$16z^3g''' = g(z^2 + 12) - 3g^3 - zg^2 + 6zg^2g' + 6z^2gg' + g'(-12z + z^3 - 2Az^2) + Azg - Az^2 \quad (3)$$

$$16z^3g''' \text{ and } 6zg'g^2 \text{ matches with } p = -1, \dots \quad (4)$$

$$z^3 = (z - z_0 + z_0)^3 = (z - z_0)^3 + 3z_0^2(z - z_0) + 3z_0(z - z_0)^2 + z_0^3.$$

With $A = 0$ equation (3) can be written as

$$16[(z - z_0)^3 + 3(z - z_0)^2z_0 + 3(z - z_0)z_0^2 + z_0^3]g'''$$

$$= g[(z - z_0)^2 + 2z_0(z - z_0) + z_0^2 + 12] - 3g^3$$

$$+ g'[(z - z_0)^3 + 3z_0(z - z_0)^2 + 3z_0^2(z - z_0) + z_0^3 - 12(z - z_0) - 12z_0]$$

$$- [(z - z_0) + z_0]g^2 + 6gg'[(z - z_0)^2 + 2z_0(z - z_0) + z_0^2]$$

$$+ 6g'g^2[(z - z_0) + z_0]. \quad (5)$$

† These corrections were submitted by M Coffey, Department of Physics, Iowa State University, Ames, IA 50011, USA, and are published with the authors' permission.