

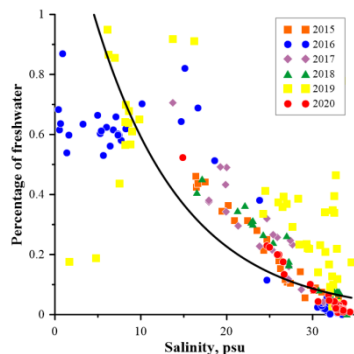
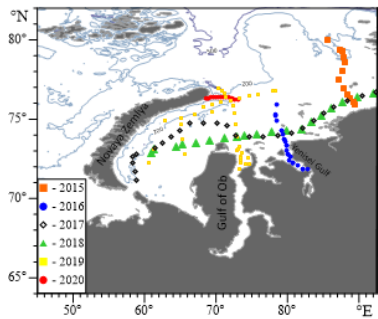


Estimation of the seasonal input of freshwater in the Kara sea surface layer using hydrochemical proxies

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Stations



Methods

$$\alpha \times S_s + \beta \times S_o + \gamma \times S_E + \delta \times S_m = S$$

$$\alpha \times TA_s + \beta \times TA_o + \gamma \times TA_E + \delta \times TA_m = TA$$

$$\alpha \times Si_s + \beta \times Si_o + \gamma \times Si_E + \delta \times Si_m = Si$$

$$\alpha + \beta + \gamma + \delta = 1$$

$\alpha, \beta, \gamma, \delta$ – the share of seawater, water of the Ob and Yenisei and meltwater;
 S_s, S_o, S_E, S_m, S – salinity of seawater, water of Ob and Yenisei, meltwater and observed surface water;
 $TA_s, TA_o, TA_E, TA_m, TA$ – total alkalinity of seawater, water of Ob and Yenisei, meltwater and observed surface water;
 $Si_s, Si_o, Si_E, Si_m, Si$ – silicon content in seawater, water of Ob and Yenisei, meltwater and observed surface water.

The dependence of the proportion of freshwater on the salinity on the surface is obtained.

$$D_w = 1.546 \times \exp(-0.096 \times S)$$

