

Snow measurements around the Hornsund Fjord (Svalbard)

(short description)

Adam Nawrot, Tomasz Wawrzyniak, Bartłomiej Luks

Institute of Geophysics Polish Academy of Sciences, Warsaw, Poland

ES1404-CORE GROUP MEETING
06th October, Warsaw, Poland

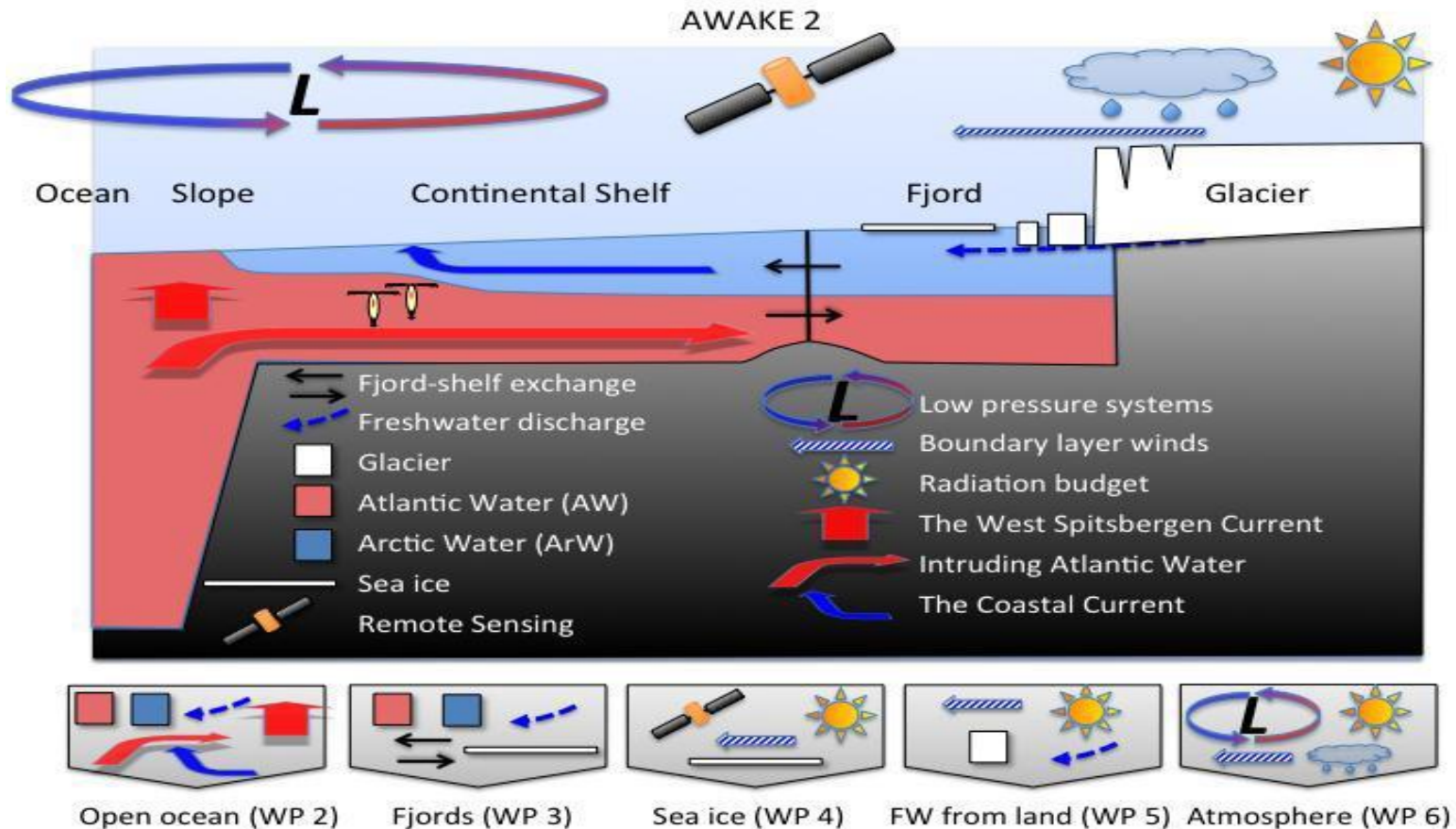


AWAKE-2

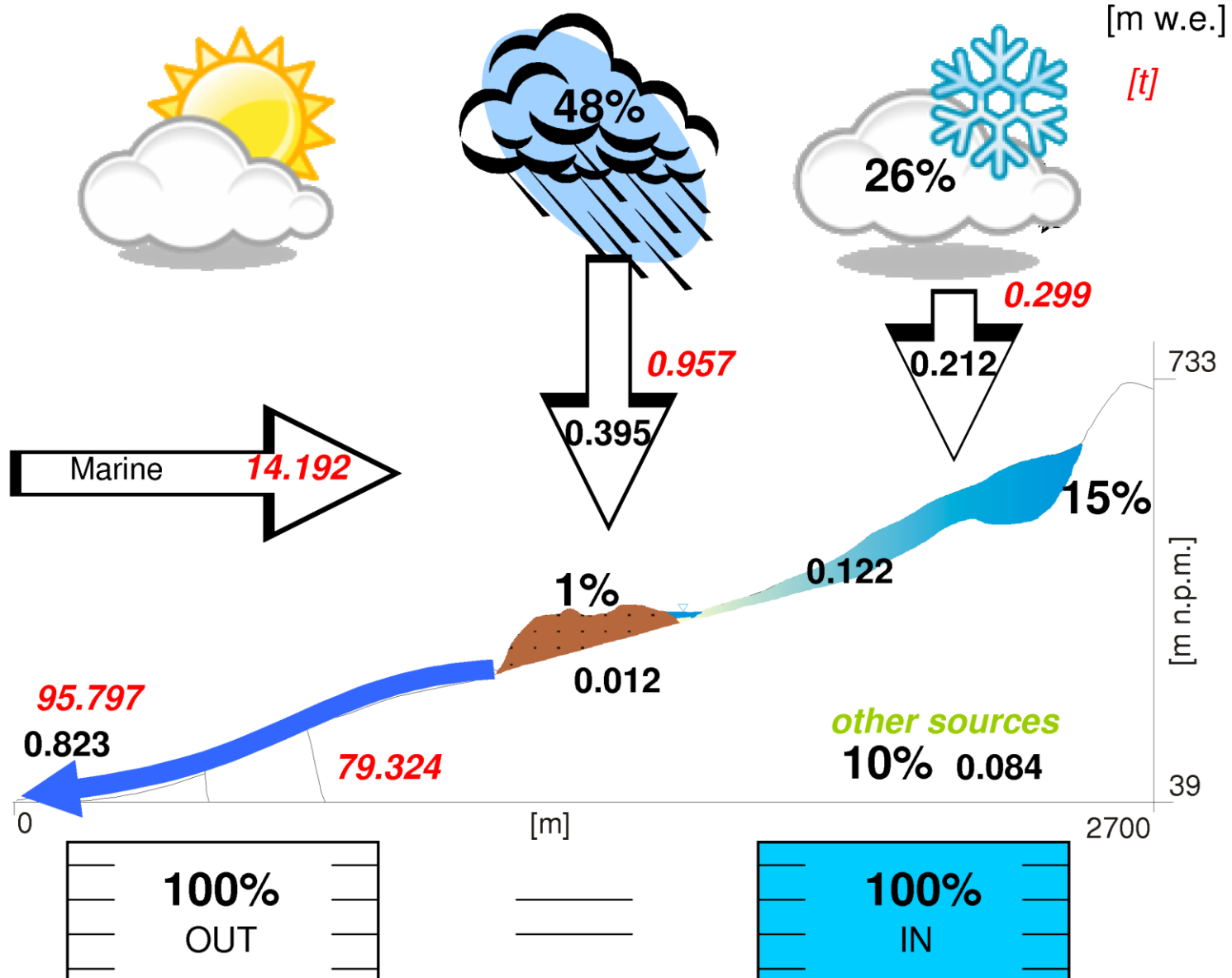
Arctic Climate System Study of Ocean, Sea Ice and Glaciers Interactions in Svalbard Area



