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THE EXISTENCE OF CONTINUABLE SOLUTIONS OF A SECOND ORDER DIFFERENTIAL EQUATION: ERRATUM

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In [**2**], N. A. Tirošelidze has pointed out that the second assertion of the Theorem in [**1**] is not correct as stated. This assertion concerns the existence of infinitely many oscillatory solutions of the equation $y''(t) + q(t)f(y(t)) = 0$.

An additional hypothesis for the function f which was used in its proof was inadvertently omitted from the statement of the result, namely that

$$\int_0^{\infty} [1 + F(u)]^{-1/2} du < \infty \quad \text{or} \quad \int_0^{-\infty} [1 + F(u)]^{1/2} du > -\infty, \quad \text{where}$$

$$F(y) = \int_0^{y} f(u) du.$$

The same hypothesis also needs to be added to the second assertion of the Corollary.

References

1. G. J. Butler, *The existence of continuable solutions of a second order differential equation*, Can. J. Math. *29* (1977), 472–479.

2. N. A. Tirošelidze, *On a theorem of G. J. Butler*, Diff. Urav. *14* (1978), 1903–1904 (Russian).

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