CORRIGENDUM TO "BACKREACTION IN THE FUTURE BEHAVIOR OF AN EXPANDING VACUUM SPACETIME"

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In [2, (3.8)] we constructed limiting metrics g_∞ for the rescalings of a class of T^2-symmetric vacuum spacetimes. It was shown that g_∞ fails to satisfy the vacuum Einstein equations. It was implicitly stated that g_∞ has a nonvanishing scalar curvature. Cécile Huneau and Jonathan Luk pointed out that the latter statement is incorrect. As mentioned in [2], the equations [1, (2.3)-(2.8)] are satisfied for g_∞ except for [1, (2.6)], which gives rise to a nonzero $G_{\widehat{R}\widehat{R}}$-term. However, it also gives rise to a nonzero $G_{\widehat{\theta}\widehat{\theta}}$-term. The result is that the scalar curvature vanishes. Consequently, the statement "We see that the framework of [8] does not apply to our rescaling examples" from [2, p. 2] is unjustified.

References

[1] LeFloch P and Smulevici J 2016 Future asymptotics and geodesic completeness of polarized T^2-symmetric spacetimes *Anal. PDE* 9 363-95

[2] Lott J 2018 Backreaction in the future behavior of an expanding vacuum spacetime *Class. Quantum Gravity* 35 035010

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