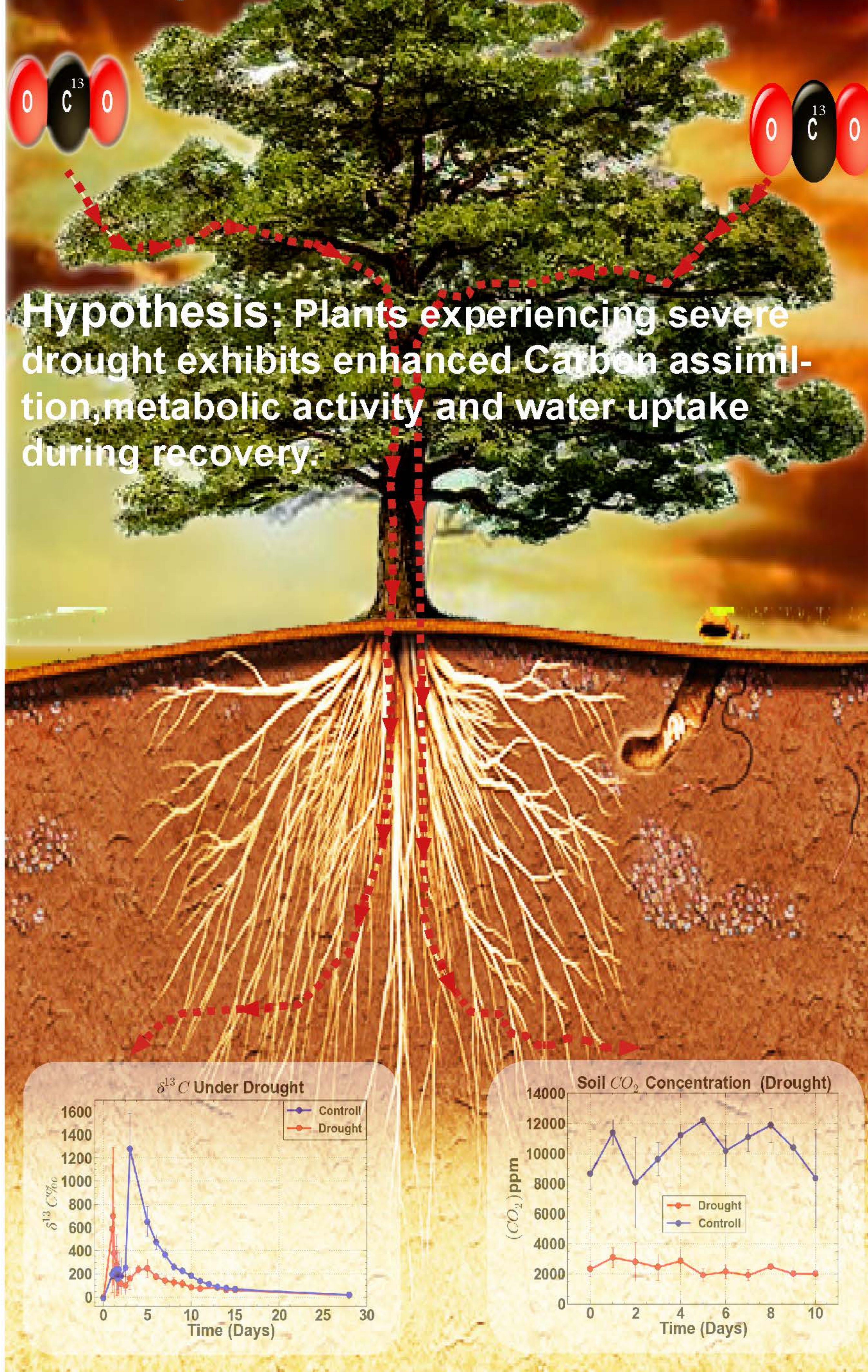


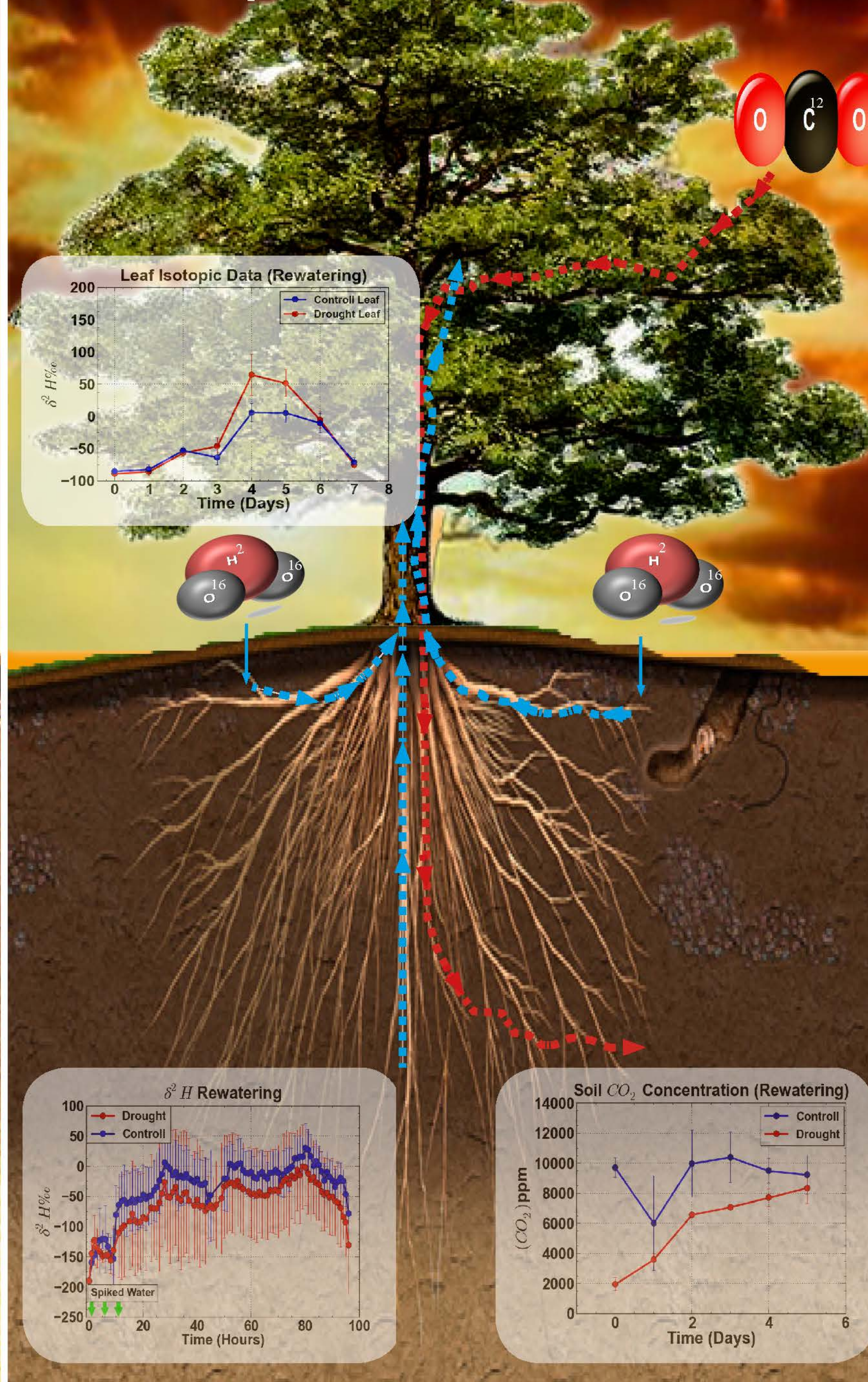
Drought Impact on Water- Carbon Interaction in Plant - Soil Continuum: A Stable Isotopic Approach

