



Validation and Interpretation of a new sea ice GlobIce dataset using buoys and the CICE sea ice model

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The GlobIce project has provided high resolution sea ice product datasets over the Arctic derived from SAR data in the ESA archive. The products are validated sea ice motion, deformation and fluxes through straits. GlobIce sea ice velocities, deformation data and sea ice concentration have been validated using buoy data provided by the International Arctic Buoy Program (IABP). Over 95% of the GlobIce and buoy data analysed fell within 5 km of each other. The GlobIce Eulerian image pair product showed a high correlation with buoy data. The sea ice concentration product was compared to SSM/I data. An evaluation of the validity of the GlobICE data will be presented in this work.

GlobICE sea ice velocity and deformation were compared with runs of the CICE sea ice model: in particular the mass fluxes through the straits were used to investigate the correlation between the winter behaviour of sea ice and the sea ice state in the following summer.