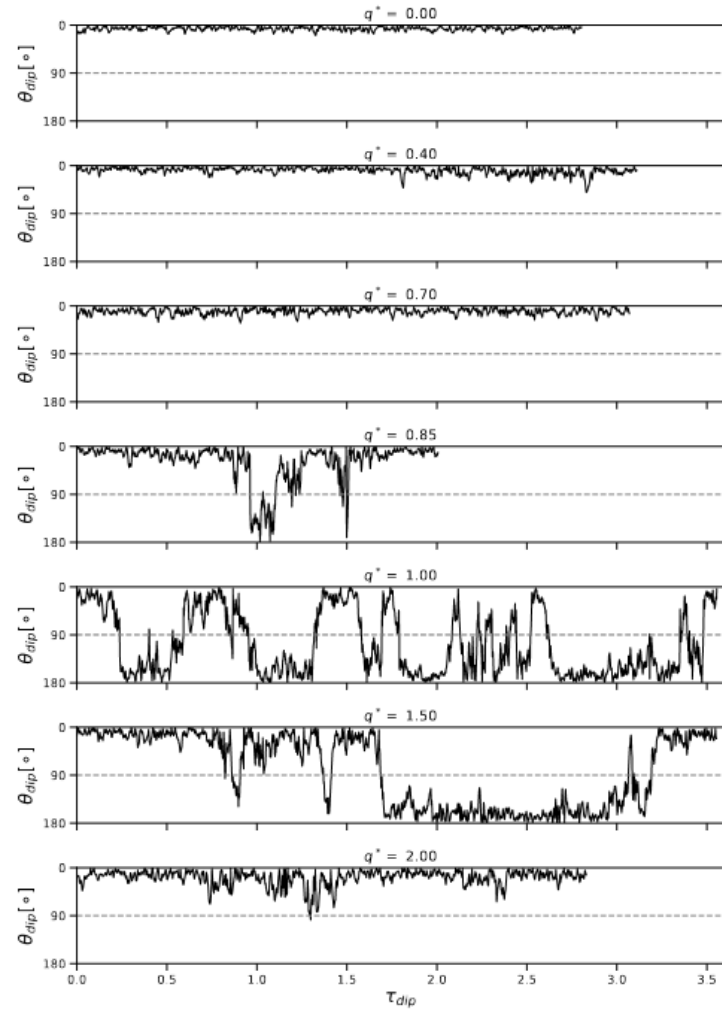
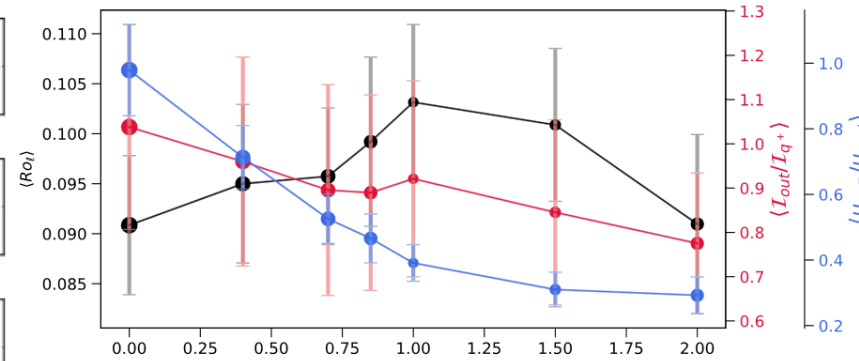


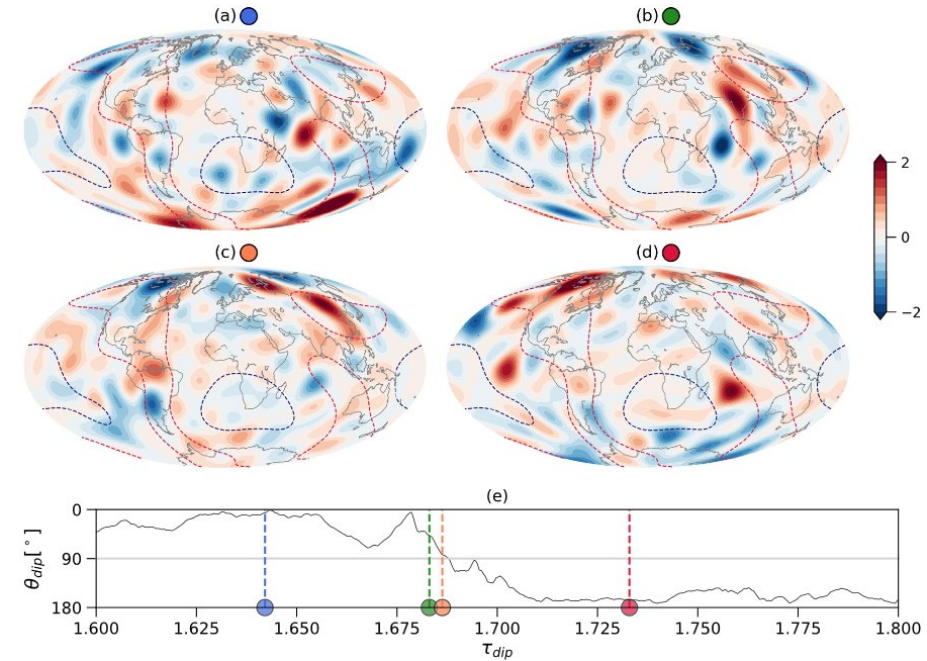
Regionally-triggered geomagnetic reversals



Increasing amplitude of CMB heat flux heterogeneity in numerical dynamos leads to transition from non-reversing to reversing fields but for $q^* > 1$ reversibility decreases.



Reversibility related to inertia (black). Increasing reversibility at $q^* < 1$ -- enhanced convection at large CMB heat flux regions (red). Decreasing reversibility at $q^* > 1$ -- partial stratification at low heat flux regions (blue).



Example of a reversal. Magnetic flux is concentrated at regions of large CMB heat flux (red dashed lines) and avoids regions of low heat flux (blue lines).