# Comment on tc-2021-273

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Community comment on "A probabilistic seabed–ice keel interaction model" by Frédéric Dupont et al., The Cryosphere Discuss., https://doi.org/10.5194/tc-2021-273-CC1, 2022

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I stumbled upon this scheme in the CICE manual. Given that I have a project with the goal to improve the landfast ice in a pan-Arctic model, I was quite interested. In attempting to bring the algorithm into the SIS2 model, the developer of that model insists on the code passing unit scaling tests.

This equation is problematic:

mu_i  = log(m_i/sqrt(1.0 + v_i/m_i**2))

with m_i having units of meters per unit area and mu_i being dimensionless. It is used here:

x_kmax = exp(mu_i + sqrt(2.0*sigma_i)*1.9430)

where x_kmax is again in units of meters. I think there need to be some scaling constants mixed in, right?