Supplement for: Subglacial and subaerial fluvial sediment transport capacity respond differently to water discharge variations

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Table S 1. As Table 3 but with the fractional exponents stated as rounded decimal numbers. For the subaerial regime the exponents are for displayed for the likely width-exponent $\alpha = 1$, as well as its end members 0 (slot canyon) and 1 (only width increases and not depth).

	Width $\times \tau$	MPM	EH	Bagnold
	$w\tau$	$Q_s \propto w\tau^{3/2}$	$Q_s \propto w\tau^{5/2}$	$Q_s \propto w^{-1/2}\Omega^{3/2}H^{-2/3}$
Subaerial ($\alpha = 0$)	$f^{0.7}Q^{0.7}\Psi^{0.7}$	$f^{0.5}Q\ \Psi$	$f^{0.8}Q^{1.7}\Psi^{1.7}$	$f^{-0.2}Q^{1.1}\Psi^{1.7}$
Subaerial ($\alpha = 0.3$)	$f^{0.7}Q^{0.8}\Psi^{0.7}$	$f^{0.5}Q\ \Psi$	$f^{0.8}Q^{1.3}\Psi^{1.7}$	$f^{-0.2}Q^{1.0}\Psi^{1.7}$
Subaerial ($\alpha = 1$)	$f^{0.7}Q^{1.0}\Psi^{0.7}$	$f^{0.5}Q\ \Psi$	$f^{0.8}Q^{0.7}\Psi^{1.7}$	$f^{-0.2}Q^{1.0}\Psi^{1.7}$
R-channel	$f^{0.4}Q^{0.8}\Psi^{0.6}$	$f^{0.5}Q\ \Psi$	$f^{0.7}Q^{1.4}\Psi^{1.8}$	$f^{-0.2}Q^{1.0}\Psi^{1.7}$
Pipe	$f\ \ Q^2\ \ S^{-1}$	$f^{1.5}Q^3S^{-2.5}$	$f^{2.5}Q^5\ \ S^{-4.5}$	$f^{1.5}\ \ Q^{4.5}S^{-4.7}$
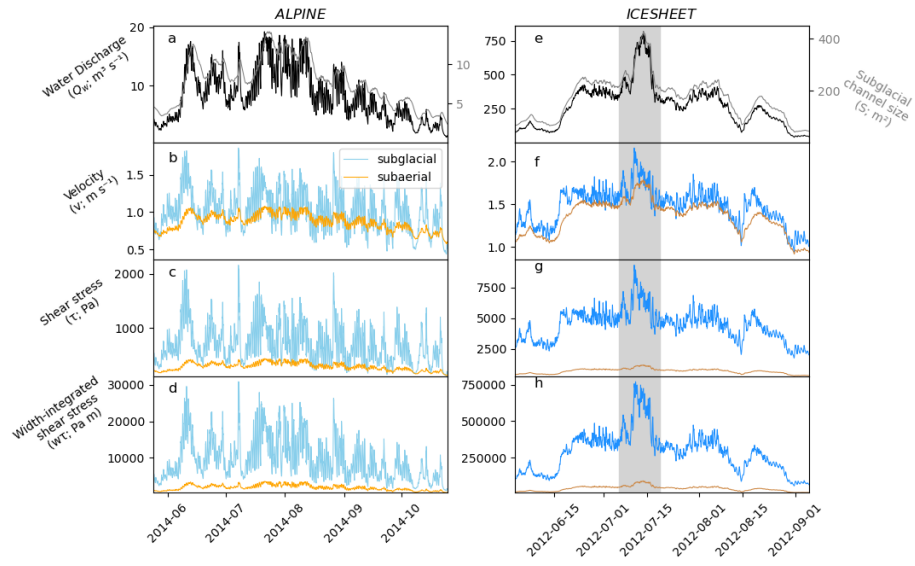
Figure S 1. As Figure 5, with 1 hr aggregation.
