Supporting Data

For

Deformation motion tracks sliding changes through summer, western Greenland

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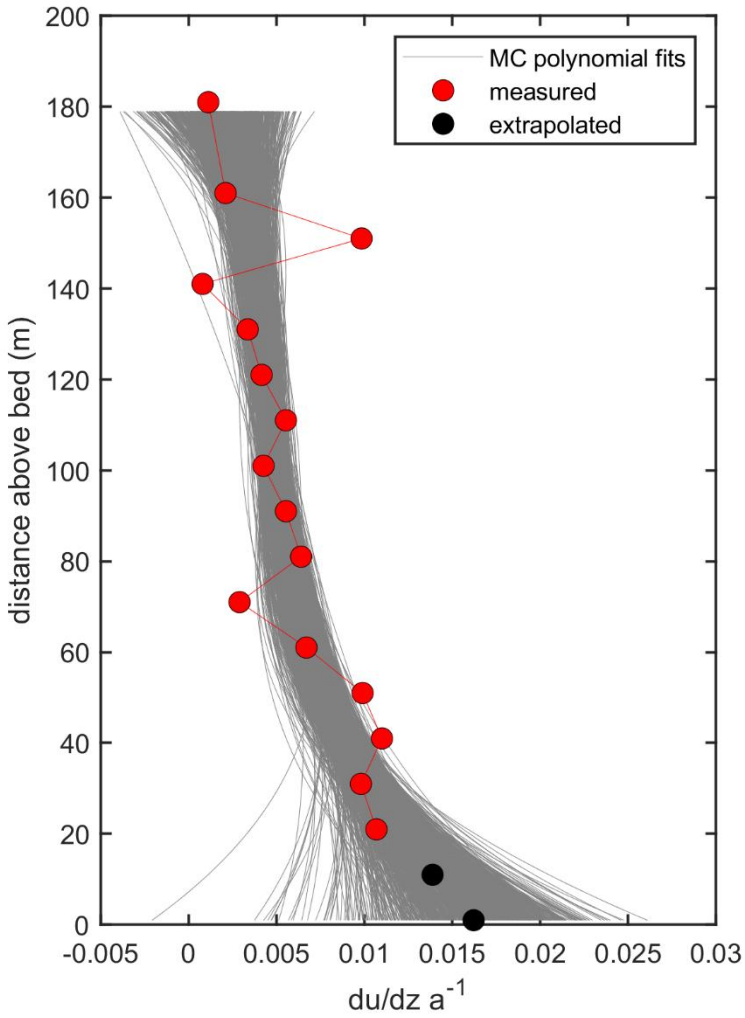

Figure S1 – *Illustration of polynomial fitting procedure to extrapolate deformation rates to failed inclinometer locations* – Polynomial fitting procedure is shown for early summer 2016 at borehole 14Sb were the two basal-most inclinometers were not functioning. Third order polynomials (grey lines) were fit the deformation profiles (red dots) for each iteration of the Monte Carlos simulation. The mean deformation rate at the failed inclinometer locations from all ten thousand polynomials of the simulation (black dots) is used to estimate the deformation rates of the basal most sensors.