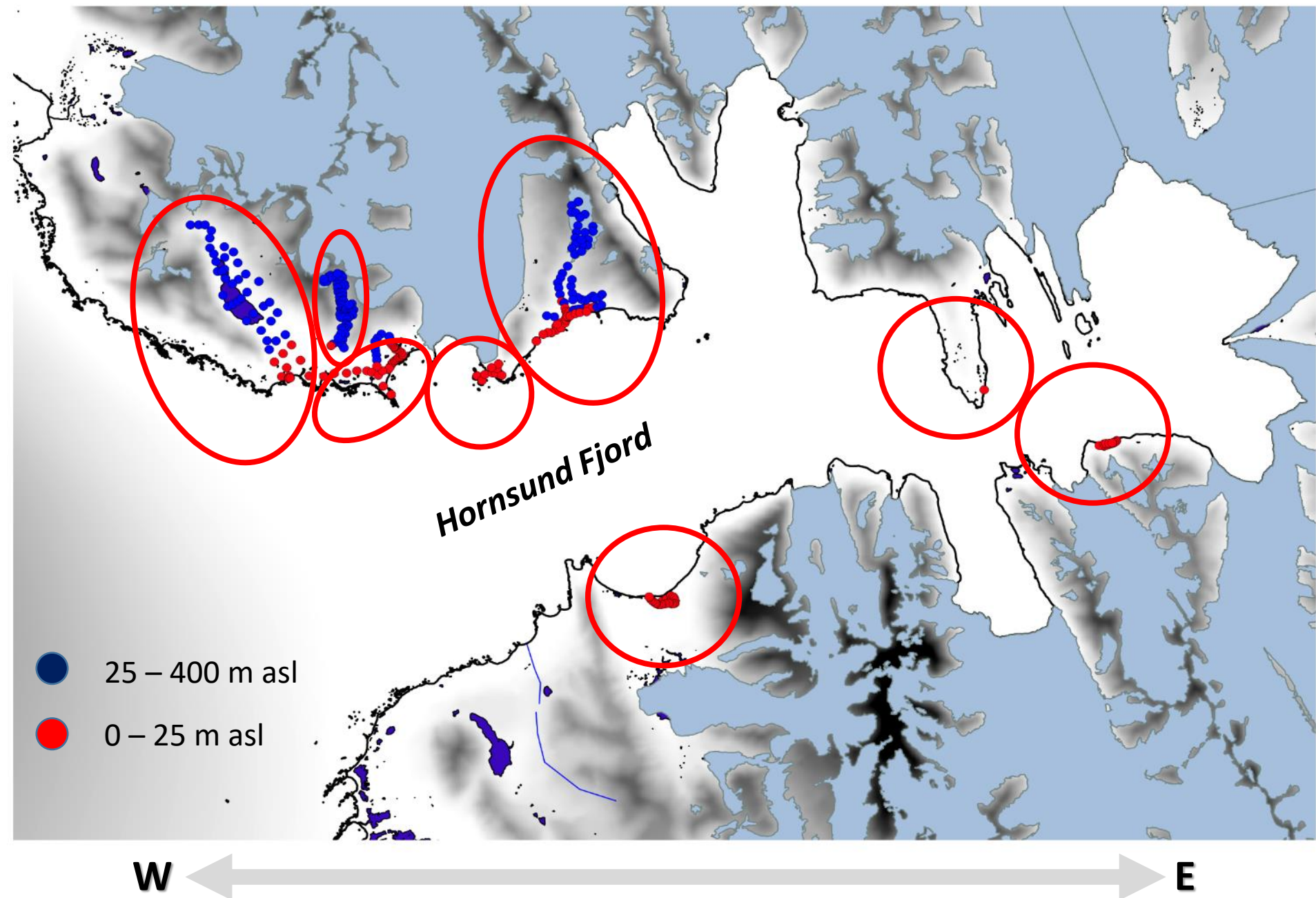
The aim of the AWAKE-2 project is to understand the interactions between the key components of the climate system in the Svalbard area, and all activities are directed to achieve this goal. The areas and links between all project WPs are shown on figure below.



