Authors examined the relationship between atmospheric large-scale circulation indices, twelve SOM patterns, and ice drift speed at three fixed transects. The results are novel. The manuscript was well written. I recommend minor revisions.

1. I suggest adding a map describing the Beaufort Gyre (BG), Transpolar Drift Stream (TDS) and Fram Strait (FR) and their transects. Because not all readers know those circulations.
2. Please tell readers why authors choose 12 nodes ?
3. Please plot the number of days for each node in winter and examine their trends. Based on the trend and sea ice motion through the transects of BG, TDS, and FR for each node, authors can calculated the contributions of 12 nodes to sea ice speed through the transects in winter. Please refer to Lee and Feldstein (2013).

Lee, S., and S. B. Feldstein, 2013: Detecting ozone- and greenhouse gas–driven wind trends with observational data. Science, 339, 563–567, https://doi.org/10.1126/science.1225154.