Review of: "Planetary relationship as a key signature from the dark sector"

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Potential competing interests: No potential competing interests to declare.

I found this paper potentially interesting but also incomplete.

The authors examine the possibility that solar activity variability could be influenced by planetary harmonics via gravitational lensing of dark matter fluxes falling on the sun. Zioutas and collaborators have primarily investigated this hypothesis in a number of works that are correctly cited here. This concept is quite intriguing and it needs to be further investigated.

However, it appears to me that the only novel addition presented by this study to what has already been published is the claim that the sunspot record from 1900 to 2016 has a 780-day signature of the Earth-Mars synodic cycle. Figure 1 would display the proof in question. Unfortunately, I felt the argument to be insufficiently developed and commented.

A general reader of the study may require more comprehensive information on how the calculations were carried out, as well as further explanation of why the figure demonstrates that the synodic cycle of Earth and Mars has a large influence on solar activity.

In fact, it appears that even the authors are unable to properly interpret their figure because they write that "it would be interesting to recover the dynamical behavior of all peaks," implying that they were unable to do so. Furthermore, the authors acknowledge that "the Lomb-Scargle periodogram does not provide a peak at 780 days," which tends to call their interpretation of Figure 1 into question.

Because Figure 1 is the only original finding given in this study, I encourage the authors to thoroughly discuss the calculations shown in the figure and to demonstrate that the depicted signal is not just random, and, finally, explain why the result supports the proposed physical hypothesis.