Water balance in 2008 - Ariedalen, Spitsbergen

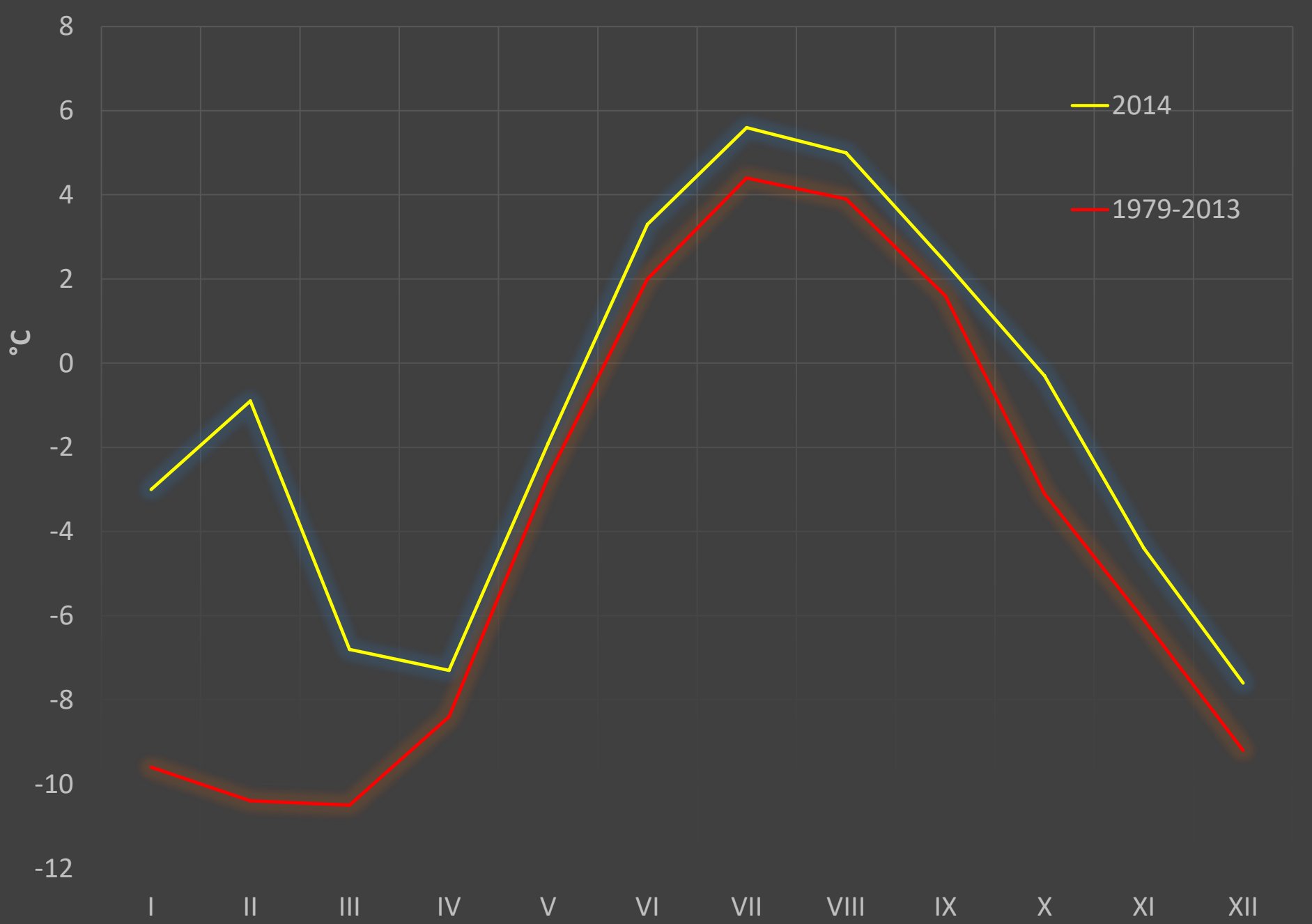






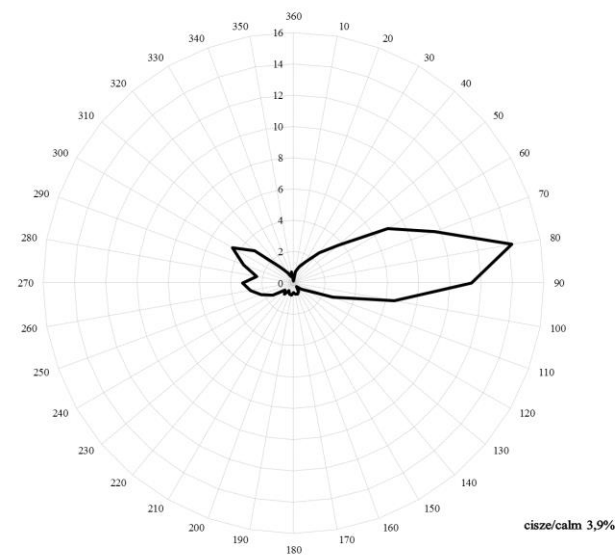


Annual (2014) and multi-annual (1979-2013) course of monthly mean air temperature

