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Tertiary Supplement for: A data-calibrated distribution of deglacial chronologies for the North American ice complex from glaciological modeling

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Table 1: Summary characteristics of runs nn9894 and nn9927 and ensemble scores. Note indicated misfit score values are a logarithmic representation of their contributions to the metric weighting (*i.e.* in analogy with the relationship between the square of a statistical residual and the corresponding probabilistic value under a Gaussian distribution. Ice volumes are give in meters eustatic sea level equivalent (mESL). "GOM d." is maximum (100 year mean) Gulf of Mexico discharge during the 14.4 ka to 13.7 ka interval. "cut3" denotes the top tertial threshold acceptance misfit scores used in the cut3 sieve. 'min' and 'max' are the minimum and maximum misfit values in the ensemble (For the case of RSL where RSL score can be below 0 the minimum absolute value is shown.

run	RSL	Rdot	Strandlines	Marine Limit	mwp1a (mESL)	20 ka ice vol. (mESL)	26 ka ice vol. (mESL)	GOM d. (dSv)
nn9894	0.1757	0.329	1.3517	3603	10.4	70.0	77.1	2.0
nn9927	0.165	0.337	1.826	2353	11.6	70.2	74.8	1.8
median	0.356	0.599	2.399	5211				
cut3	0.291	0.512	2.129	4530				
min	0.102	0.239	1.089	1620				
max	1.395	2.040	6.059	13921				

1. Time-slices for two sample runs

This supplement contains time-slices for two of the best runs to offer an example of individual glaciologically-self-consistent runs and variation within the ensemble. A summary of their characteristics is given in Table 1. Of perhaps particular interest is the regional pattern of mass-loss during mwp1-a mirroring that of the ensembles means.

Each run in the ensemble has individual strengths and failings. Given this along with our emphasis on quantifying uncertainty, we have focused on the statistical characteristics of the calibrated ensemble. Table 1 includes summary values from the ensemble for four of the major metric components. This should help in interpreting the various score values along with providing a somewhat clearer motivation for the sieve thresholds.

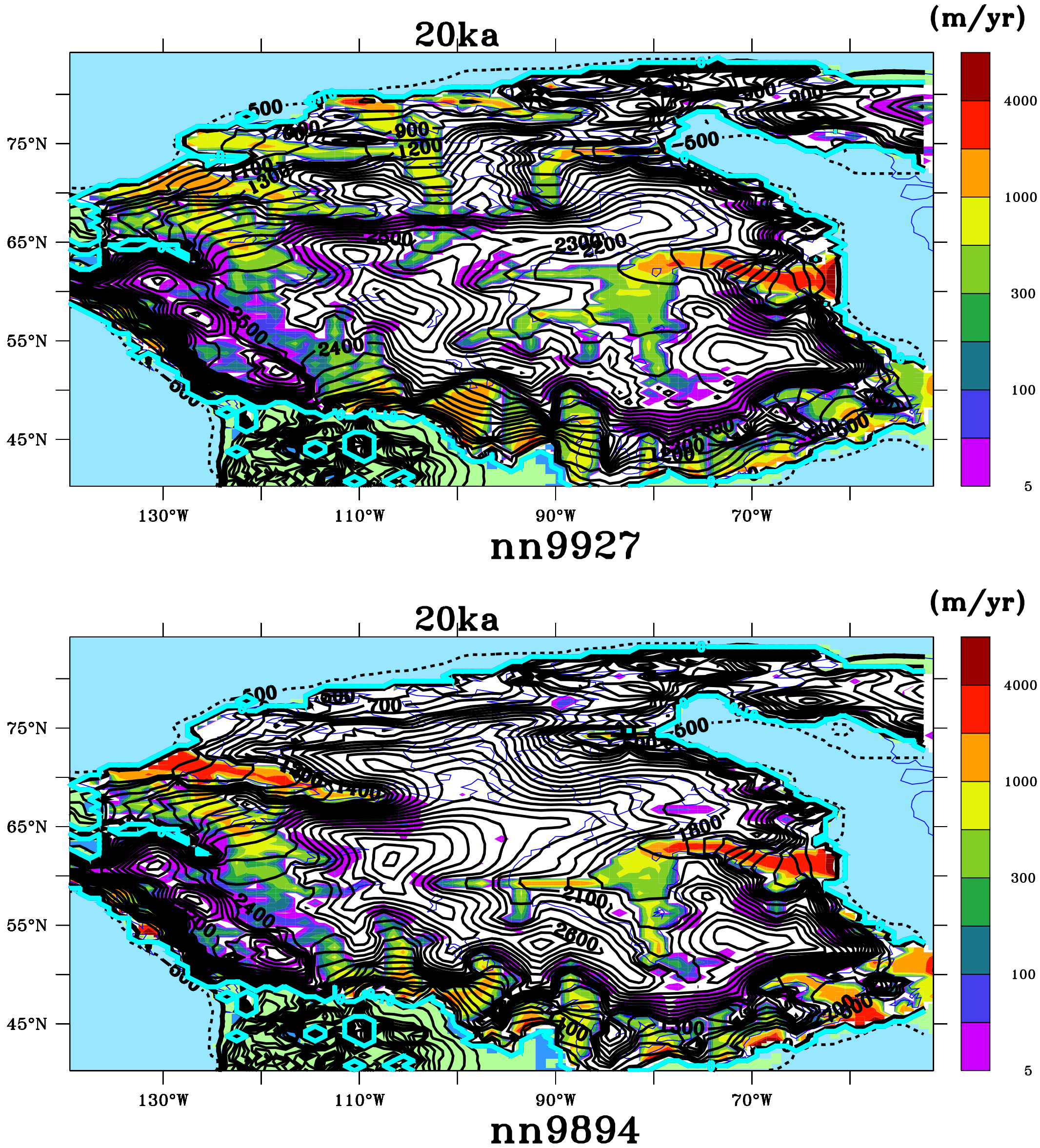

Figure 1: 20 ka weighted mean basal velocity and surface elevation. Only lakes of depth greater than 10 m are shown in this and subsequent time-slice plots. Furthermore shorelines are those from the GSM and therefore do not take into account geoidal deformation (which is taken into account for RSL calculations).

