

Erratum: Supernova bound on axionlike particles coupled with electrons [Phys. Rev. D **104**, 103007 (2021)]

Pierluca Carenza  and Giuseppe Lucente



(Received 1 July 2024; published 2 August 2024)

DOI: [10.1103/PhysRevD.110.049901](https://doi.org/10.1103/PhysRevD.110.049901)

Due to a numerical error related to the integration on the supernova (SN) model in the computation of the axionlike particle (ALP) luminosity [see Eq. (29) in our published work], the SN bound shown in Fig. 12 is not correct. The correct result can be found in Ref. [1], excluding values of the ALP-electron coupling $2 \times 10^{-9} \lesssim g_{ae} \lesssim 5.5 \times 10^{-7}$ for ALP masses $m_a \lesssim 1$ MeV when only tree-level interactions are considered. In Fig. 8 of Ref. [1], the authors compare the bound calculated in our published work (solid black line) with the correct one that they evaluated considering the same processes (dashed blue line).

- [1] R. Z. Ferreira, M. C. D. Marsh, and E. Müller, Strong supernovae bounds on ALPs from quantum loops, *J. Cosmol. Astropart. Phys.* **11** (2022) 057.