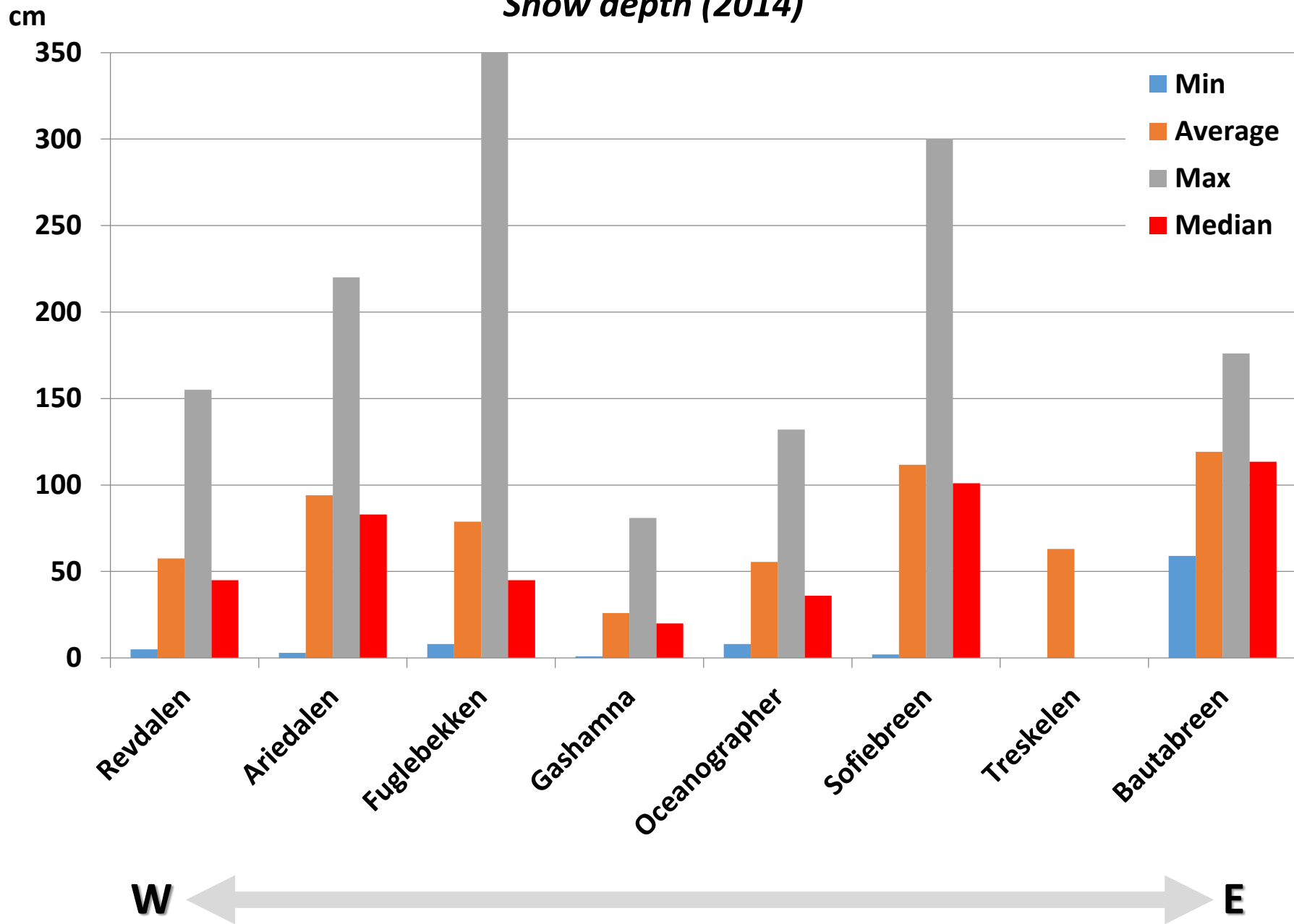


PRECIPITATION [mm]	2014	1979-2013
annual precipitation	410	452,6
max. daily precipitation	33,1	58,3
days with rainfall	103	94
days with snowfall	191	170
days with daily precip. $\geq 0,0$ mm	251	242
days with daily precip. $\geq 0,1$ mm	183	171
days with daily precip. $\geq 1,0$ mm	78	87
days with daily precip. $\geq 10,0$ mm	9	10