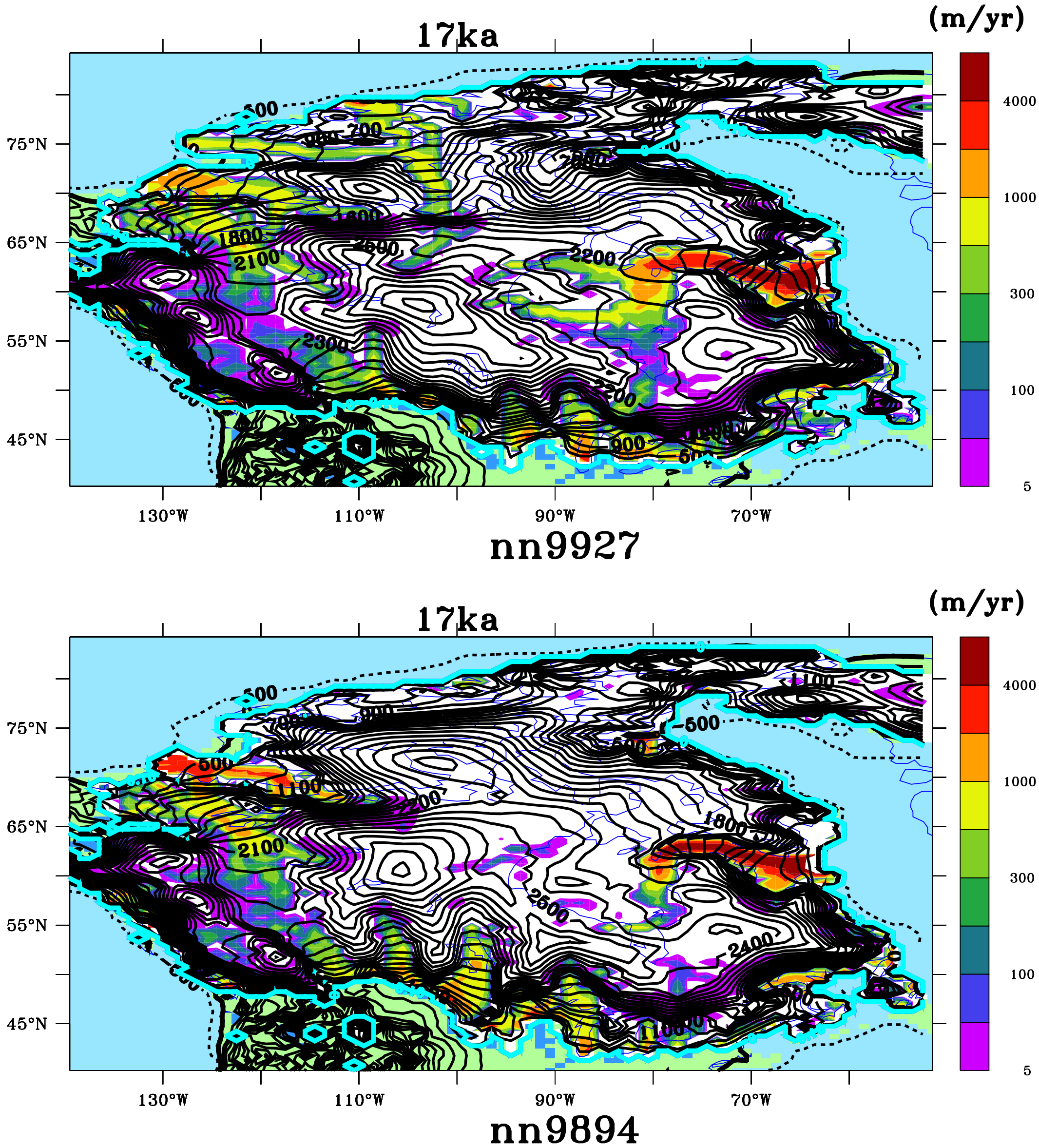

Figure 2: 17 ka weighted mean basal velocity and surface elevation.

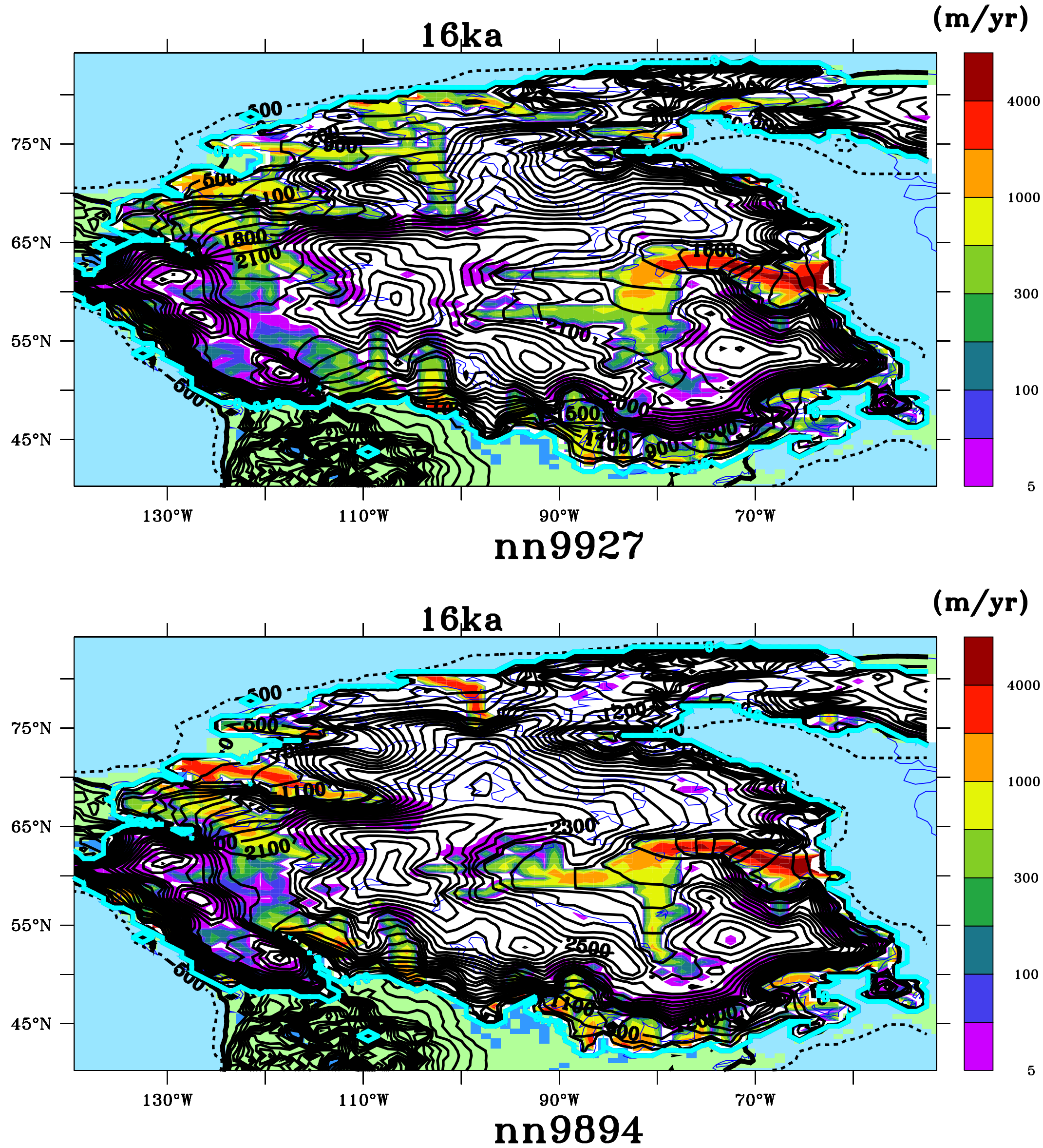

Figure 3: 16 ka weighted mean basal velocity and surface elevation.

