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Should we modify our understanding of surface and mid-depth circulation of the Arctic Ocean?

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The canonical picture of the Arctic Ocean circulation consists of an anticyclonic Beaufort Gyre and a Transpolar Drift at the surface, and a cyclonic mid-depth circulation sub-divided into different sub-basin scale gyres.
While this general picture remains intact, new insights have been gained regarding the connection between the surface and mid-depth circulation and their time-dependent response to changes in the atmosphere, as well as the communication with the adjacent Atlantic and Pacific Ocean.
Recent results based on model experiments and observational data will be shown and discussed. These encompass the propagation of density anomalies at mid depth, which on exit may be able to impair the overflows, the use of tracers in the context of understanding the circulation's variability and indications for a recent major shift of flows connecting the Eurasian and the Amerasian Basin.