Corrigendum

Corrigendum to "Mechanical wave momentum from the first principles" [Wave Motion 68 (2016) 283–290]

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In my paper Mechanical wave momentum from the first principles, the axial momentum is represented as a product of the **wave mass** m_w and the wave speed c. The former is introduced as the exceed of the mass density (per unit length) in the wave, m, over that ahead of the wave, $m_0 = $ const

$$p = m_w c, \quad m_w = m - m_0. \tag{1}$$

It should be noted that this relation is valid not only for mechanical waves but for electromagnetic waves too (that is, it reduces to the known expression for the axial momentum of the latter). Indeed, in an application to electromagnetic waves, we may consider m_0 as the **rest mass**. Since it is absent, the **wave mass** becomes

$$m_w = m = E/c^2, \tag{2}$$

where E is the energy density and c is the speed of light. The momentum density follows as

$$p = m_w c = E/c, \tag{3}$$

as it should.

Of course, this coincidence is not accidental. The fact is that the considerations resulting in the expression (1) in the above paper are true for electromagnetic waves too.

The author regrets that he did not note this fact at once.