Erratum: Geometry and topology of the quasiplane Szekeres model [Phys. Rev. D 78, 064038 (2008)]

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(Received 30 December 2011; published 19 March 2012)

DOI: 10.1103/PhysRevD.85.069903

PACS numbers: 04.20.Jb, 99.10.Cd

The paper [1] contains an error. The identification of subspaces postulated in its Sec. VIII cannot be made because it would introduce a discontinuity in the metric. That erroneous statement resulted from a computational error for which I find no justification.

In consequence of this error the conclusions of Secs. IX and XI are invalidated as well, namely:

- (i) Re Sec. IX—Shell crossings cannot be avoided in the way described there. When the flat surfaces of constant t and z have the topology of infinite planes, shell crossings necessarily occur, except in the special case when the quasiplane spacetime becomes plane symmetric, as proved in Ref. [2].
- (ii) Re Sec. XI—The finite volume constructed there does not exist when the identifications from Sec. VIII are impossible. Thus, the problem of identifying the volume that contains the active gravitational mass M(z) can be approached only in the way described in Sec. XII.

Sections II–VII, X, and XII of Ref. [1] remain correct. The abstract, the introductory Sec. I, and the concluding Sec. XIII need to be suitably modified.

The error pointed out here was noticed by Charles Hellaby.

[2] C. Hellaby and A. Krasiński, Phys. Rev. D 77, 023529 (2008).

^[1] A. Krasiński, Phys. Rev. D 78, 064038 (2008).

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