



Supplement of

Quantifying frost-weathering-induced damage in alpine rocks

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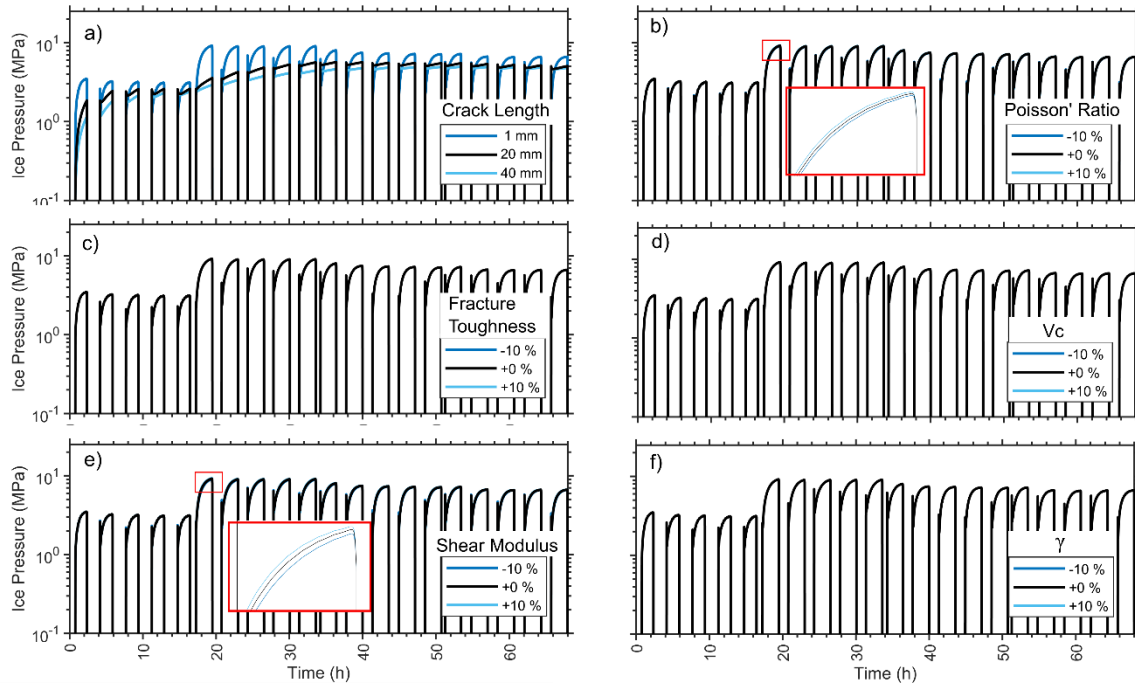


Figure S1: Sensitivity analyses of frost cracking modelling for FT-1. The values are used from Table1 in the main manuscript and shifted for a) crack length (1 mm was used in the main manuscript), b) Poisson' ratio, c) fracture toughness, d) growth-law parameter (V_c), e) shear modulus, f) growth-law parameter (γ). In c,d,f there was no difference visible. The predicted ice pressures did not overcome the critical threshold for inelastic crack growth.

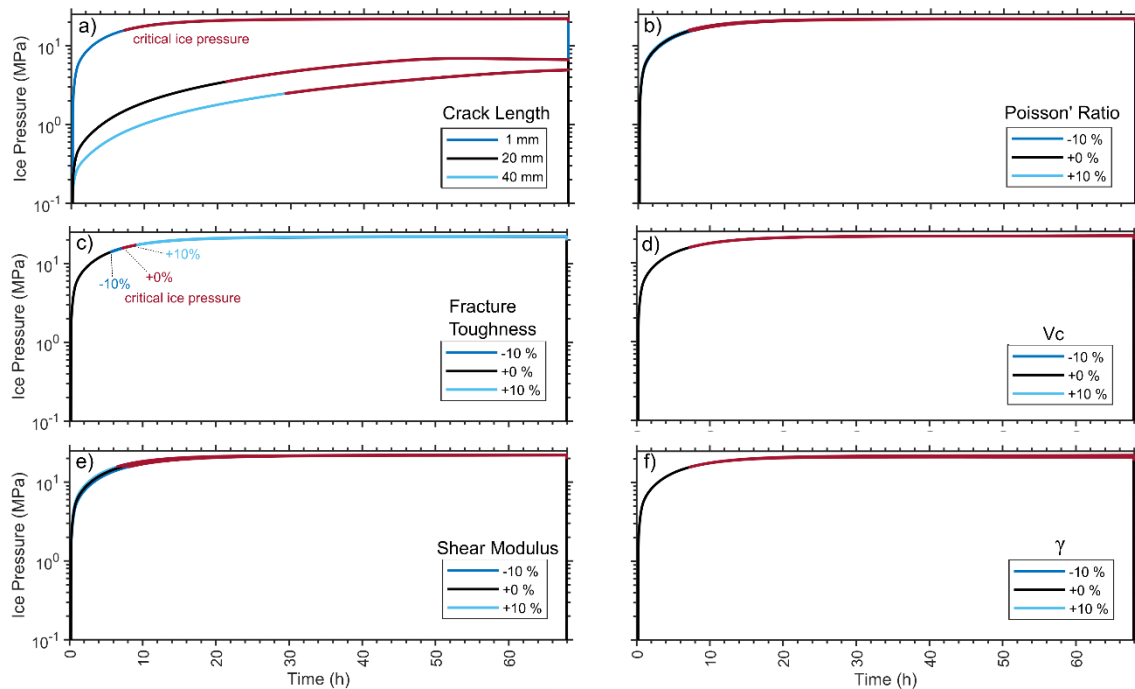


Figure S2: Sensitivity analyses of frost cracking modelling for FT-2. The values are used from Table1 in the main and shifted for a) crack length (1 mm was used in the main manuscript), b) Poisson' ratio, c) fracture toughness, d) growth-law parameter (V_c), e) shear modulus, f) growth-law parameter (γ). In d,f there was no difference visible. In red the critical ice pressure is marked which indicates inelastic crack growth. Fracture toughness as well as crack length shift the threshold for inelastic crack growth.