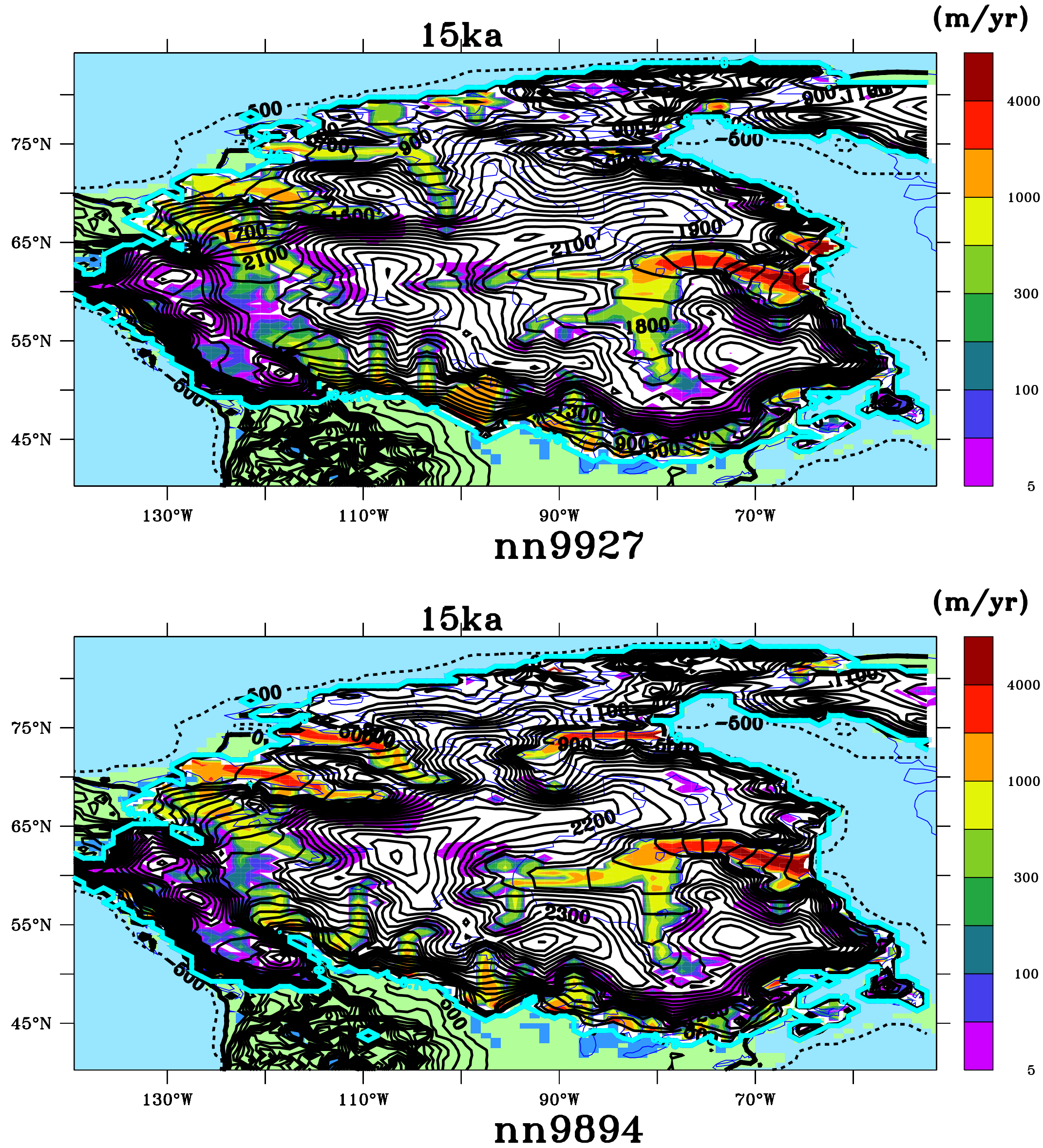

Figure 4: 15 ka weighted mean basal velocity and surface elevation.

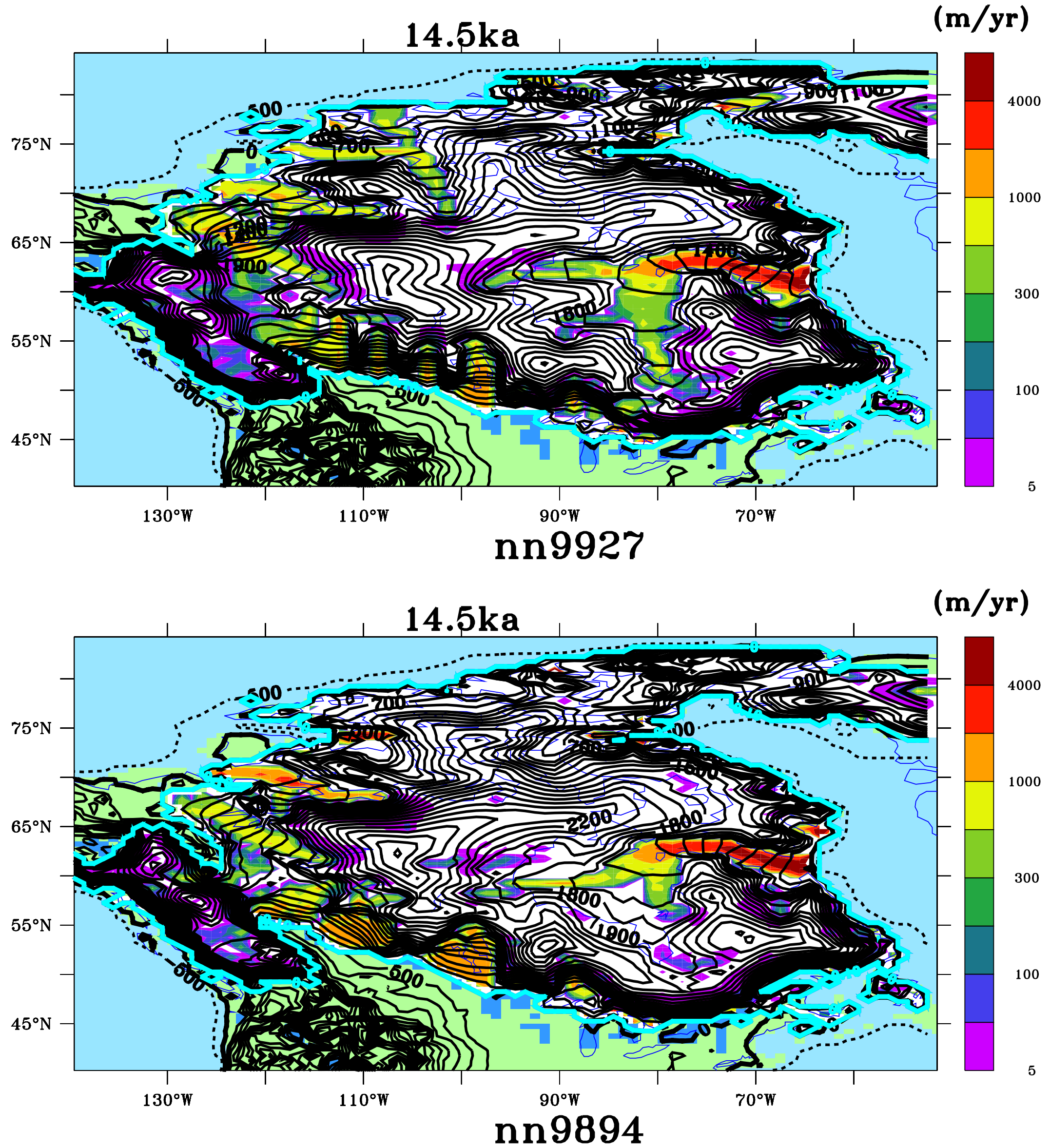

Figure 5: 14.5 ka weighted mean basal velocity and surface elevation.

