1 **Supplementary Materials: Evolution of cratons through**
2 **the ages: A time-dependent study**

3 Jyotirmoy Paul*, Attreyee Ghosh

4 Centre for Earth Sciences, Indian Institute of Science, Bangalore, India

5 *jyotirmoy@iisc.ac.in

Fig. S 1: Final stage of cratonic evolution from different models at 240 km. Viscosity combinations of cratons and asthenosphere is marked for each figure.

Fig. S 2: Final stage of cratonic evolution from different models at 24 km. Viscosity combinations of cratons and asthenosphere is marked for each figure.

Table S 1: List of viscosity parameters used in the models.

Normalized Asth. visc.	Actual asth. visc. (Pa-s)	Craton visc. multi- ple	Craton visc. within 0-100 km (Pa-s)	Craton visc. within 100-300 km (Pa-s)	Final defor- mation at 240 km (%)	Final defor- mation at 24 km (%)
0.01	10^{19}	10	3×10^{23}	10^{20}	-91	55
0.01	10^{19}	100	3×10^{24}	10^{21}	-48	33
0.01	10^{19}	1000	3×10^{25}	10^{22}	-37	10
0.1	10^{20}	10	3×10^{23}	10^{21}	-60	34
0.1	10^{20}	100	3×10^{24}	10^{22}	-19	7
0.1	10^{20}	1000	3×10^{25}	10^{23}	-31	-6
1	10^{21}	10	3×10^{23}	10^{22}	-12	7
1	10^{21}	100	3×10^{24}	10^{23}	-10	0.2
1	10^{21}	1000	3×10^{25}	10^{24}	-8	-9

9 V1: Animation of cratonic evolution at 240 km depth. Asthenosphere viscosity is 10^{19} Pa-s,
10 cratons are 10 times stronger than surroundings (0.01, 10)
11 V2: Animation of cratonic evolution at 240 km depth. Asthenosphere viscosity is 10^{19} Pa-s,
12 cratons are 100 times stronger than surroundings (0.01, 100)
13 V3: Animation of cratonic evolution at 240 km depth. Asthenosphere viscosity is 10^{20} Pa-s,
14 cratons are 100 times stronger than surroundings (0.1, 100)
15 V4: Animation of cratonic evolution at 240 km depth. Asthenosphere viscosity is 10^{21} Pa-s,
16 cratons are 100 times stronger than surroundings (1, 100)