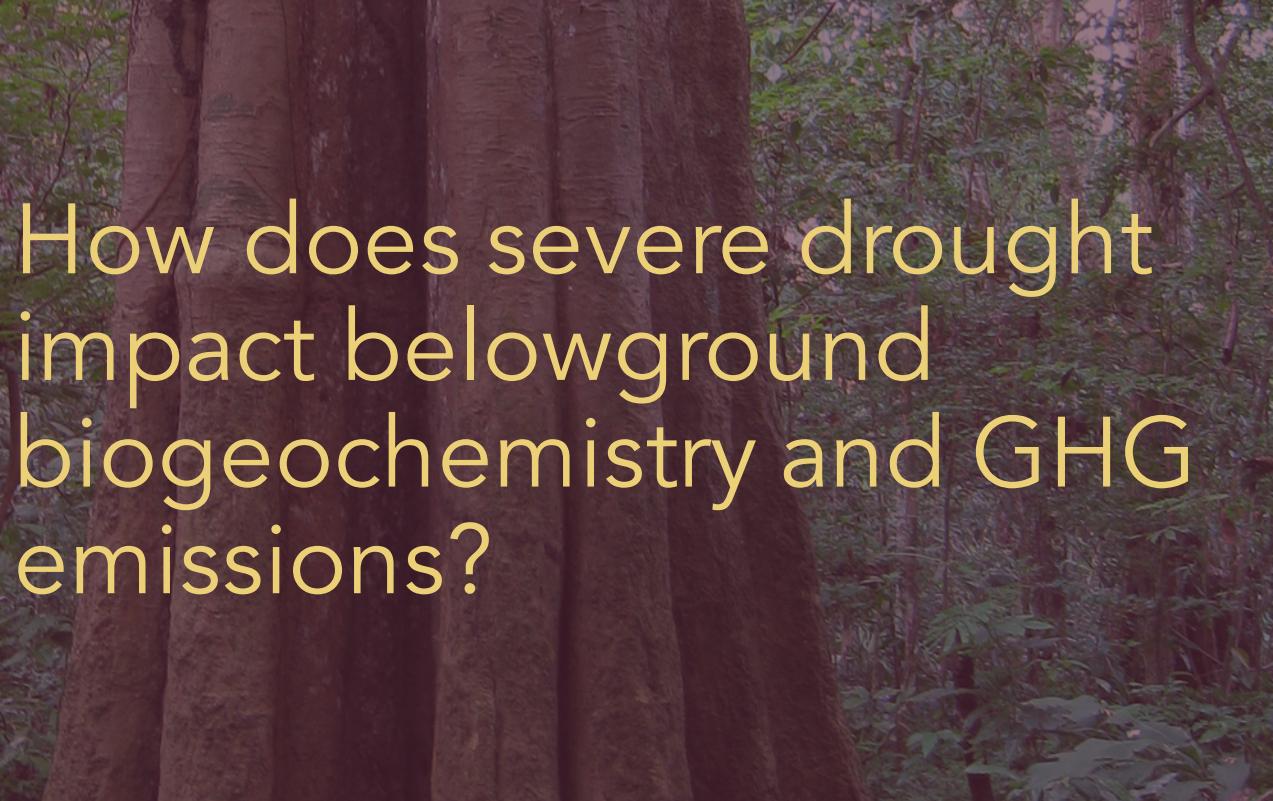
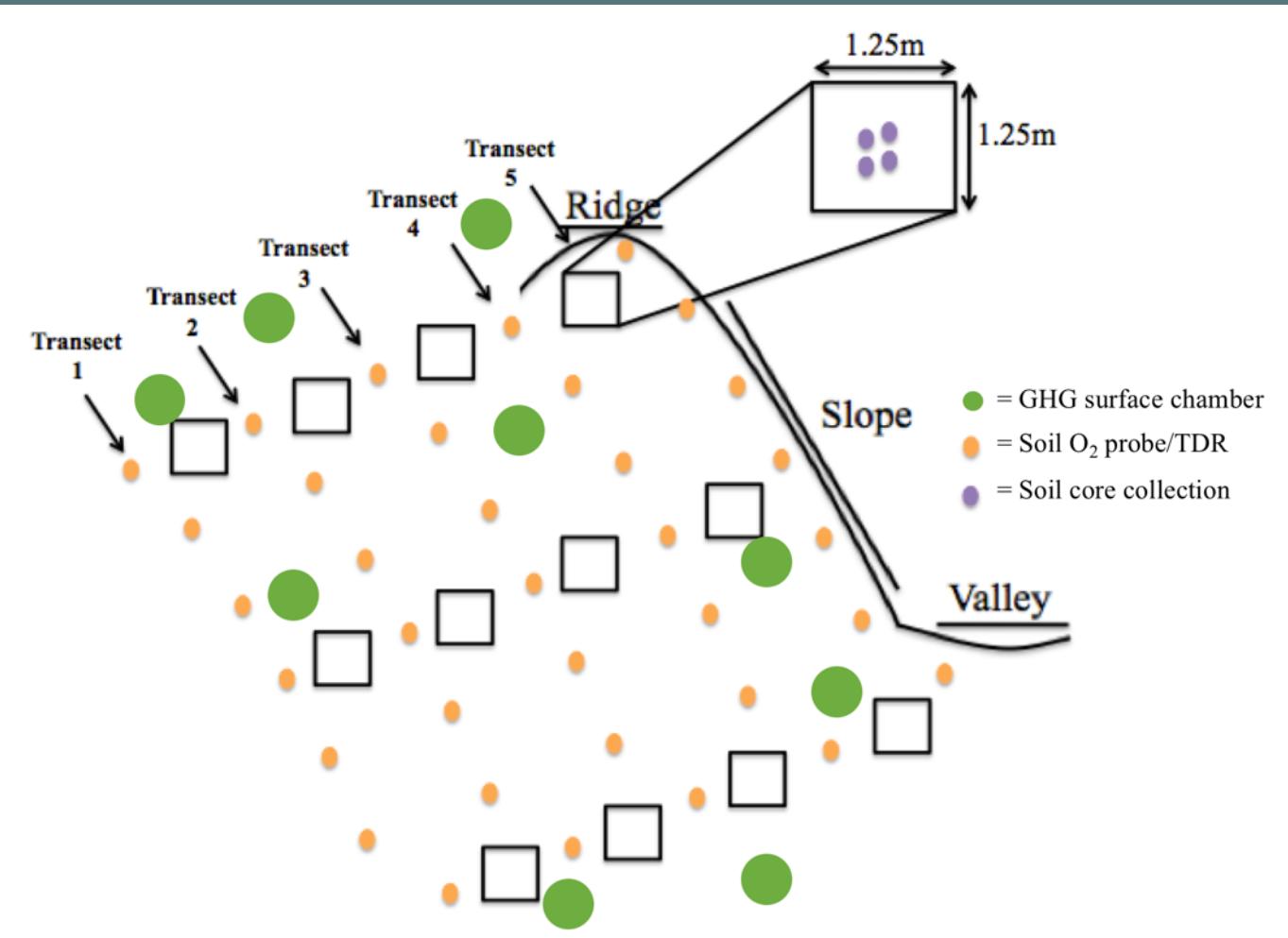


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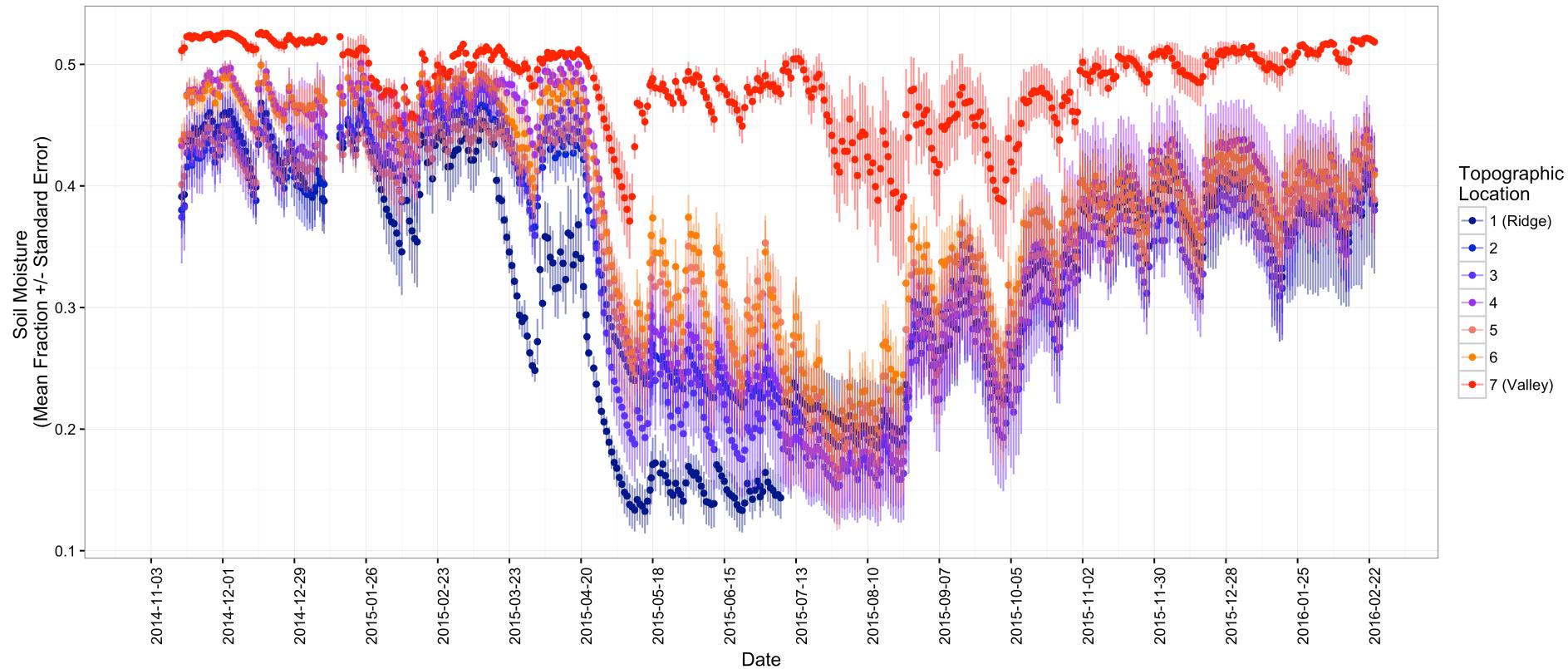