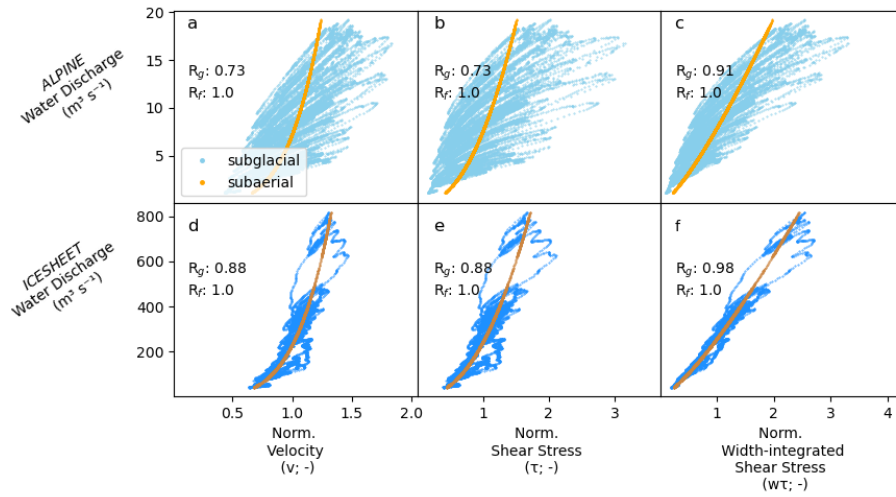
Figure S 2. As Figure 6, with 1 hr aggregation.
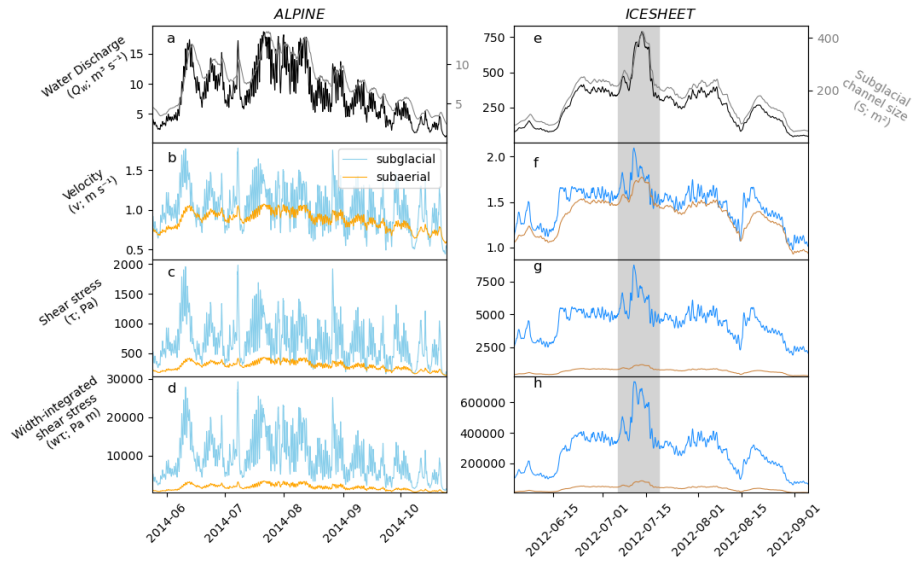
Figure S 3. As Figure 5, with 6 hr aggregation.
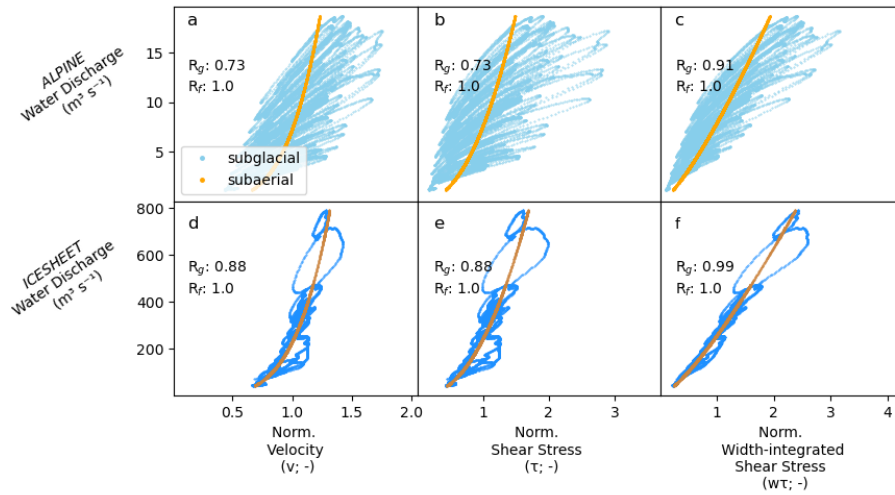
Figure S 4. As Figure 6, with 6 hr aggregation.