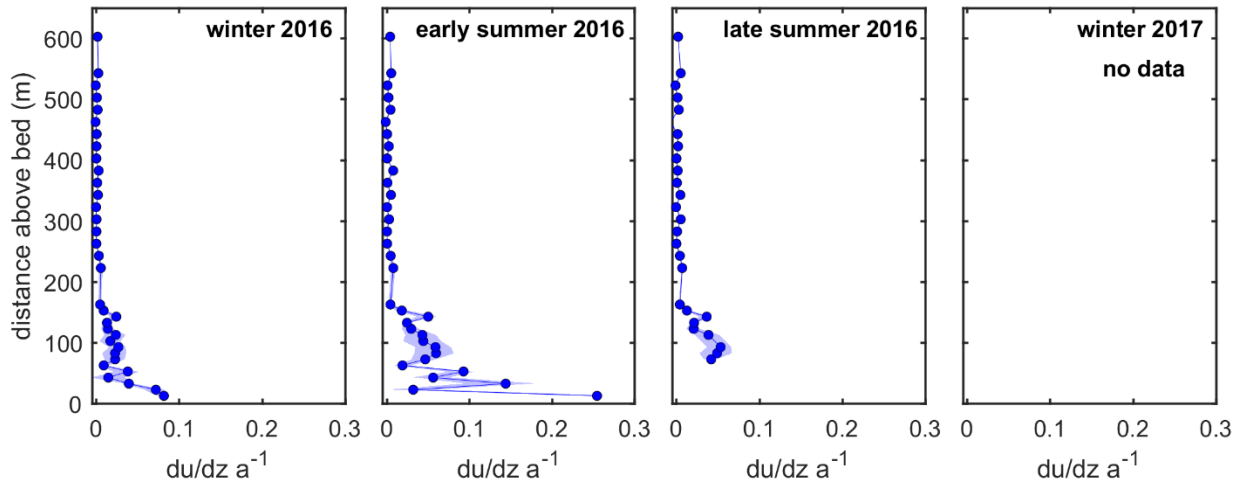

Figure S2 – *Deformation profile through annual velocity cycle at 14N* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

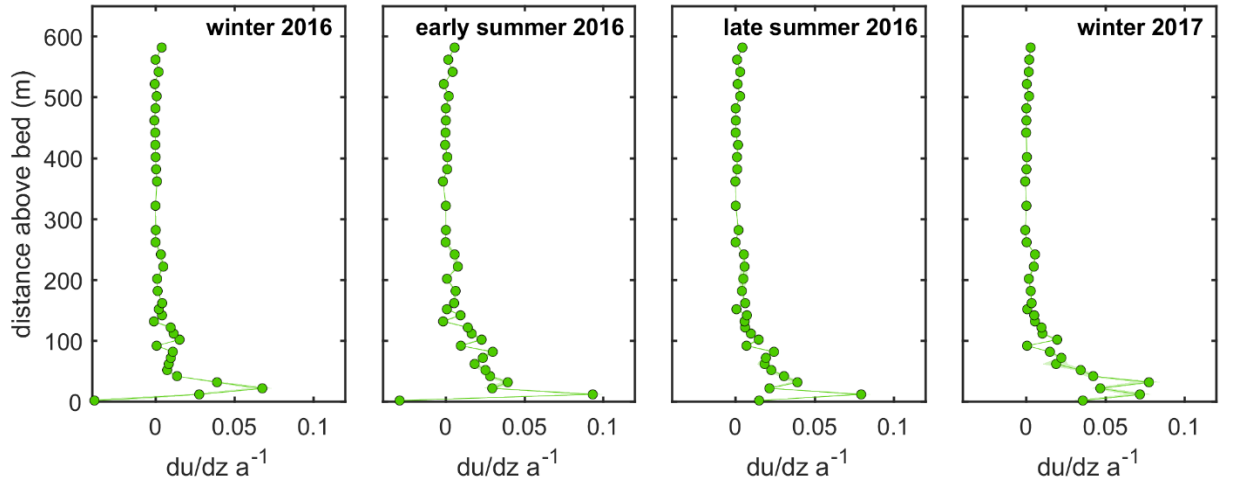

Figure S3 – *Deformation profile through annual velocity cycle at 14Sa* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