How does severe drought
impact belowground
biogeochemistry and GHG
emissions?

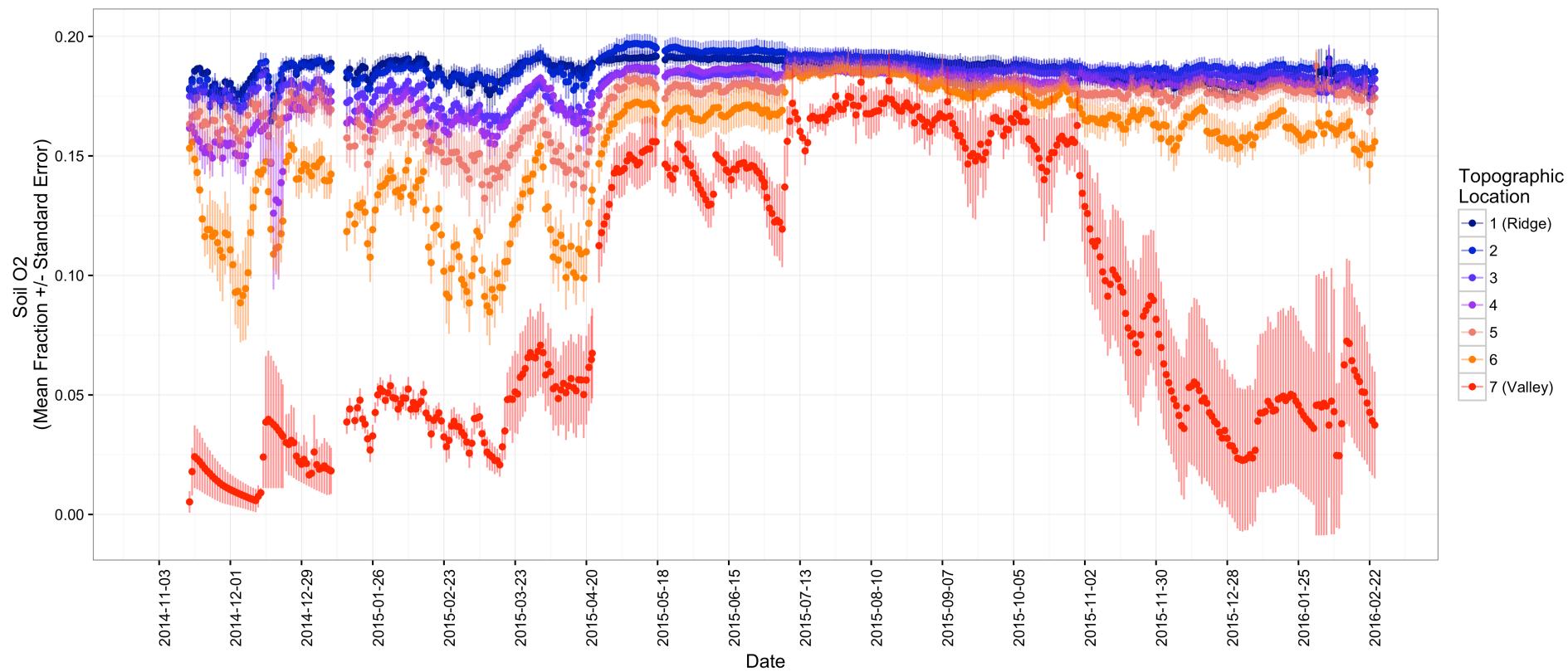
Field array (O_2 and TDR sensors, automated GHG