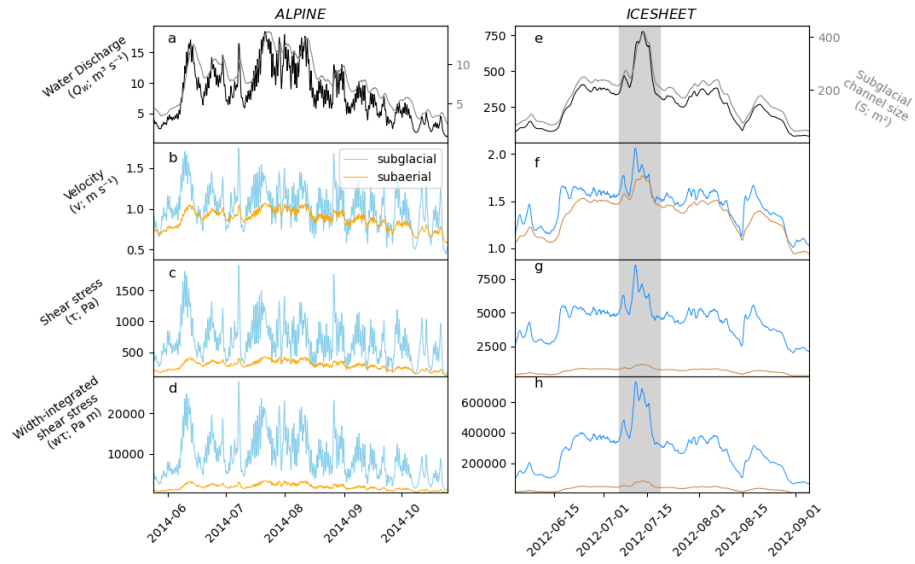
Figure S 5. As Figure 5, with 12 hr aggregation.
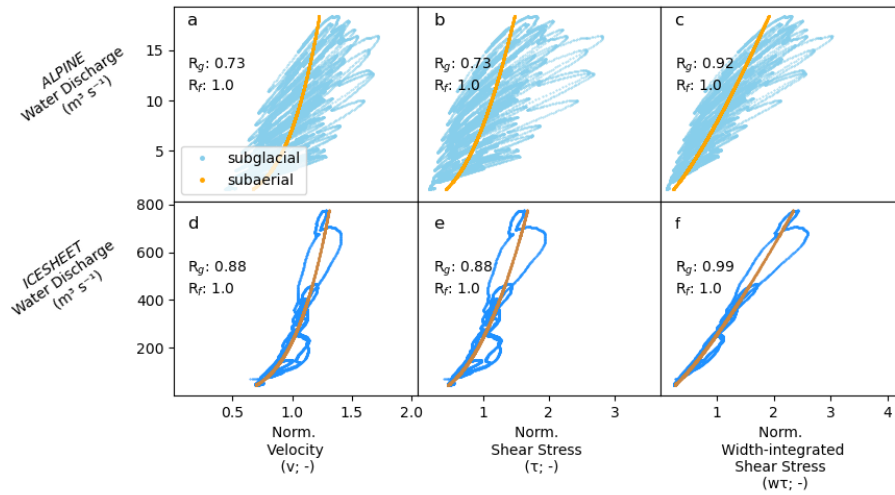
Figure S 6. As Figure 6, with 12 hr aggregation.
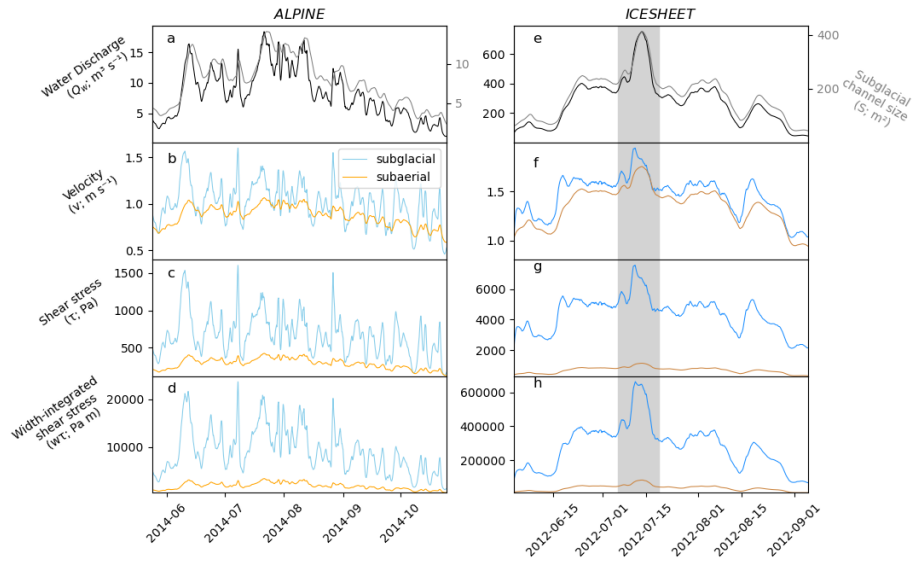
Figure S 7. As Figure 5, with 1 day aggregation.
