SESSION: (A3) S2S ensemble predictions and forecast information

(A3-08)

Subseasonal prediction of wintertime East Asian temperature based on atmospheric teleconnections

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A statistical model is constructed based on the lagged composite fields associated with the Northern Hemisphere teleconnection patterns to predict the East Asian wintertime surface air temperature for lead times out to 6 weeks. The prediction skill of the statistical model is compared with that of hindcast simulations of the Global Seasonal forecasting model version 5. We found that four teleconnections, i.e., the West Pacific, East Atlantic, Scandinavian, and East Atlantic/Western Russian teleconnection patterns, provide skillful predictions over East Asia for lead times beyond 4 weeks. When combinations of the teleconnections is used, the statistical model outperforms the climate model for lead times beyond 3 weeks, especially during those times when the teleconnections are in their active phases.