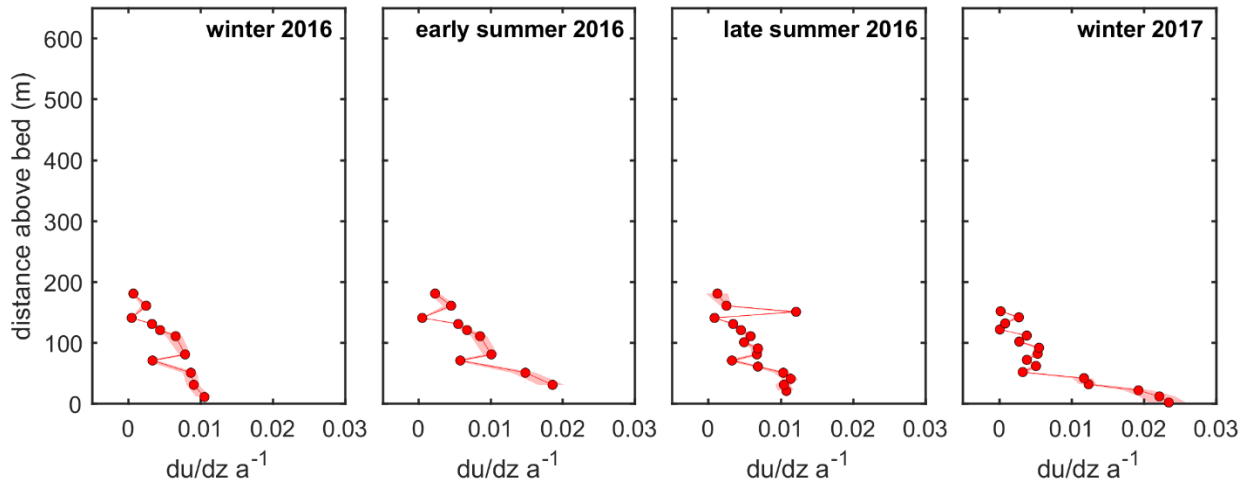

Figure S4– *Deformation profile through annual velocity cycle at 14Sb* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

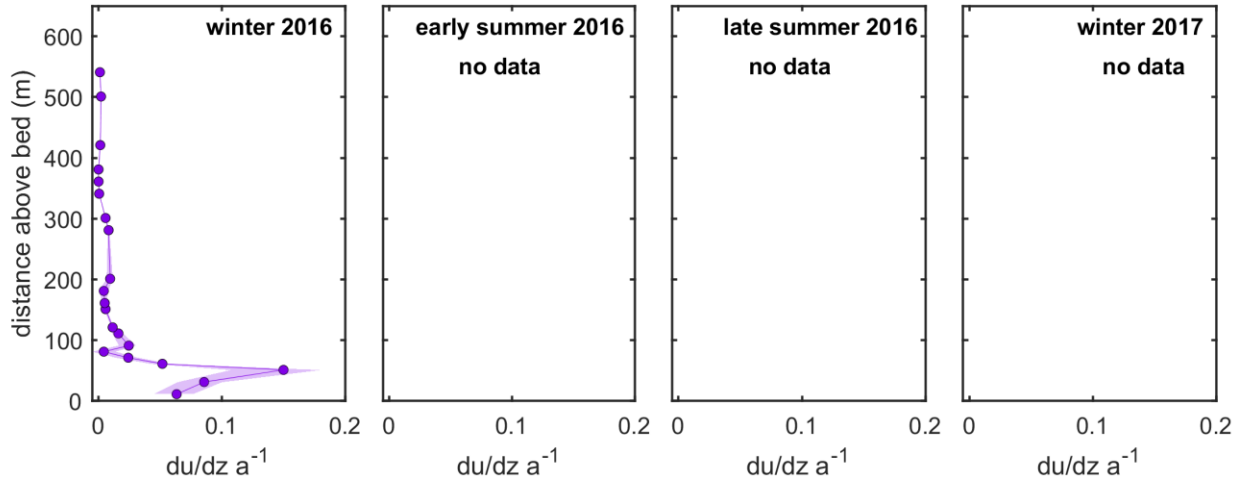

Figure S5 – *Deformation profile through annual velocity cycle at 14W* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