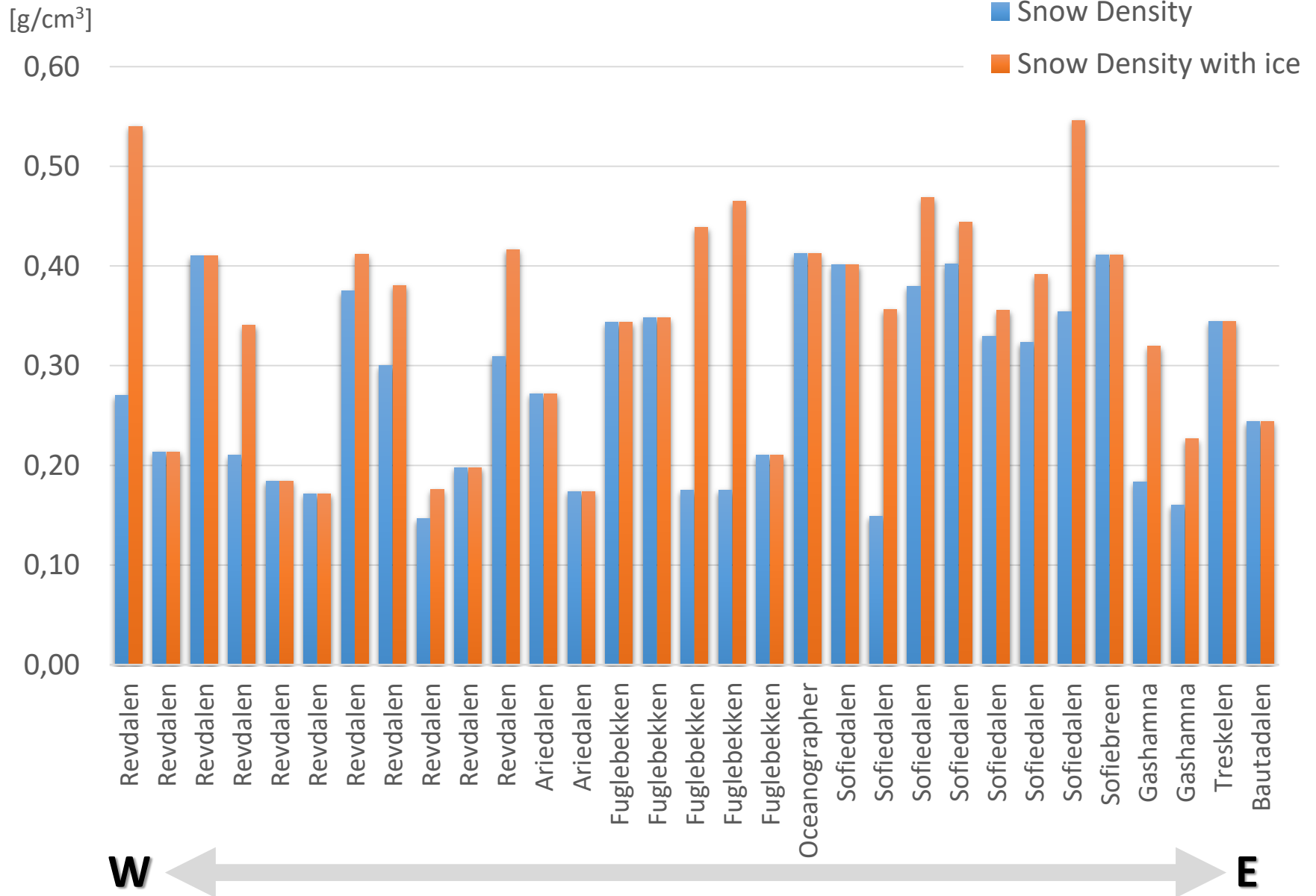
SNOW COVER [cm]	2014	1979-2013
max. snow depth	56	80
mean depth snow cover	6	19
days with snow cover	238	256
days with snow cover >10 cm	149	174
days with snow cover >20 cm	113	107
days with snow cover >40 cm	30	27

