

Animation 1 - A sample Monte Carlo inversion to convergence over 85 iterations. This is 1 of the 1000 simulations comprising the ensemble mean presented in Figure 10. The layout of subplots and color scale limits follow Figure 10. **A:** Inferred rate of mass change field at ice-containing nodes (\dot{m}). **B:** Gaussian smoothing ($\sigma = 200$ km) of the inferred rate of mass change field (\dot{M}). **C:** Spherical harmonic representation of the trend in GRACE-derived cryosphere-attributed rate of mass change (\dot{M}^G). **D:** Difference between \dot{M}^G and \dot{M} (Δ). Black contour lines denote irregularly shaped ice-containing nodes within the domain.