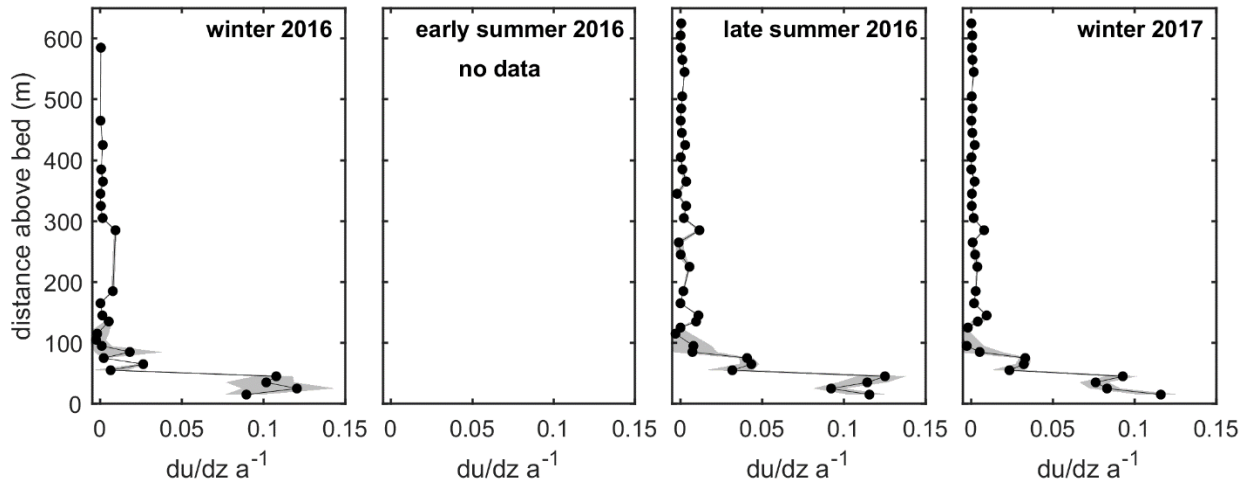

Figure S6 – *Deformation profile through annual velocity cycle at 15Ca* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

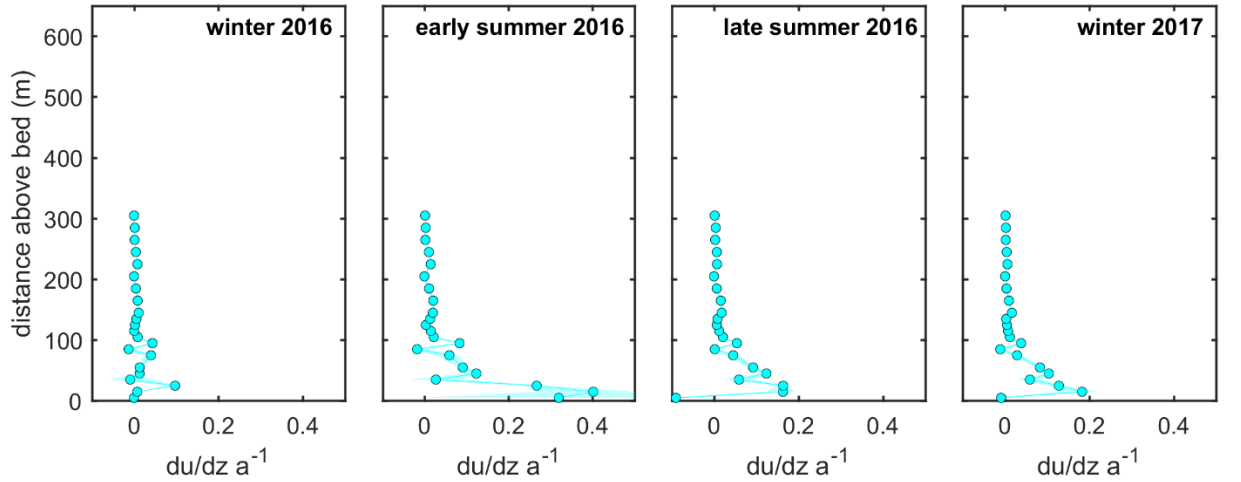

Figure S7 – *Deformation profile through annual velocity cycle at 15Cb* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