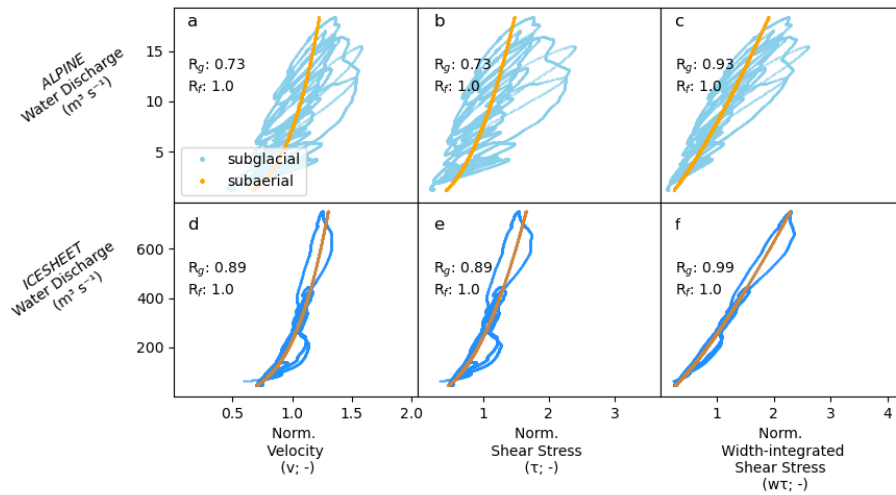
Figure S 8. As Figure 6, with 1 day aggregation.

15
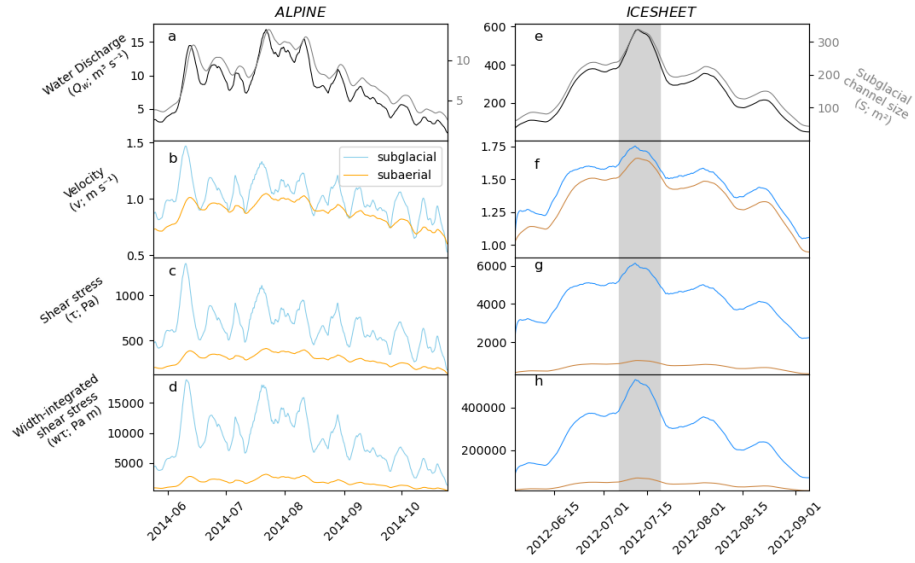
Figure S 9. As Figure 5, with 5 day aggregation.
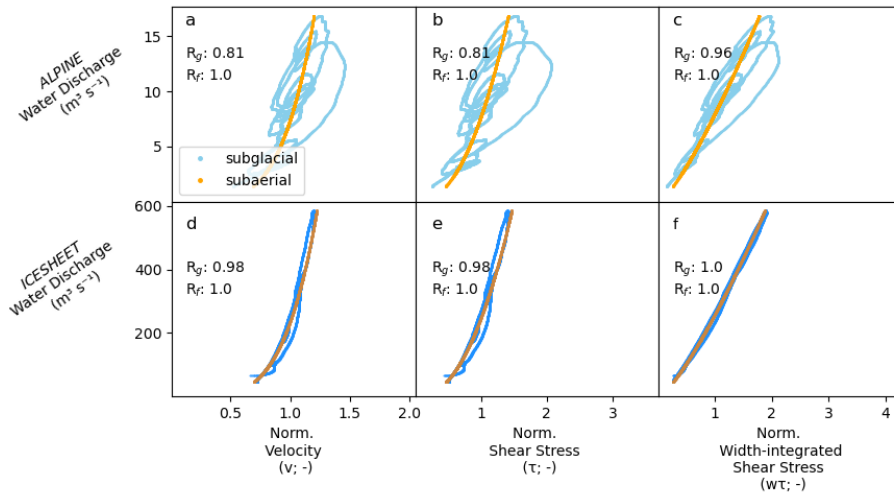
Figure S 10. As Figure 6, with 5 day aggregation.