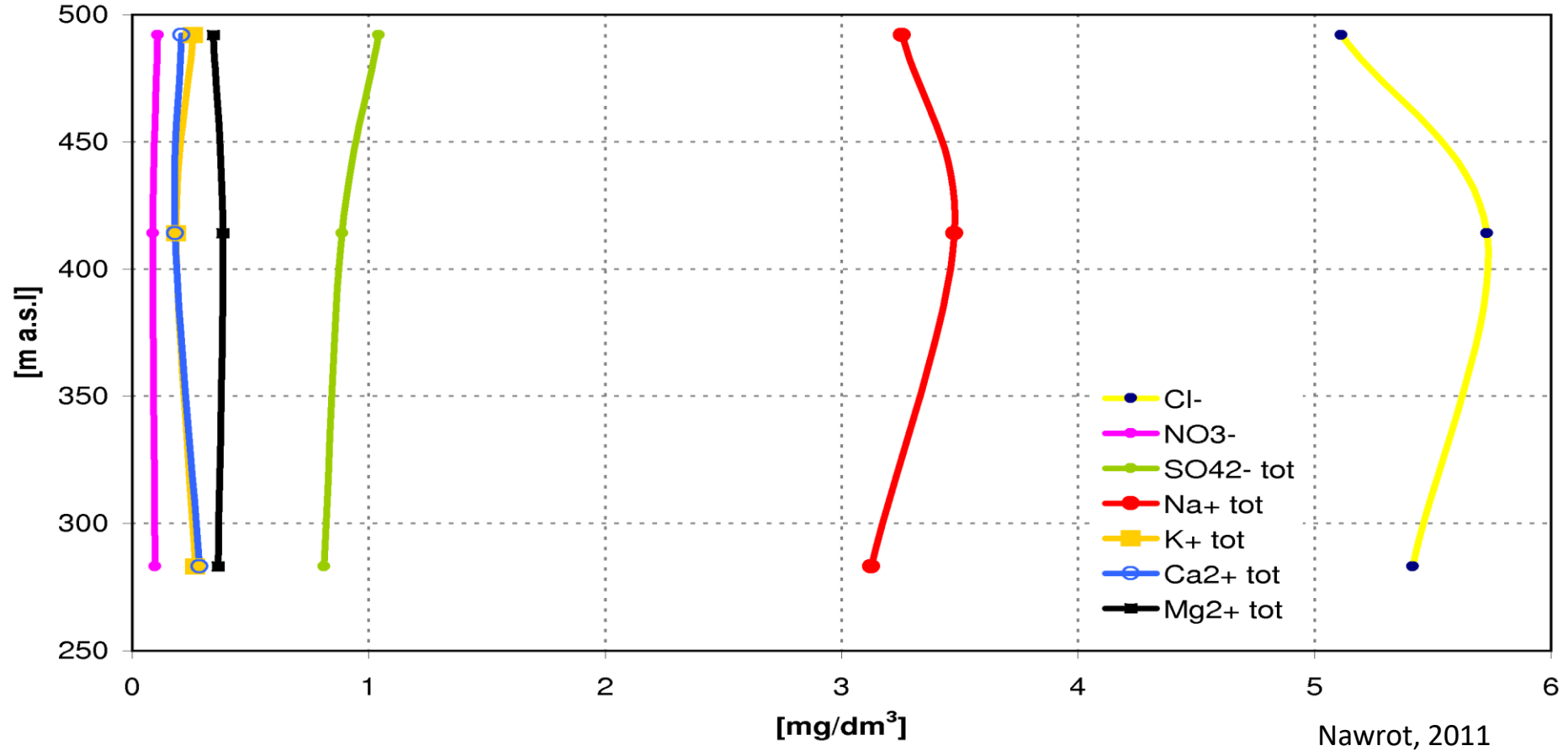
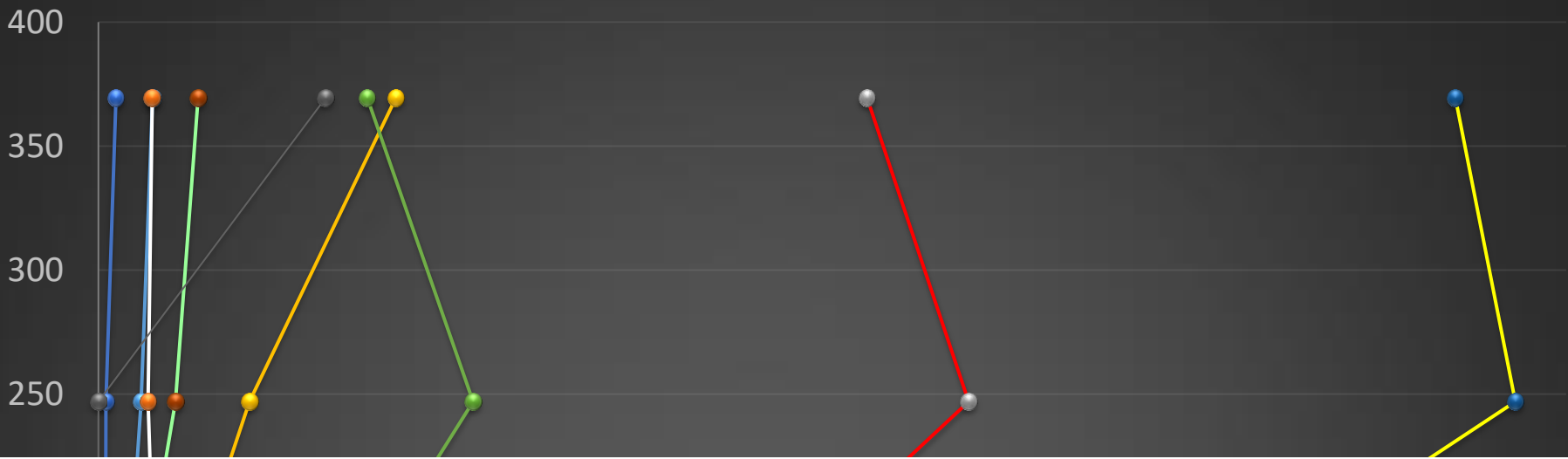


Snow depth (2014)