chambers) allowed high temporal resolution data before, during and after

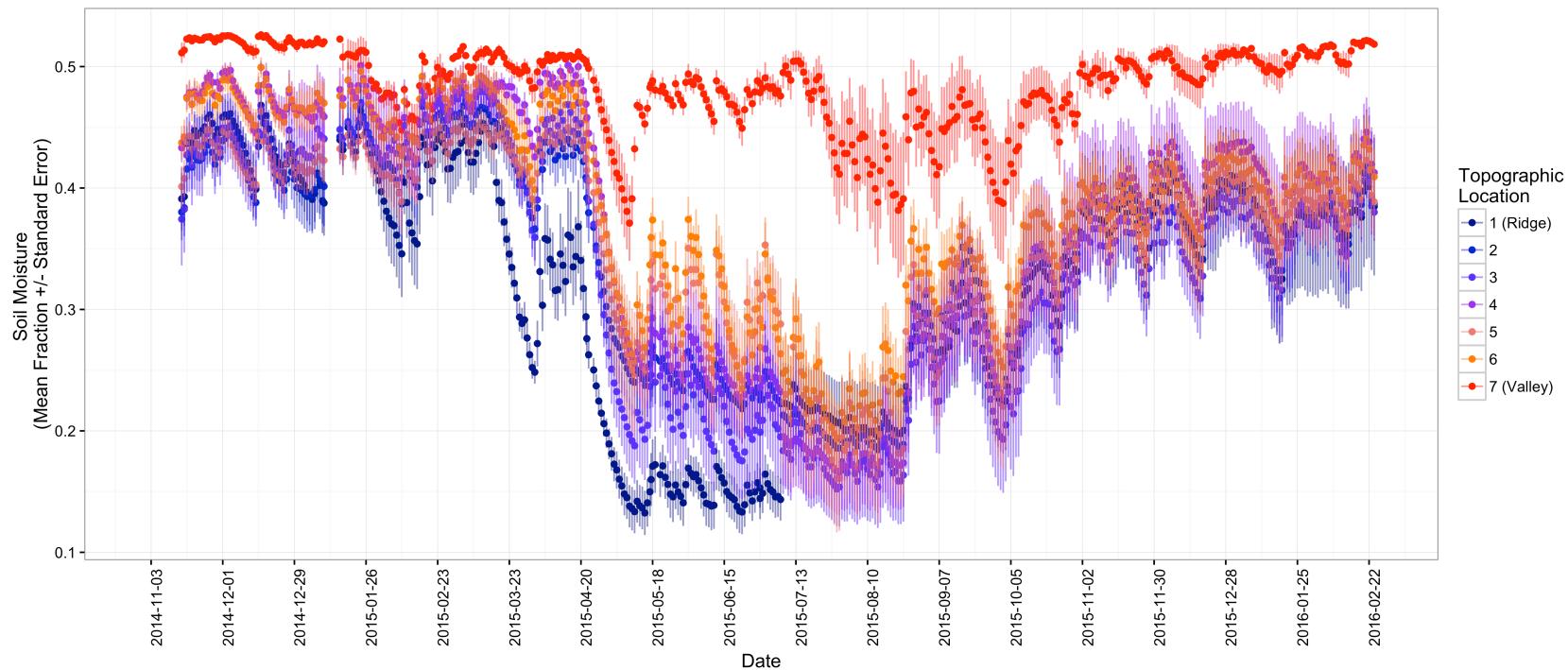
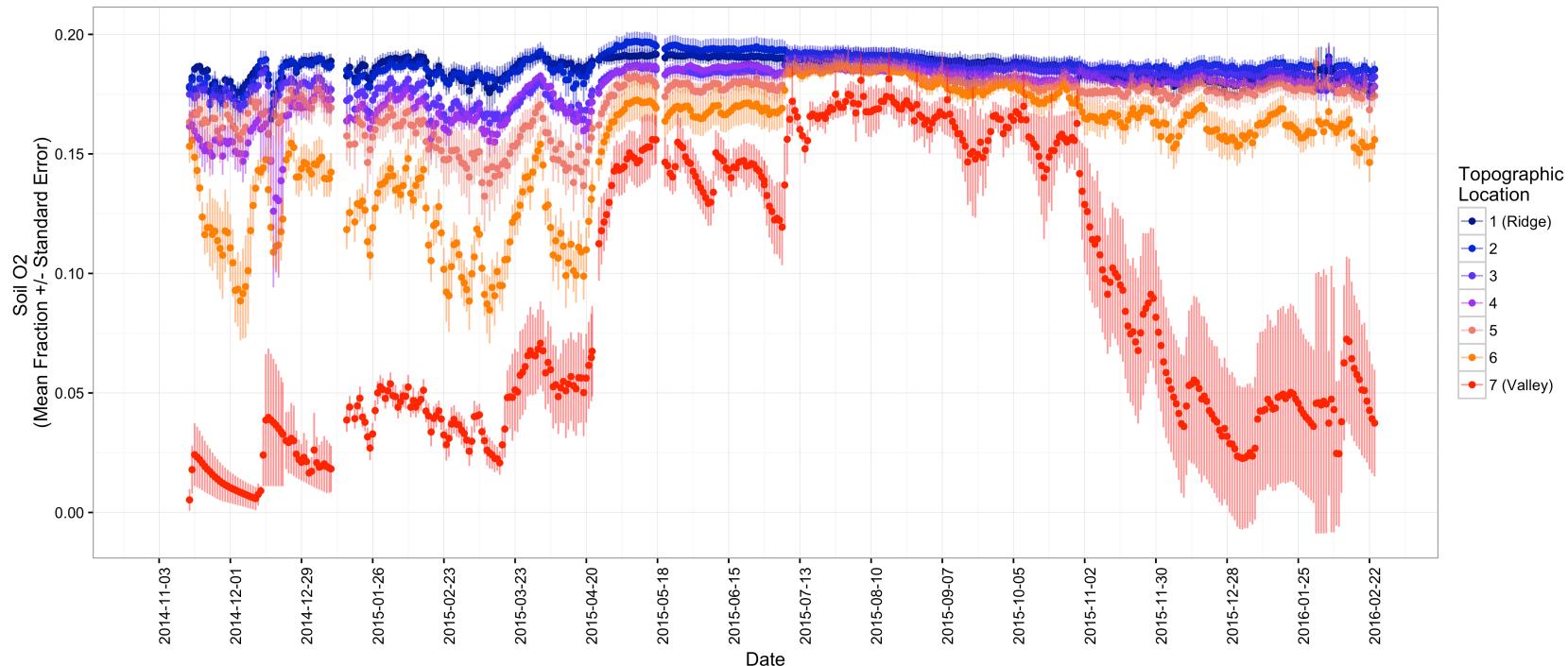


