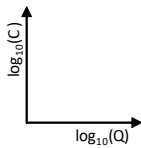
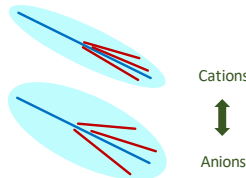
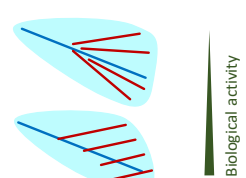
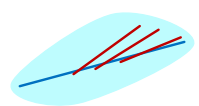


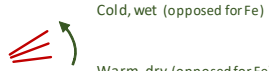



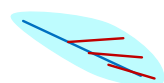
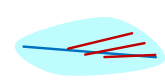


Dominant source	GROUNDWATER	PRECIPITATION	SOIL
cQ-behavior 	 <p>Cations ↕ Anions</p>	 <p>Biological activity</p>	
Solute mobilization (cQ slope): long-term event-scale	Slope < 0 Slope < 0	Slope < 0 -1 < slope < 1	Slope > 0 Slope > 0
Variability in cQ space: long-term event-scale	Well-confined Low variability	High scatter High variability	High scatter Some variability
Potential modulators of event-scale behavior	ionic form lower variability for cations due to exchange buffering	Biological activity: increases the variability	Presence as nanoparticulates likely affects the solute mobilization during events
Drivers and controls of inter-event variability: slope	 <p>Warm, small events, more pre-event water Cold, small events, more event water</p> <p>Seasonality indicators and event characteristics</p>	 <p>Dry, large events, more event water Wet, small events, more pre-event water</p> <p>Antecedent conditions and event-water contributions</p>	 <p>Cold, wet (opposed for Fe) Warm, dry (opposed for Fe)</p> <p>Seasonality indicators and antecedent conditions</p>
Drivers and controls of inter-event variability: intercept	 <p>Warm, dry Cold, wet</p> <p>Seasonality indicators and antecedent conditions</p>	 <p>(Warm,) dry (Cold,) wet</p> <p>(Seasonality indicators and) antecedent conditions</p>	 <p>Warm, dry Cold, wet</p> <p>Seasonality indicators and antecedent conditions</p>
Solutes (at Erlenbach)	Ca, Mg, Na, Sr, Ba, B, SO ₄ , EC	Cl, NO ₃	Fe, Mn, Cr
Mixed behavior	 <p>Long-term cQ scatter and inter-event variability increases with contribution from precipitation, e.g. K.</p>	 <p>Long-term behavior becomes more chemostatic with increasing contributions from precipitation, mobilization behavior on the event scale.</p>	