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A possible relationship between Chandler Wobble modulation and El Nino/ Southern oscillation phenomena

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Polar motion series was filtered using a statistical method based on Kalman process in order to separate the Chandler Wobble (CW) from other signal components. The instantaneous amplitude is directly computed from the state vector of the Kalman filter. We find that the amplitude modulation of the filtered Chandler Wobble shows a significant agreement with the El-Nino/ENSO represented by the Southern Oscillation Index (SOI) after 1960. Prior to 1960, perhaps the connection is not as strong because of less reliability of the observations involved. In this presentation we propose some elements concerning a possible physical mechanism capable of exciting the CW through the ENSO phenomena, noting that the SOI represents a shift of atmospheric mass across the breadth of the equatorial Pacific Ocean with related mass and motion fluctuations in the atmosphere and ocean in more distant areas.