



Water and thermal balances of Antarctic Lakes

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Water and thermal balance components of the lakes located on Fields Peninsula of King George Island (Western Antarctica) and Larsemann Hills oasis (Eastern Antarctica) were studied. Field campaigns were carried out during the summer period (Dec-Mar) of 2012-13, 2013-2014. The lakes' water level, surface and deep water temperatures, surface water inflow/outflow, ground water level, snow water depth and density were measured. The water samples to estimate the solid and chemical runoff were collected. The meteorological data at the nearby stations include the precipitation amount, air temperature, wind speed and cloud cover and may be used as forcing data for a lake model.

Daily and seasonal values of the surface water inflow/outflow and evaporation were estimated. The lake model FLake was explored to represent the summer thermal regime of different lakes of sizes in Antarctica.