

Interactive comment on “Variability of scaling time series in the sea ice drift dynamics in the Arctic Ocean” by A. Chmel et al.

Anonymous Referee #1

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This paper presents a scaling analysis of the accelerations of an ice floe in the Arctic Ocean over a one month period.

The presentation is weak and it offers no new insight on sea ice dynamics. The analysis is of the time intervals between certain ice acceleration events, yet we are not told why this parameter is important. 50% of the values are not included because they fall below a noise threshold, but time interval statistics are useless if there are gaps in the data. The time series of the accelerations is not shown, just of the ice speed. The thresholds used for the interval estimates are not discussed yet the results must be sensitive to the thresholds selected. Finally the authors are not considering inertial motion along with tidal motion as a possible (and likely) explanation for the observed oscillations in the later part of the record.

Other comments: How many GPS receivers were used? Use SI units please What is round-off error here? What is pseudo distance? What is the 2DRMS applied to and why “twice”?

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