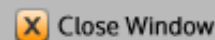




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CONTROL ID: 1455663**TITLE:** ATMOSPHERIC CIRCULATION OVER NORTHERN EURASIA AND THE ARCTIC: ASSESSMENT OF MODELING PERFORMANCE AND RESOLUTION ISSUE

ABSTRACT BODY: A system of MGO global and regional atmospheric models is applied for climate studies in the Arctic region. The modeling system is driven by the observed SST/Ice boundary conditions for the period 1981-1990. It has been shown that the embedded RCM has reasonable skill in downscaling GCM simulated thermal regime and circulation patterns in the Arctic and Northern Eurasia. It should be emphasized, however, that there is significant uncertainty across reanalyses in representation of the observed cyclonic activity in the region depending on the resolution. It has been found that the use of different lateral boundary conditions for RCM simulations (e.g., derived from reanalyses and GCM) weakly affects reproduced atmospheric circulation properties suggesting very large internal variability of the Arctic climate system itself. Further research is needed to order to assess current and future circulation changes in the northern high latitudes and associated changes in the extremes (storm surges, frequency and intensity of heat/cold outbreaks in the Arctic, etc.). The study is supported by RFBR grant 11-05-00733.

CURRENT SECTION/FOCUS GROUP: Global Environmental Change**CURRENT SESSION:** GC019. Environmental, Socio-economic and Climatic Change in Northern Eurasia and Their Feedbacks to the Global Earth System**INDEX TERMS:** [1637] GLOBAL CHANGE / Regional climate change.**AUTHORS/INSTITUTIONS:** I. Shkolnik, S. Efimov, Regional Climate Modeling Lab, Main Geophysical Observatory, St. Petersburg, RUSSIAN FEDERATION;**SPONSOR NAME:** Igor Shkolnik**CONTACT (E-MAIL ONLY):** i.m.shkolnik@mail.ru**TITLE OF TEAM:**

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