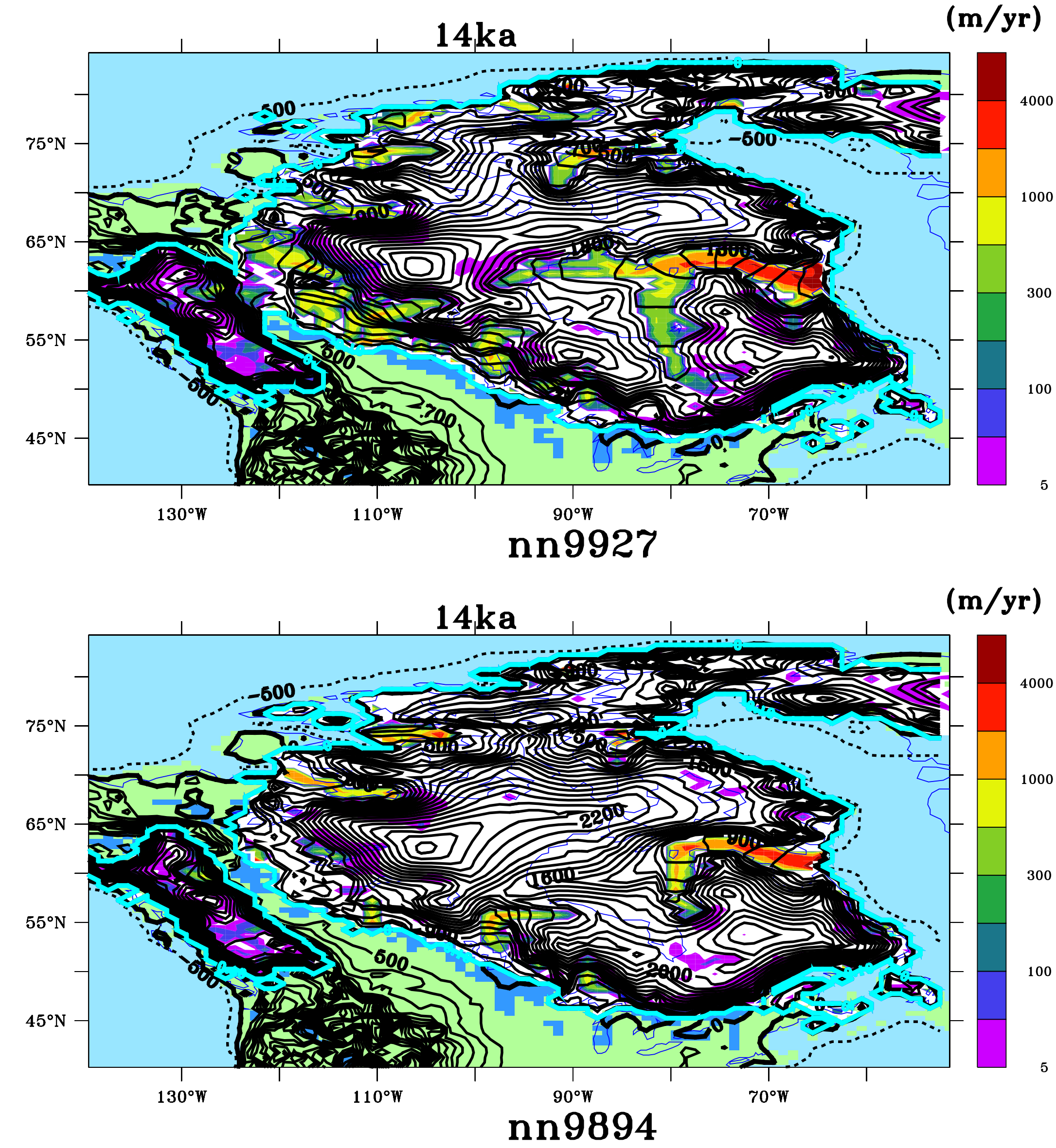

Figure 6: 14 ka weighted mean basal velocity and surface elevation.