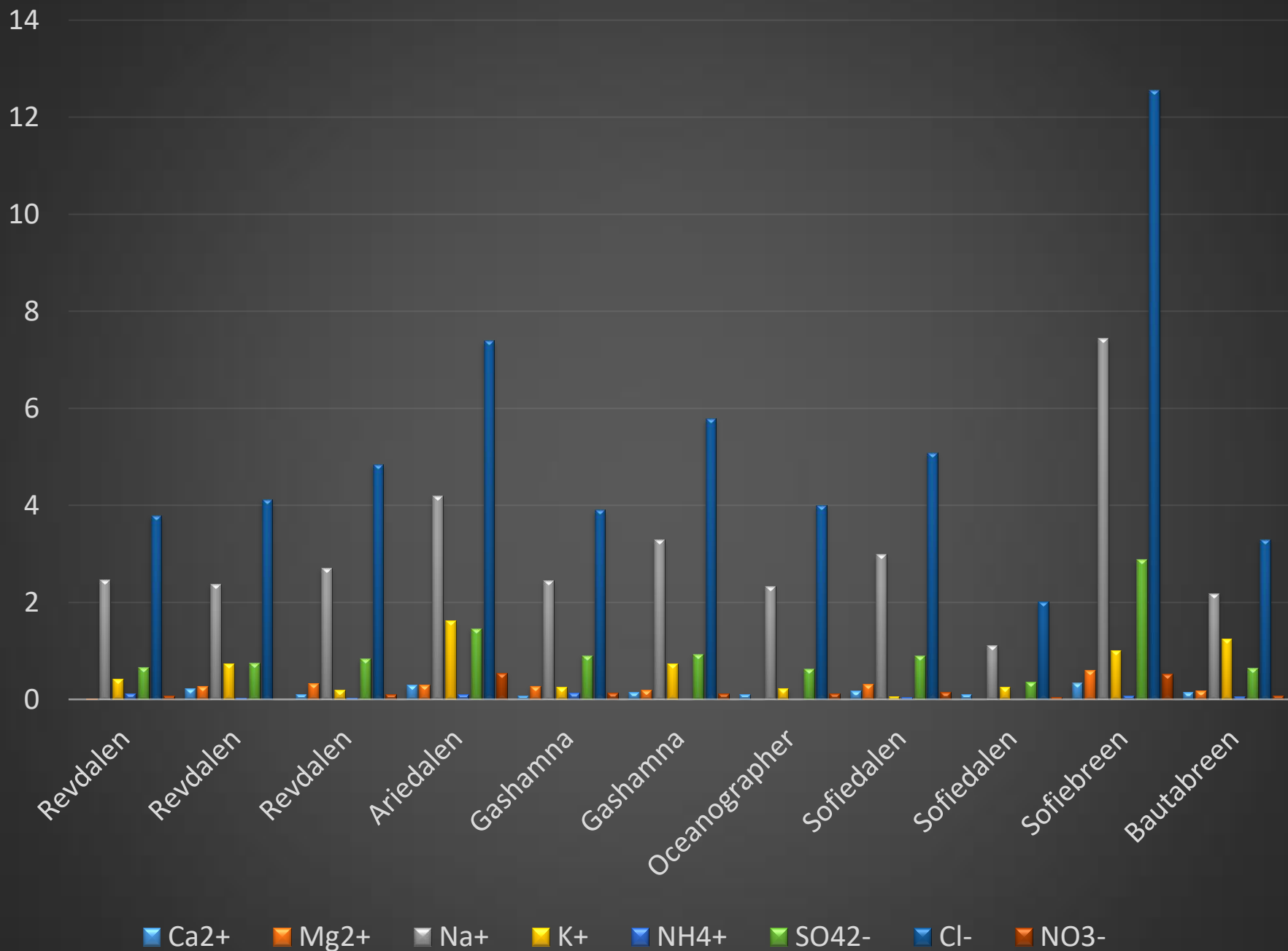


Mean snow density





Nawrot, 2011



W

E

Conclusions

Snow depth increases from the West to the East

There is no significant change in the snow density distribution from the West to the East

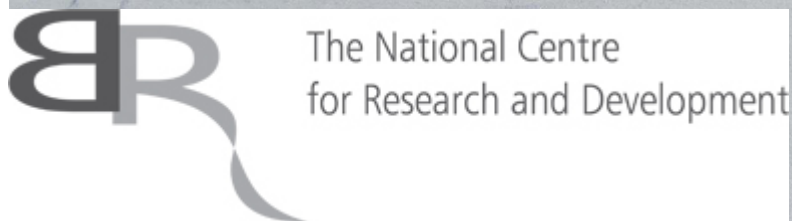
There is no significant change in the snow density with elevation

Small changes in ions concentration due to the horizontal distribution - (small amount of samples)

Ions concentration is changing with elevation



"Arctic climate system study of ocean, sea ice and glaciers interactions in Svalbard area" - AWAKE2 (Pol-Nor/198675/17/2013) supported by the National Centre for Research and Development within the Polish-Norwegian Research Cooperation Programme.





Thank you for
your attention!