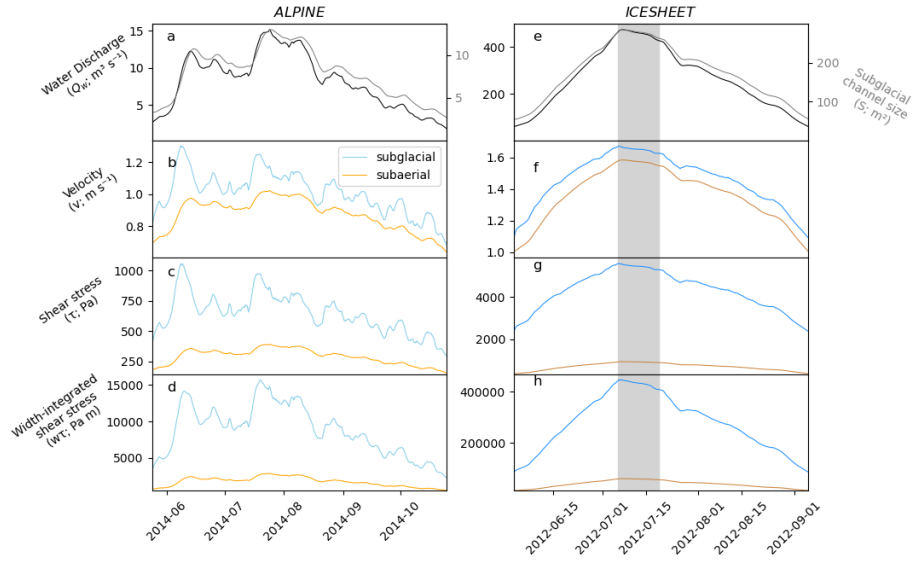
Figure S 11. As Figure 5, with 10 day aggregation.
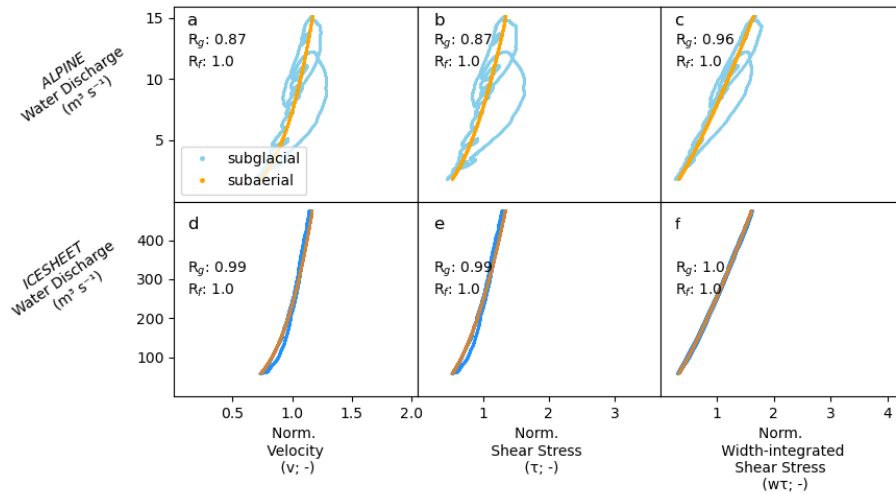
Figure S 12. As Figure 6, with 10 day aggregation.