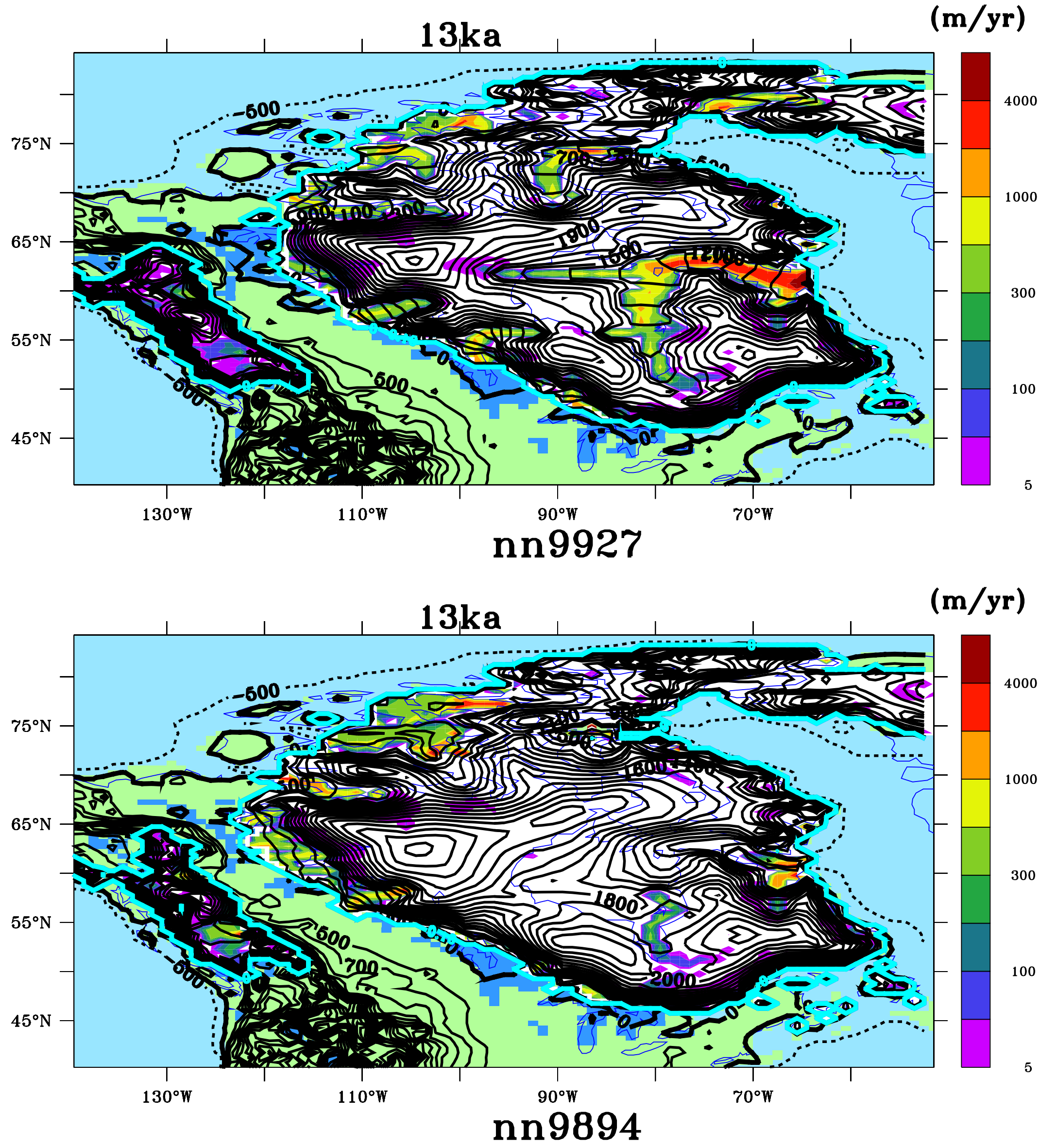

Figure 7: 13 ka weighted mean basal velocity and surface elevation.

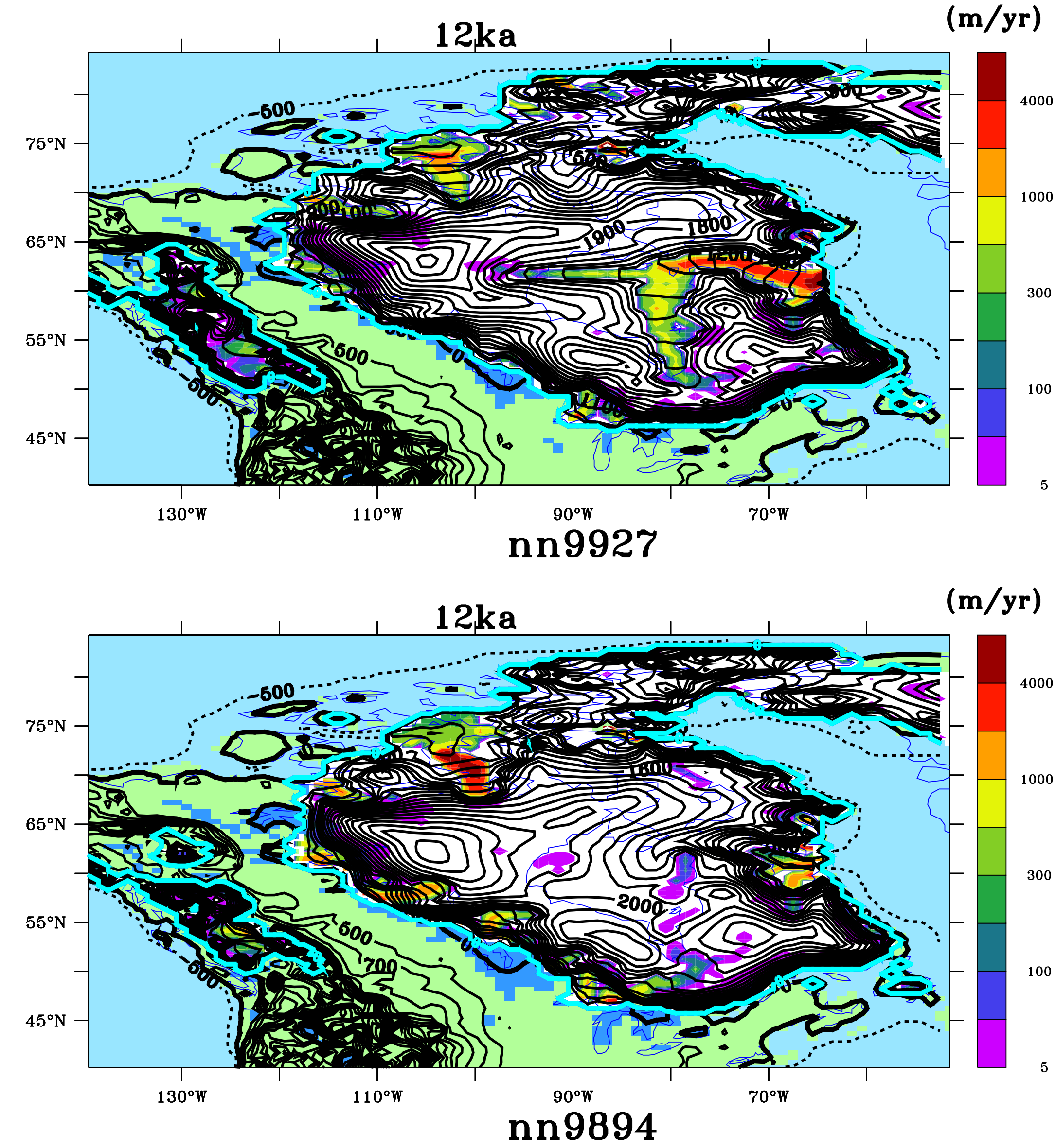

Figure 8: 12 ka weighted mean basal velocity and surface elevation.

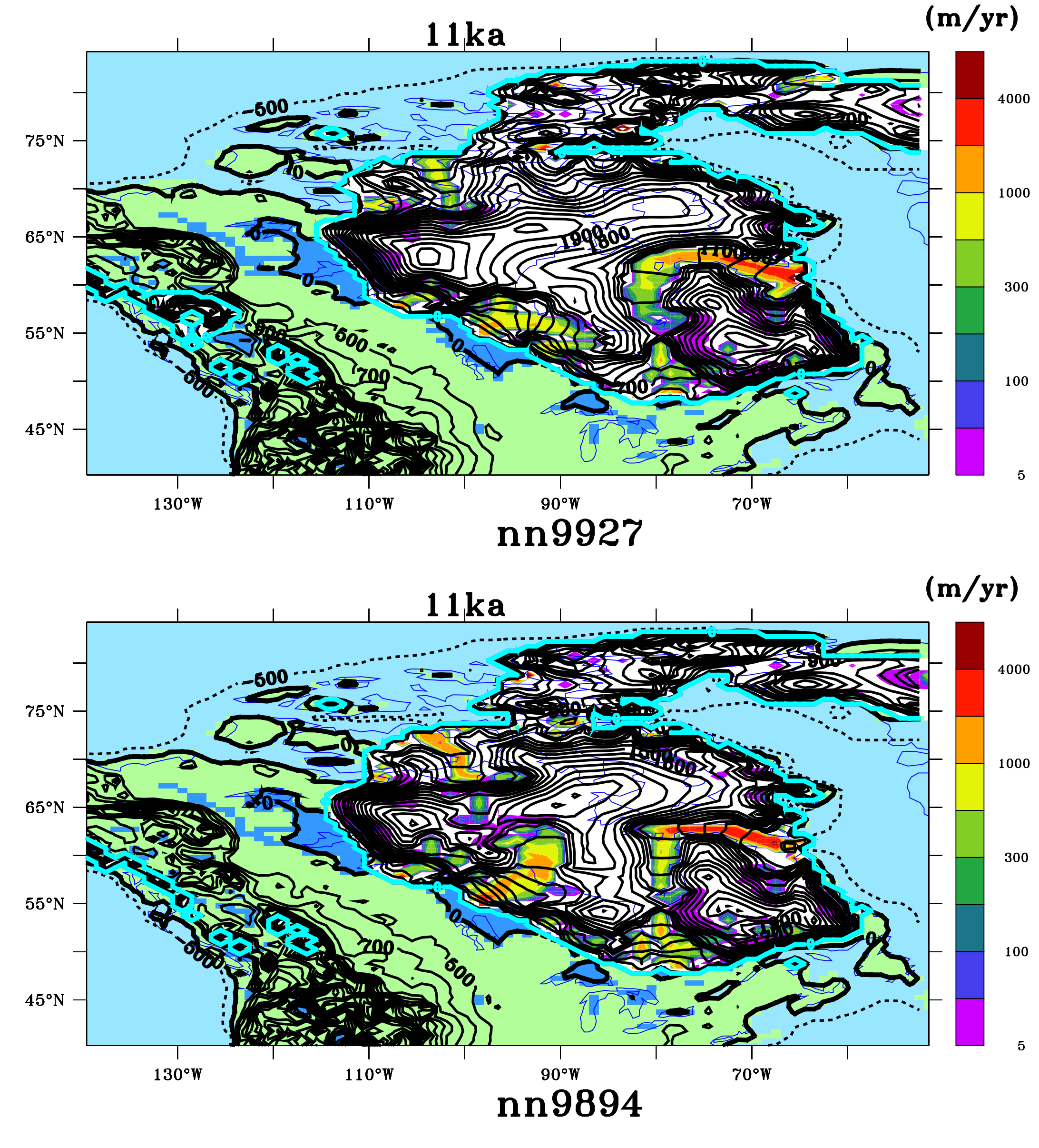

Figure 9: 11 ka weighted mean basal velocity and surface elevation.

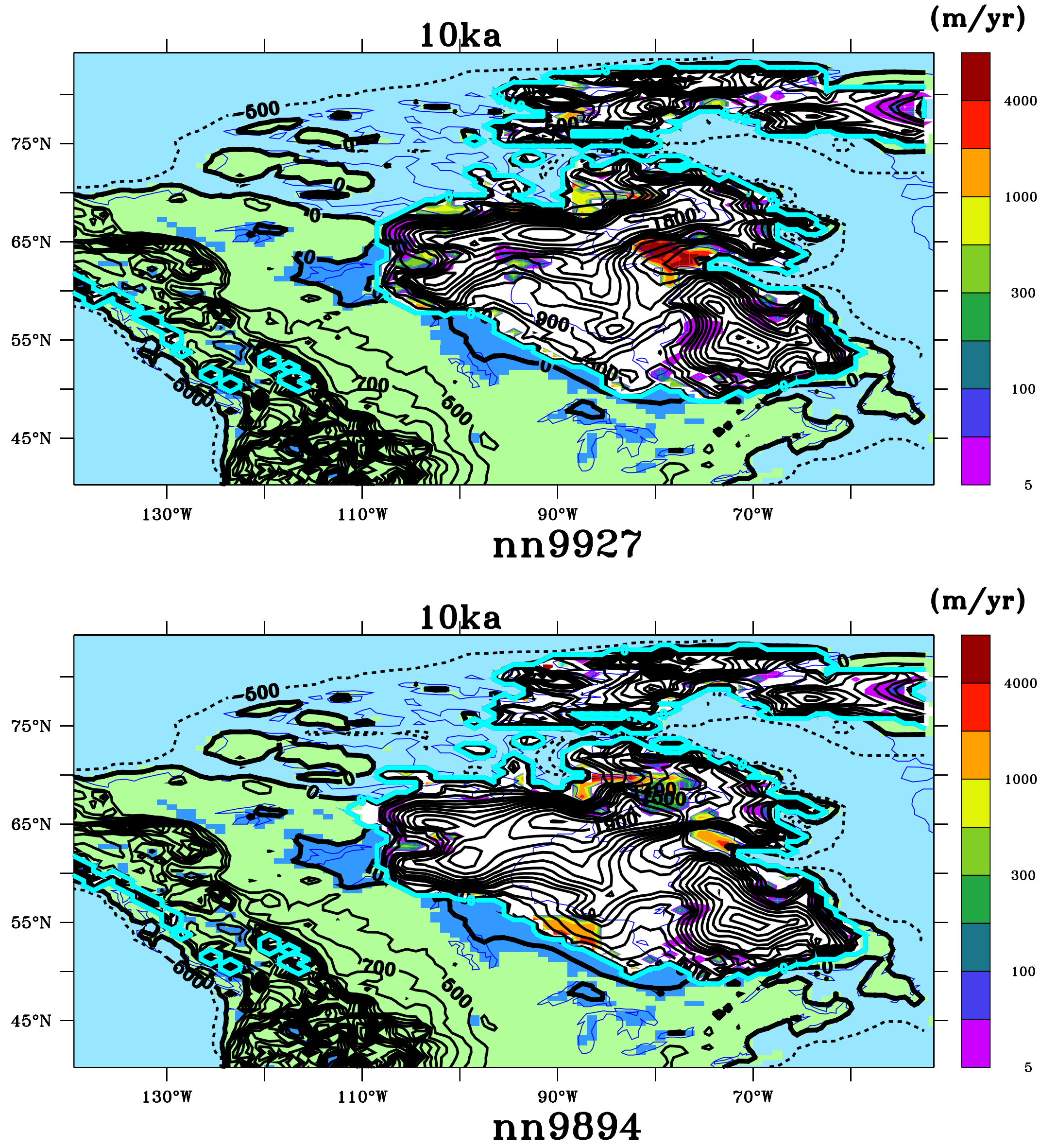

Figure 10: 10 ka weighted mean basal velocity and surface elevation.