Soil moisture and O₂ exhibited a threshold response to drought with lengthy persistence; valley less sensitive to O₂ changes

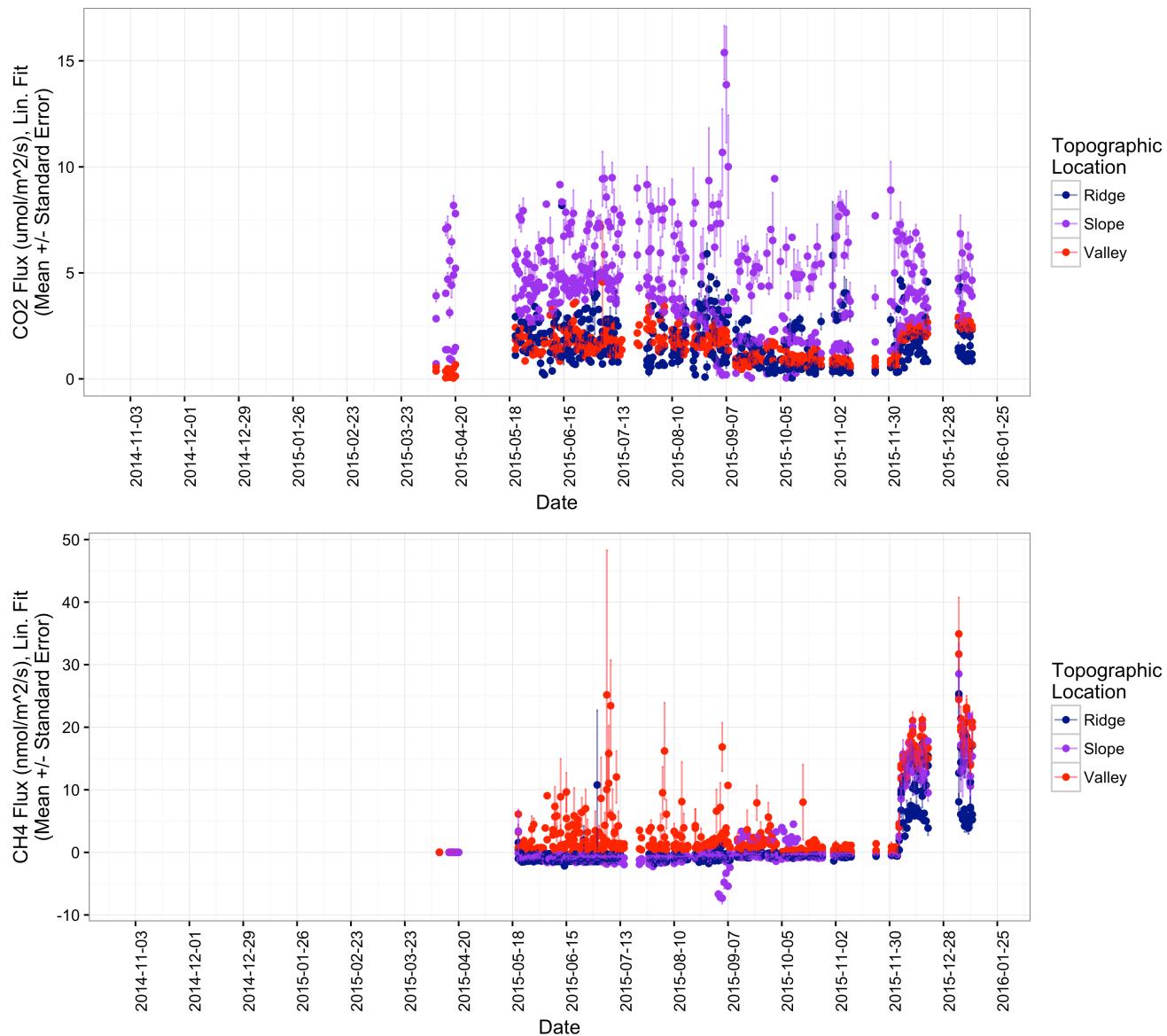


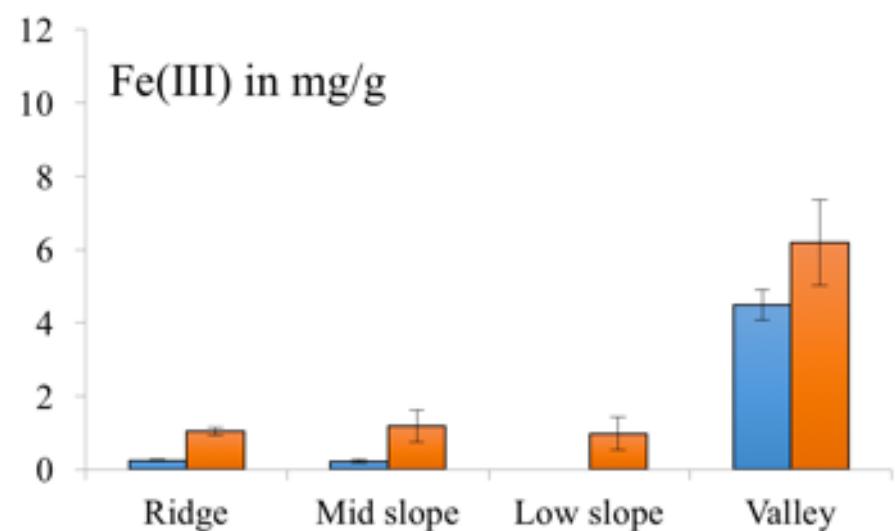
