International Journal of Theoretical Physics, Vol. 26, No. 1, 1987

Erratum: Some Cylindrical Symmetric Non-Static Perfect Fluid Distributions in General Relativity with Pressure Equal to Density[1]

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(i) In equation (79) the value of v_4 should be zero and therefore $v_1^2 = -A^2$. Hence the model in case (a.2.1) is unrealistic.

(ii) The right-hand side of equation (63) should read

$$4\left[m(m-1)+\phi^2\frac{d}{d\phi}\left(\frac{1}{A}\frac{dA}{d\phi}\right)\right]$$

and consequently the expressions for metrics (68) and (70), resepctively, should be changed to

$$ds^2 = \phi^{2q}\exp(n\phi+l)(dT^2-dx^2)$$
$$-\phi^{2m}\,dy^2-\phi^{2(1-m)}\,dz^2$$

and

$$ds^2 = \phi^{2m(m-1)}\exp(h\phi^2+n\phi+\xi_0)(dT^2-dx^2)$$
$$-\phi^{2m}\,dy^2-\phi^{2(1-m)}\,dz^2$$

where q, n, l, h, and ξ_0 are constants.

(iii) Expressions (80)-(82), respectively, should be changed as follows:

$$8\pi\rho = 8\pi p = \frac{1}{-UV}\,\frac{q-m(m-1)}{n^2A^2\phi^2}$$

[1]This paper appeared in *International Journal of Theoretical Physics*, **20**, 709 (1981).

0020-7748/87/0100-0105$05.00/0

$$v_1 = \frac{-Ax}{(T^2 - x^2)^{1/2}}$$

$$v_4 = \frac{AT}{(T^2 - x^2)}$$

The reality conditions in this case are $T^2 - x^2 > 0$ and $q - m(m-1) > 0$.

(iv) Expressions (83)-(85), respectively, should be changed to

$$8\pi\rho = 8\pi p = \frac{4h}{n^2(x^2 - T^2)}$$

$$v_1 = \frac{-AT}{(x^2 - T^2)^{1/2}}$$

$$v_4 = \frac{Ax}{(x^2 - T^2)}$$

and the reality conditions for this case are $x^2 - T^2 > 0$ and $h > 0$.