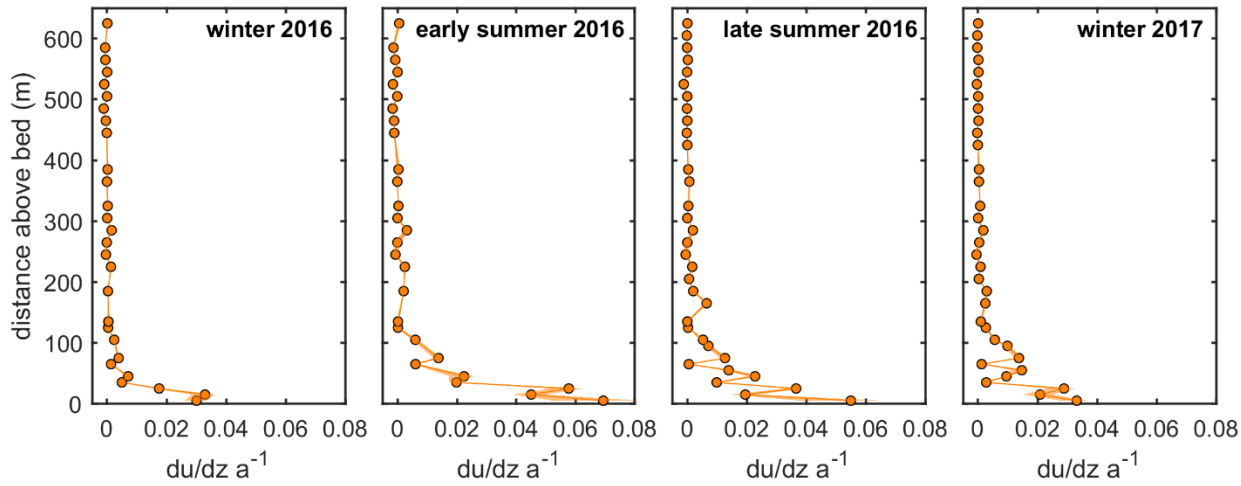

Figure S8 – *Deformation profile through annual velocity cycle at 15E* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.

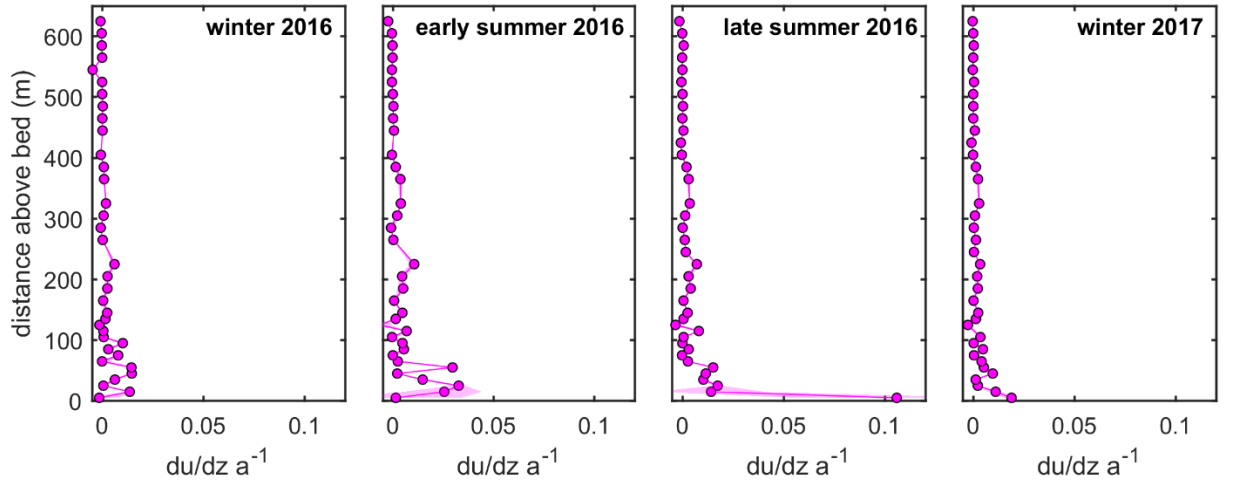

Figure S9 – *Deformation profile through annual velocity cycle at 15S* – Deformation profile for borehole is shown for the 2016 winter, 2016 early summer, 2016 late summer, and 2017 winter. Each dot shows a du/dz measured by an individual inclinometer.