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Resubmission to PRL (LC17151) May 11, 2019

Dear Editors,

We hereby resubmit our manuscript, "*Revealing the emergence of classicality in nitrogen-vacancy centers*," by Thomas Unden, Daniel Louzon, Michael Zwolak, Wojciech H. Zurek and Fedor Jelezko (LC17151).

Our new version addresses both concerns you initially have encountered. First we shortened our main text by moving the paragraphs describing the artificial creation of the GHZ state and the method section to the supplementary text. And second, we added a paragraph to the conclusion which addresses your second concern, namely to what extend our approach disfavor other approaches.

In relation to your second concern, it is important to note that our experiment shows evidence of classicality at the atomic scale. We therefore can disfavor other approaches like gravitational collapse as these are not intended to describe systems at the nanoscale.

Thank you for your consideration.

Sincerely yours,

Thomas Unden, on behalf of all coauthors

P.S. As one of the criteria of PRL is "broad interest", we note that we were contacted by and are corresponding with Philip Ball, who has been commissioned to write an article for the "Quanta" magazine on experimental tests of quantum Darwinism. In addition to this letter, we also attached the original one to the mail.