

Interactive comment on “Scaling aspects of the sea-ice-drift dynamics and pack fracture” by A. Chmel et al.

A. Chmel et al.

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A referee’s comment on the rigidity of the sea-ice cover (SIC) is quite appropriate, and we can add some information on this point. After submitting this manuscript we revealed in our files that the large-scale sea-ice fragmentation on 10 February 2004 occurred in the period of very low temperatures (about -40 C). We suppose, that the correlated drift dynamics became disturbed during this freezing cycle, since the sea-ice consolidation hinders the interactions between ice-fields and, correspondingly, the stress release in the SIC. The latter circumstance, in its turn, should enhance the probability of fracturing. Therefore, prolonged periods of decorrelated dynamics could be precursors of large-scale SIC fragmentation due to suppressed energy discharge in the drifting sea-ice.

Interactive comment on Ocean Sci. Discuss., 4, 107, 2007.

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Interactive Discussion

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