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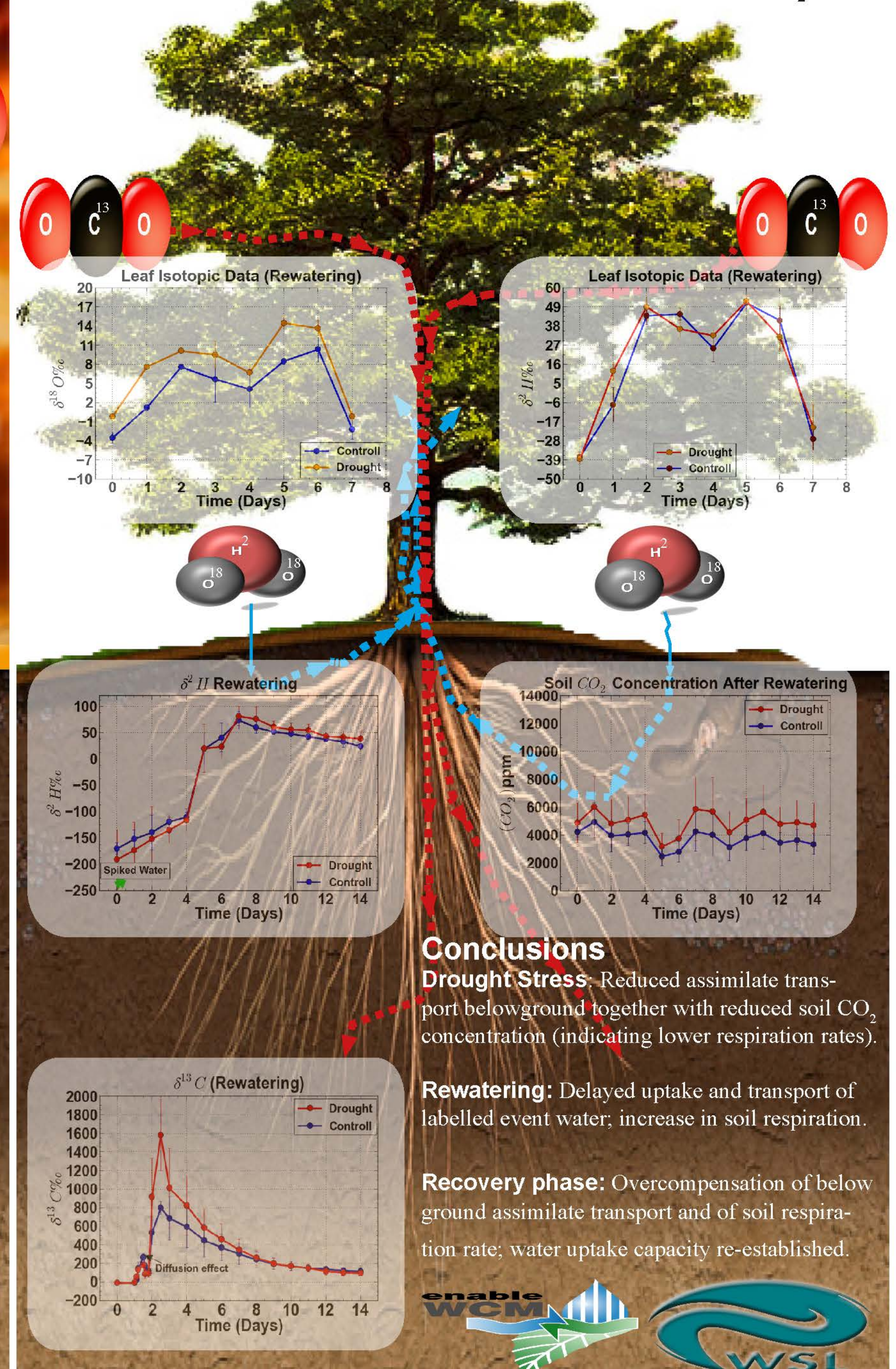
Phase 1(Drought Stress): C¹³ enriched CO₂ Pulse labelling.



Phase 2(Rewatering): Deuterium enriched D₂O Pulse Labelling.



Phase 3(Recovery): Combined Pulse Labelling: C¹³ enriched CO₂, Deuterium and O¹⁸ enriched D₂¹⁸O.



Conclusions

Drought Stress: Reduced assimilate transport belowground together with reduced soil CO₂ concentration (indicating lower respiration rates).

Rewatering: Delayed uptake and transport of labelled event water; increase in soil respiration.

Recovery phase: Overcompensation of below ground assimilate transport and of soil respiration rate; water uptake capacity re-established.

