



## **Is global seismicity signed by the Markowitz wobble ?**

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For the past 100 years the worldwide occurrence of large seismic events shows a significant cyclic temporal pattern of about 34 years. The spectral analysis of the irregular Earth's polar motion over the last 100 years filtered from the secular drifts shows that both LOD and polhody are affected by the same significant periodicity. The third amplitude of polar motion at decadal periodicity in the terrestrial reference frame, after the Chandler and annual, is known as Markowitz wobble. The spectral coherence between the seismicity and polar motion is high at long periods, reaching saturation value at about 20 years. No significant delay is shown by the cross-correlation analysis between LOD, polhody and seismicity. If we accept the idea that global seismicity and polar motion are both signed by the Markowitz wobble, we can infer that they could be modulated by the same cause. Recent models hypothesize a gravitational and inertial coupling between the mantle and an inner core able to reproduce the Markowitz wobble on the polar motion. However, if the wobble signature on seismicity will be confirmed, this interpretation should probably be revised.