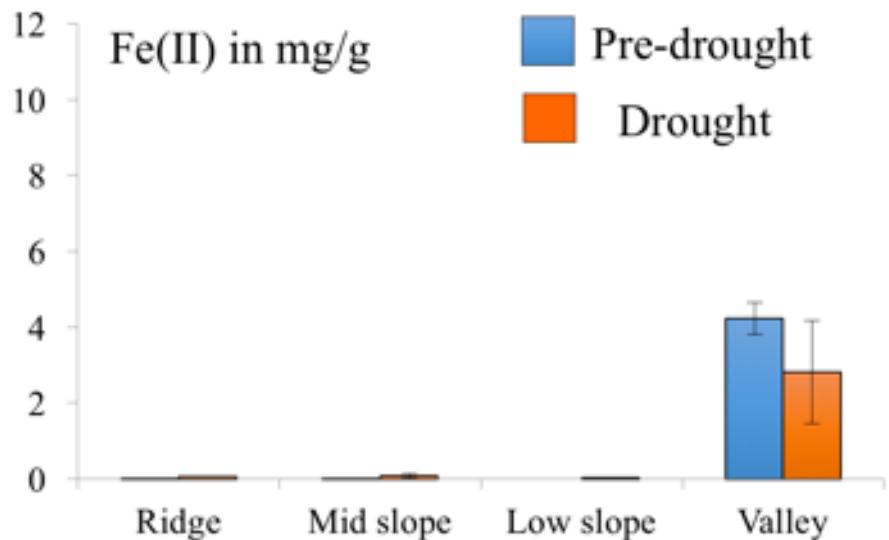
Soil moisture and O₂ exhibited a threshold response to drought with lengthy persistence; valley less sensitive to O₂ changes