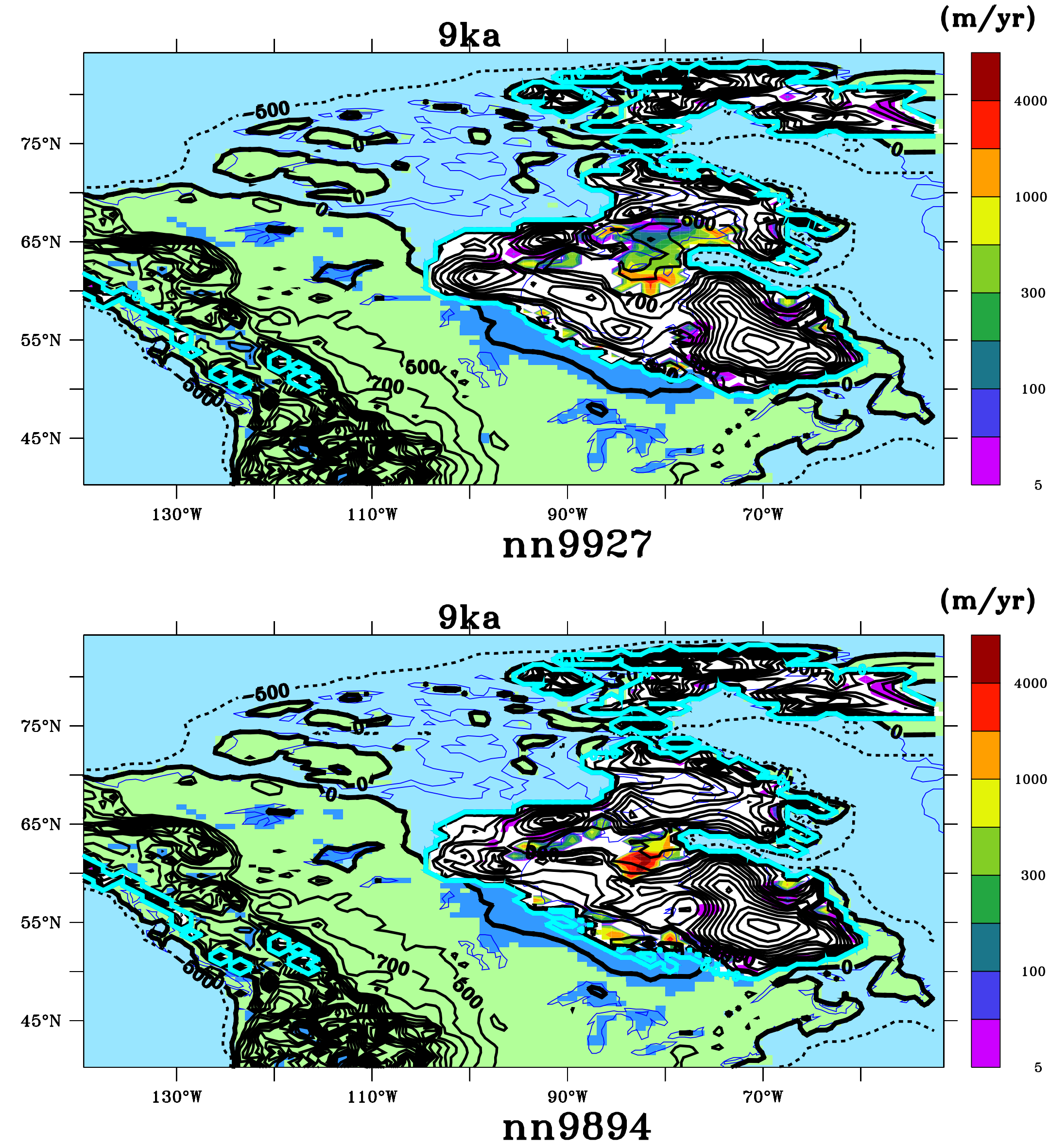

Figure 11: 9 ka weighted mean basal velocity and surface elevation.

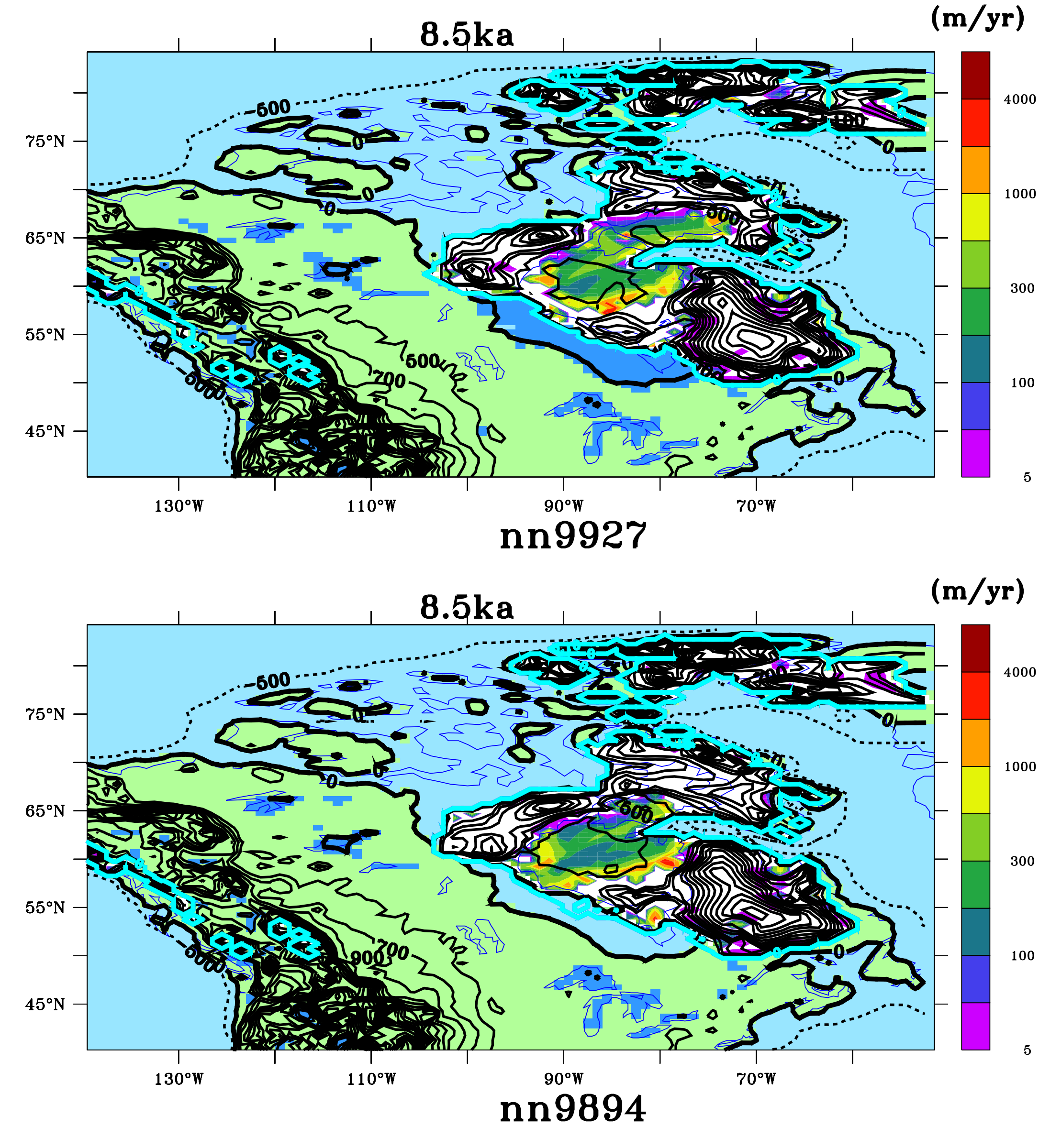

Figure 12: 8.5 ka weighted mean basal velocity and surface elevation.

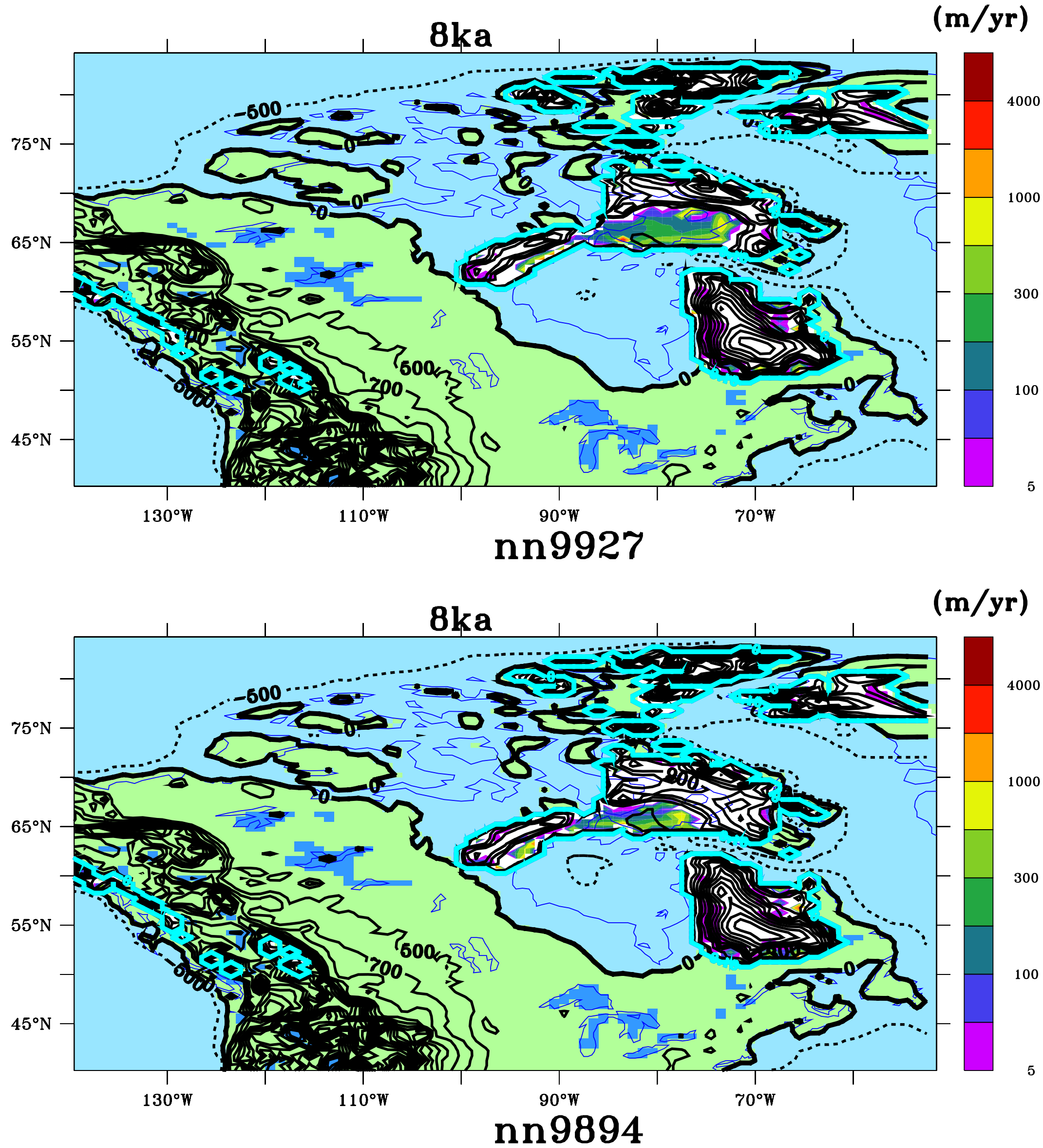

Figure 13: 8 ka weighted mean basal velocity and surface elevation.

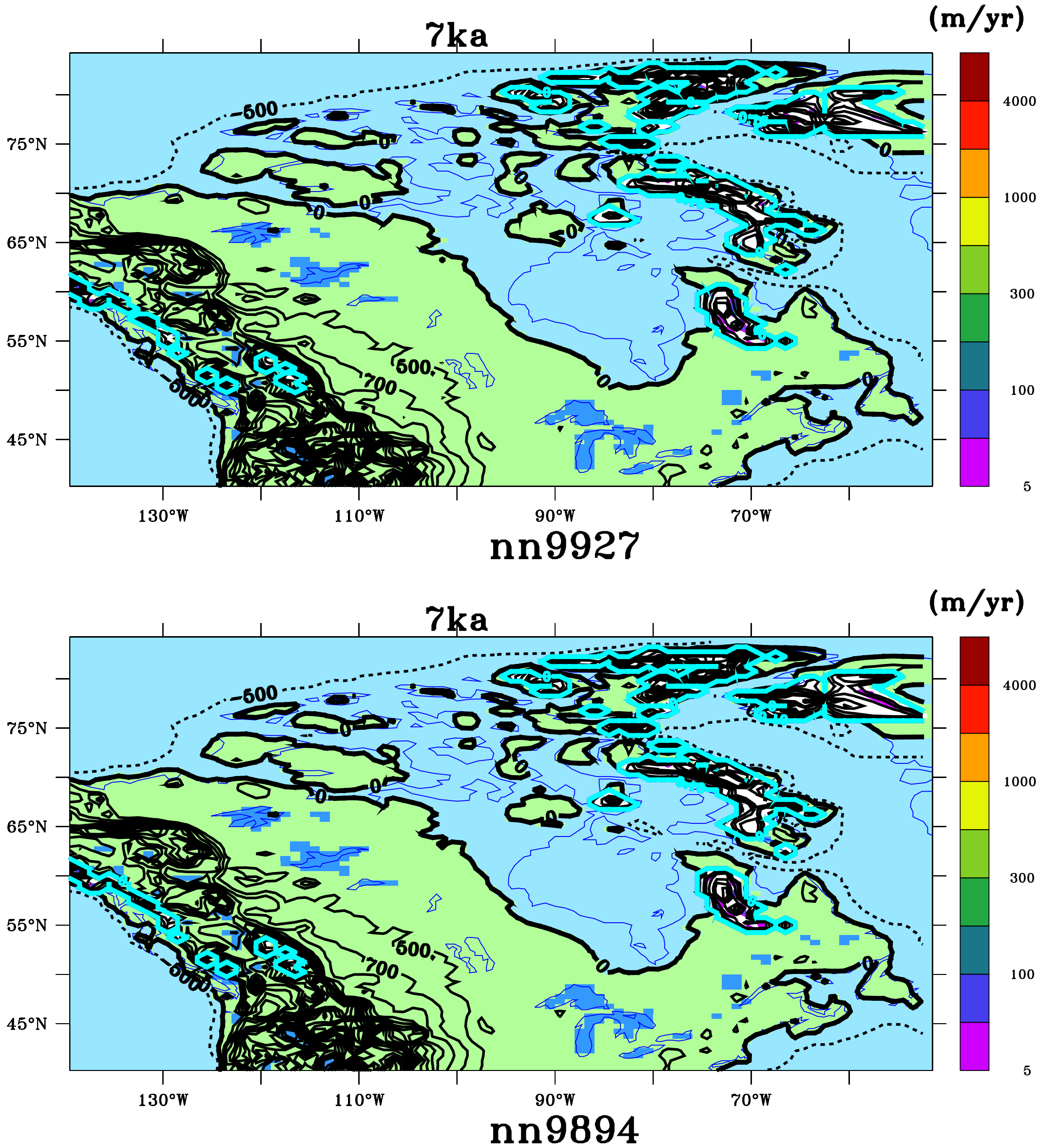

Figure 14: 7 ka weighted mean basal velocity and surface elevation.