The Cryosphere Discuss.,
https://doi.org/10.5194/tc-2020-26-RC1, 2020

The Cryosphere
Discussions

Interactive comment on "Opportunistic evaluation of modelled sea ice drift using passively drifting telemetry collars in Hudson Bay, Canada" *by* Ron R. Togunov et al.

Anonymous Referee #1

Received and published: 2 March 2020

Togunov et al,. 2020 In general: This paper evaluates the bias/accuracy of the NSIDC sea ice motion product via comparisons with drifting GPS collars in Hudson Bay. The paper is well-written and referenced, and uses a robust set of statistics to evaluate the product. The discussion details the characteristics of Hudson Bay, which likely affect the performance of the motion product in this region. However, the authors note that their findings are not divergent from other evaluations of this product in the Arctic Ocean. I recommend publication of this paper, with minor edits as indicated below.

Line # Comment 1 Needs indent 64 NSIDC model? 66 I would argue that satellite-based estimates are not validation data, rather, inter-comparison data, since they are

estimates with their own set of biases. The in situ (2) and (3) obs are suitable for validation. 72 What studies? Reference(s)? 74 I'm not certain that the more recently-deployed IABP buoys have these types of errors. The ref was published in 2013, and there have been improvements to these buoys since then. 166 Interesting. NSIDC ice motion does incorporate a turning of the sea ice left, so here it appears the angle of turn may be too high in this region 205 Okay, and the turning angle is discussed here 210 melt ponds 405 I think you used Version 4, so need to update this reference

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