



Supplement of

A statistical fracture model for Antarctic ice shelves and glaciers

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(a) Baudoin IS, Group 1



-- Less likely to fracture / More likely to fracture -->

Figure S1. Group 1: Modelled probability of a fracture for Baudoin IS (a) and Rennik IS (b). Observed surface fractures are shown in black and observed non-fractured ice is marked with orange circles. Red polygons represent regions where high resolution images were available.



Figure S2. Group 1: Modelled probability of a fracture for West IS (a), Ekstrom IS (b), Filchner IS (c) and Stancomb-Brunt IS (d). Labels the same as Fig. S1.





(a) Larsen B IS, Group 2







Figure S3. Group 1 and 2: Modelled probability of a fracture for Larsen B IS (Nordenskjold coast) (a), Ninnis IS (b) and Abbot IS (c). Labels the same as Fig. S1.





Figure S4. Group 1 and 2: Modelled probability of a fracture for Borchgrevnik-Lazarev IS (a), Riiser-Larsen IS (b), Larsen C IS (c), Ronne IS, unsuccessful results (d). Labels the same as Fig. S1. 4



(a) Larsen C IS, Fallieres Coast, Group 4

(b) Borchgrevnik IS, Group 4



(c) Larsen D IS, Group 2





Figure S5. Group 2 and 4: Modelled probability of a fracture for Larsen C IS (a), Borchgrevnik IS (b), Larsen D IS (c) and Ross East IS (d). Labels the same as Fig. S1.



(a) Nivl IS, Group 3

(b) Cook IS, Group 1



(c) Rennik IS, Pennell Coast, Group 2

(d) Rennik IS, Lazarev Mountains, Group 3



Figure S6. Group 1, 2 and 3: Modelled probability of a fracture for Nivl IS (a), Cook IS (b), Rennik IS (c and d). Labels the same as Fig. S1.



Figure S7. Group 1 and 2: Modelled probability of a fracture for Prince Harald IS (a), Jelbart and Atka IS (b), Wilkins and George VI IS (c) and Getz IS (d). Labels the same as Fig. S1.



(a) Stange and Ferringo IS, Group 1



(b) Nickerson and Sulzberger IS, Group 1



0 0.2 0.4 0.6 0.8 1 <-- Less likely to fracture / More likely to fracture -->

Figure S8. Group 1: Modelled probability of a fracture for Stange and Ferringo IS (a), Nickerson and Sulzberger IS (b) and West IS (c). Labels the same as Fig. S1.