Characteristics of air – sea ice interaction processes in the Central Arctic.

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Based on the developed with modern parameterizations method for calculations of sensible and latent turbulent heat fluxes, validated by direct measurements, and the data of year around every minute measurements of surface air temperature, humidity and wind velocity at two levels, the estimates of turbulent heat fluxes for the tracks of Russian drifting stations "North Pole" - 35" (2007 - 2008) and "North Pole - 39"(2011-2012) drifts are obtained. Together with measurements of incoming and reflected shortwave and longwave radiation, and data of cloudiness and snow-ice cover observations, they give possibility to analyze spatial - temporal variability of air – sea ice interaction processes from each 10 minutes to synoptic and seasonal time scales. Comparison with data of similar observations executed at the Russian drifting station "North Pole-4" (1954 - 1957) and the US drifting station SHEBA (1997 - 1998) allowed making conclusions about the long-term variability of the energy exchange processes between underlying surface and atmospheric surface layer in the Arctic Ocean. One of the most interesting features is the peculiarities of energy exchange characteristics calculated with data of drifting station "North Pole - 35", which drift had place in the northern periphery of the Kara and Barents seas. Due to influence of continental air masses the large differences in the values of turbulent fluxes compare with calculated for the central part of the Arctic Ocean and the Beaufort Gyre area in April-October are revealed.