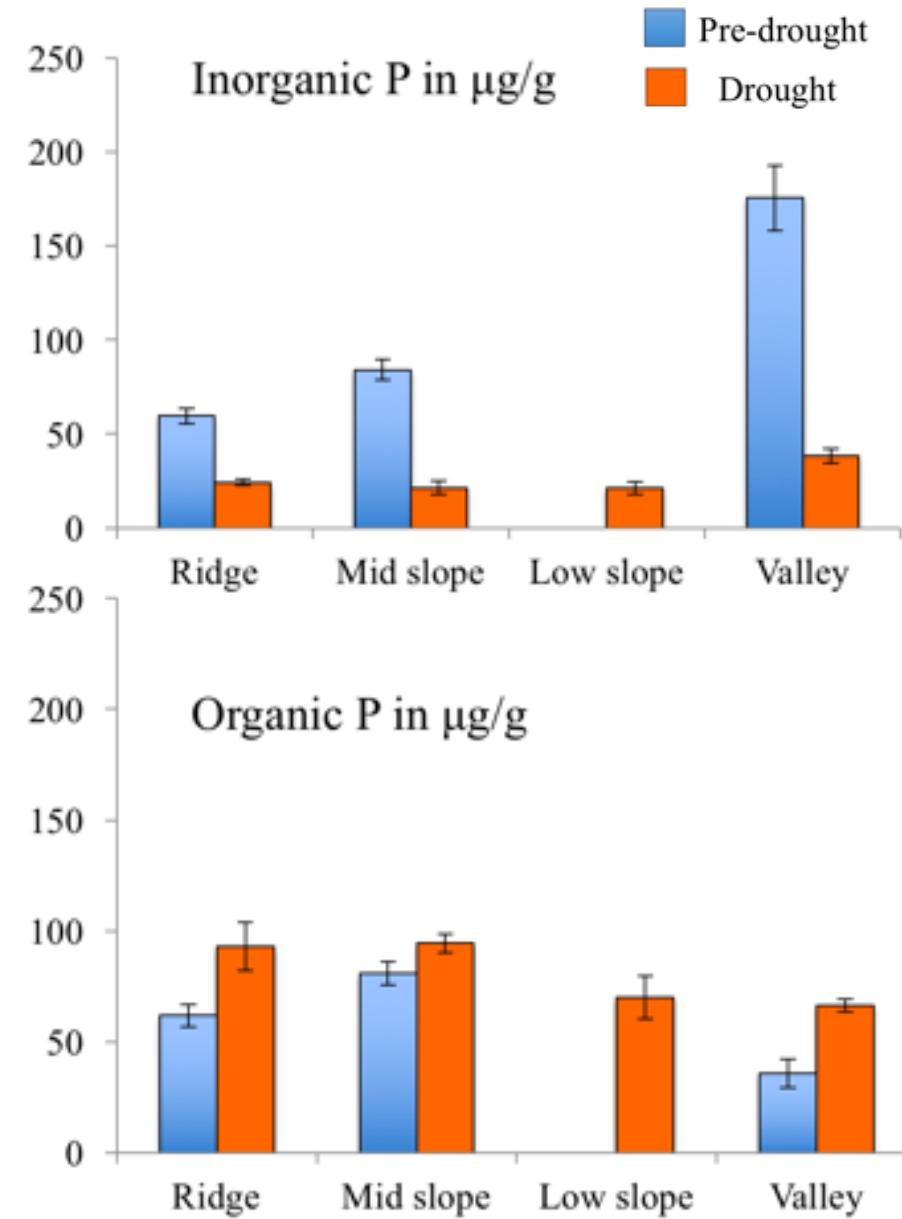


Greenhouse gas emissions show patterns across topographic space: particularly CO₂ on slopes.





Iron(II) concentrations decreased post-drought, particularly in the valleys, while Iron(III) concentrations increased, associated with Iron(II) oxidation to Iron(III) after soil oxygen availability rose.



Inorganic phosphorus concentrations declined dramatically during the drought, possibly due to Fe-P bonding.
Organic P increased slightly, possibly due to decreased decomposition rates.