Arctic Sea Ice Predictability and Prediction on Seasonal-to-Decadal Timescale

A – Dominant Arctic sea ice predictability sources

- Persistence
- Ice thickness preconditioning
- Reemergence

B – Sea ice initialization

- October-November Arctic sea thickness
- March and September Arctic sea ice

C – Multi-model sea ice prediction

- The hindcasts
- C/NRM-CM5.1 and EC-Earth2.3
- Seasonal forecasts initialized every 1st November and every 1st May from 1990 to 2008
- 5 month long
- Initialized from ERA-interim for the atmosphere + in-home sea ice reconstructions + ORAS4 (EC-Earth2.3) or ocean reconstruction (C/NRM-CM5.1) for the ocean
- 5 members using initial perturbations applied to all components for EC-Earth2.3, only the atmosphere for C/NRM-CM5

C – Multi-model sea ice prediction

- Linearly Detrended Anomaly Correlation for Sea Ice Extent (SIE)

References: