

## ***Interactive comment on “A recent bifurcation in Arctic sea-ice cover” by V. N. Livina and T. M. Lenton***

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We would like to thank James Overland for their supportive remarks.

His idea of a tipping point suggests an element of irreversibility, which is a view shared by several others working in the field, who use the existence or not of irreversibility to decide whether there is a sea-ice tipping point or not in their models.

We try to emphasize that tipping points for the Arctic sea-ice need not be irreversible, instead changes can be readily reversed on seasonal timescales with the huge seasonal changes in forcing.

We do acknowledge changing external forcing, in particular in our Fig. 10, where we distinguish seasonal forcing and a longer timescale, directional forcing referred to as

C1562

climate change.

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Interactive comment on The Cryosphere Discuss., 6, 2621, 2012.