

## ***Interactive comment on “On the nonlinear and Solar-forced nature of the Chandler wobble in the Earth’s pole motion” by Dmitry M. Sonechkin et al.***

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I did not know the publication of Pukite et al. (2018). Of course, I include it into the reference list of the corrected text of my paper. However, I must say that there are numerous tidal periodicities which can affect the polar motion in principle. One can find several different combinations of these capable to produce time series more or less well reproducing the real pole motion. The combination found by Pukite et al. (2018) is one of such combination. In the primary text of my paper I already indicate another combination proposed by Sidorenkov (2009). Perhaps, even more such combinations can be proposed: At the same time, I agree that the choice of a concrete combination is debatable. However, I want to stress repeatedly the main message of my paper consists in the following. Any linear dynamical system responds to its exter-

nal periodicities separately. It means that the power spectrum of the system reveals spectral density peaks at periods of each external periodicity, but no peak can be seen at the period of the combinational harmonic. The necessary and sufficient condition for the appearance a spectral peak at a combinational tone frequency consists of the dynamical system nonlinearity.

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Discussion paper

