Erratum: Nonstrange quark stars from an NJL model with proper-time regularization [Phys. Rev. D **100**, 123003 (2019)]

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In this erratum, we correct our misuse on the data of tidal deformability Λ .

In this paper, we have concluded that our calculations on the Λ for a 1.4-solar-mass star are “within the interval ($200 < \Lambda < 800$) [1] and the interval ($0 < \Lambda < 630$) for large component spin, and satisfy the constraint with $\tilde{\Lambda} = 300^{+420}_{-230}$ when restricting the magnitude of the component spins from the analysis of GW170817 [2]”. But those citations are not all appropriate here for our calculated results. After discussion with the author of a recent work “probing up-down quark matter via gravitational wave” [3], and rereading on the work in Ref. [2], our calculated results can only fit to $\Lambda < 800$ for the low spin prior. This is because of our misunderstanding of data in those cited works.

The EOS-independent average tidal deformability $\tilde{\Lambda} = 300^{+420}_{-230}$ is derived for masses to lie between 1.16 and 1.60 $M_{\odot}$ (with a total mass $2.73^{+0.04}_{-0.01}$ and a chirp mass $M = 1.186 M_{\odot}$). But our calculations in this paper are only for 1.4-solar-mass quark stars or binary neutron stars with the same masses when restricting the magnitude of the component spins. Besides, the $\Lambda_{1.4} > 200$ bound is based on the neutron star EOS, that is, the model-dependent result. Also, we note that the radii constraints are also EOS-dependent in Refs. [4,5]. Since there are not constraints on radii of calculated quark stars or from astronomical observation, the cited radii ranges can not be used as real constraints but as a comparison.

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