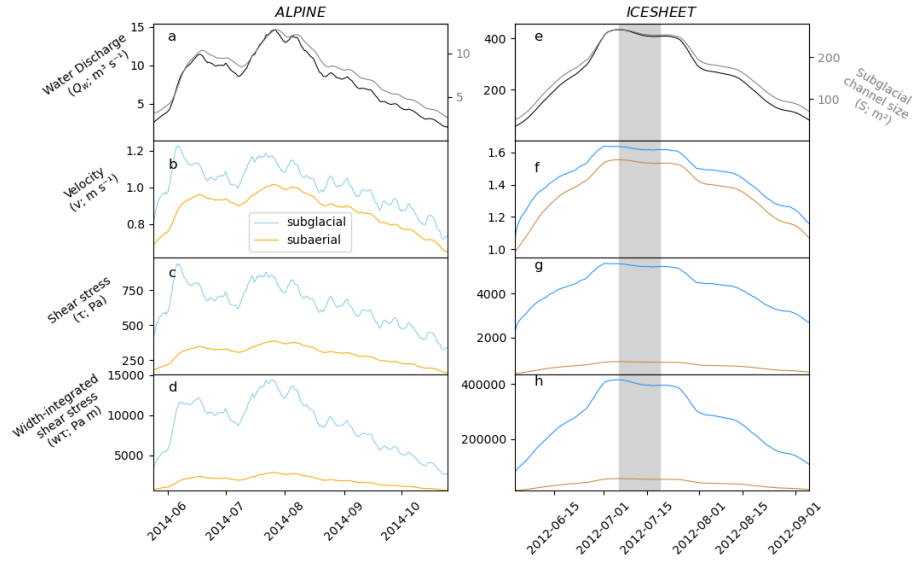
Figure S 13. As Figure 5, with 15 day aggregation.
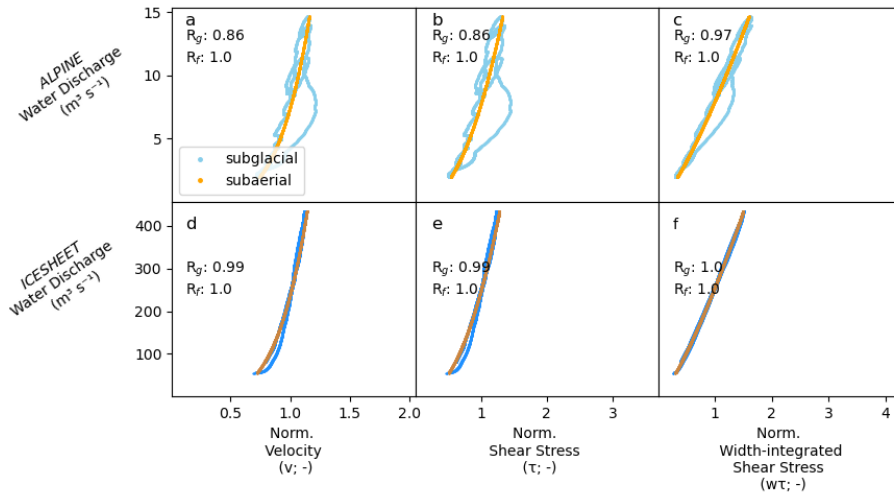
Figure S 14. As Figure 6, with 15 day aggregation.
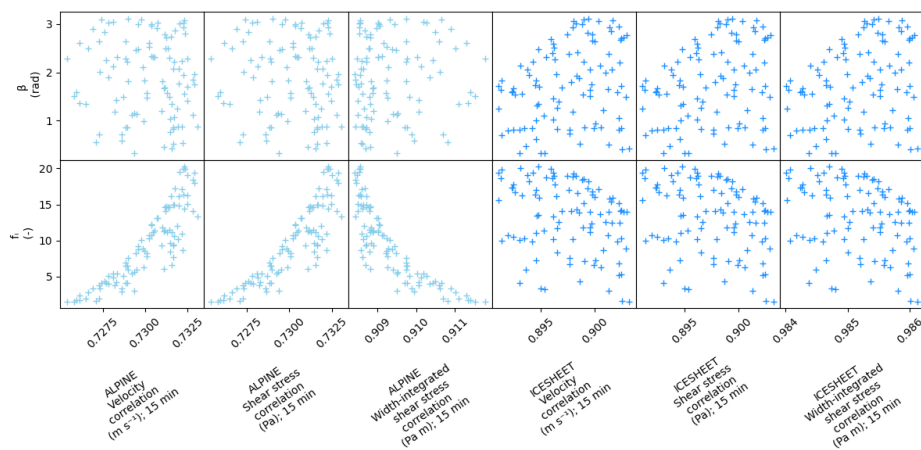
Figure S 15. Parameter values of from ensemble run (Section 4.2) against rank correlation. Results show that across the parameter space, subglacial parameters do not reach a similar rank correlation of subaerial channels.