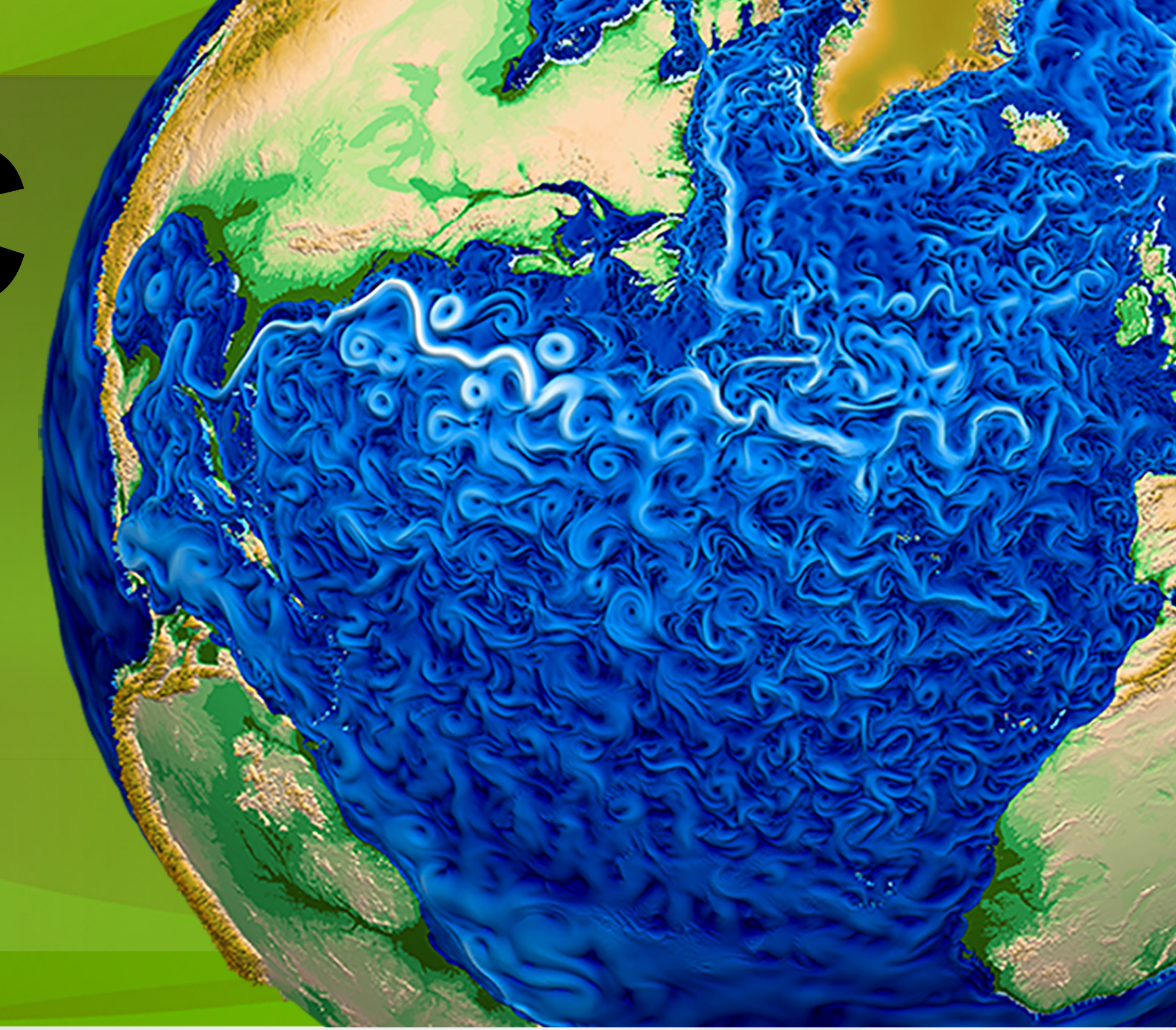# ALMv1-CaNDy: A Multi-Nutrient BGC Representation for ALMv1
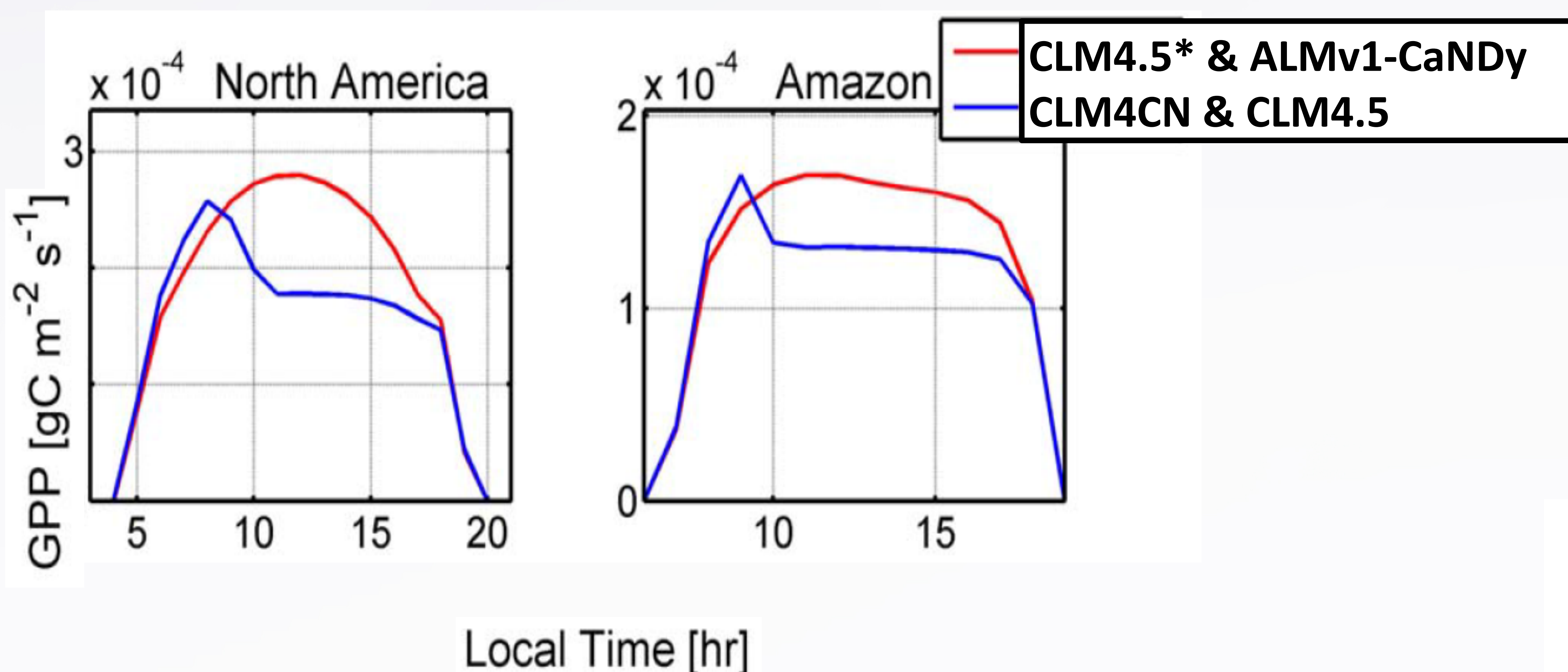
W.J. Riley, Q. Zhu, J.Y. Tang
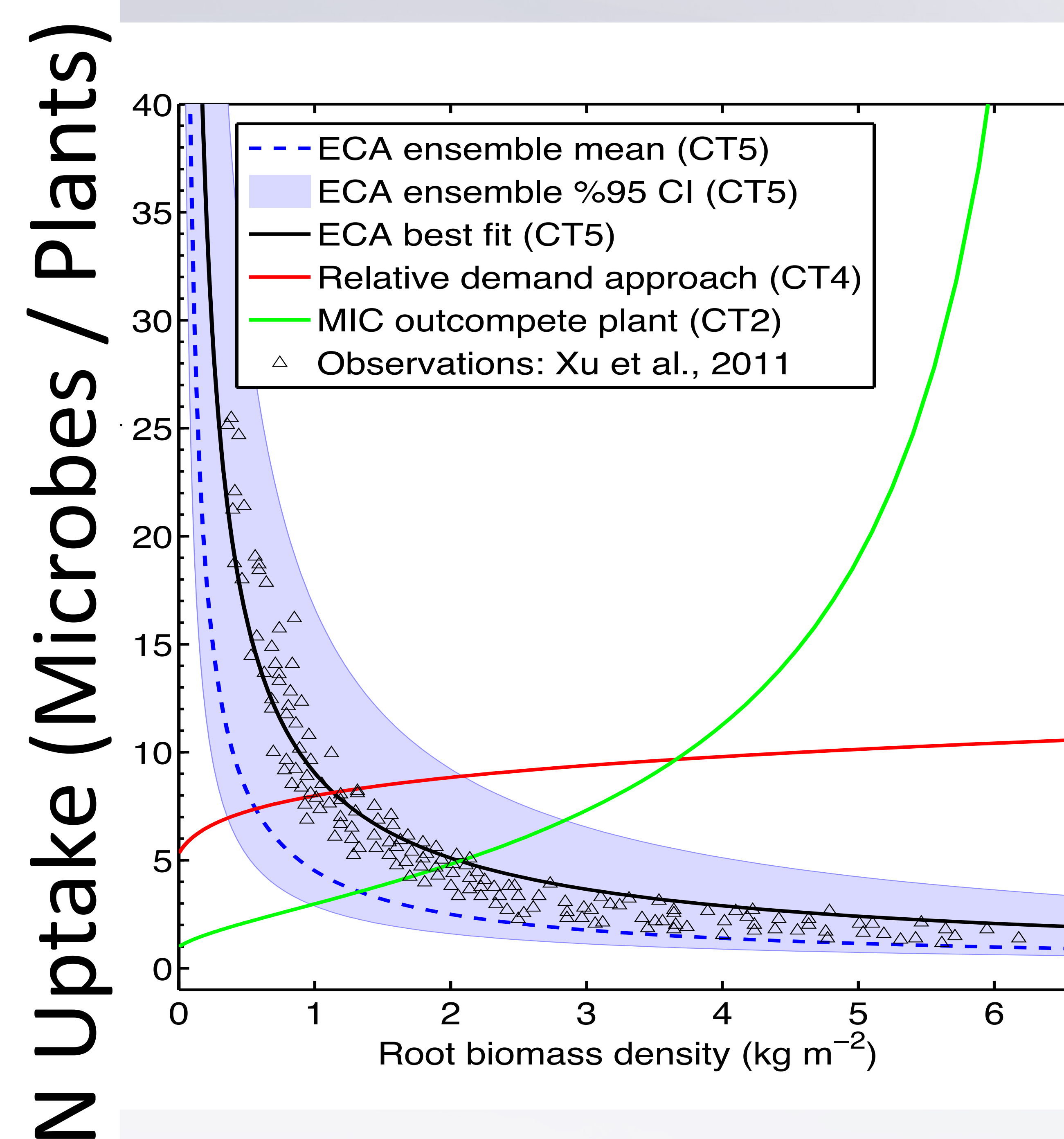
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## ALMv1-CaNDy

- Based on Equilibrium Chemistry Approximation
- Multiple time scales with different dominant processes are represented
- Relevant observations being integrated in ILAMB
- Poster reviews several ALM publications on this topic over the past year



- **The ACME BGC Experiment is motivated by the inclusion of Nitrogen and Phosphorus constraints on terrestrial C cycling**

- **We show here that the ECA approach quantitatively and qualitatively matches the ¹⁵N observations**

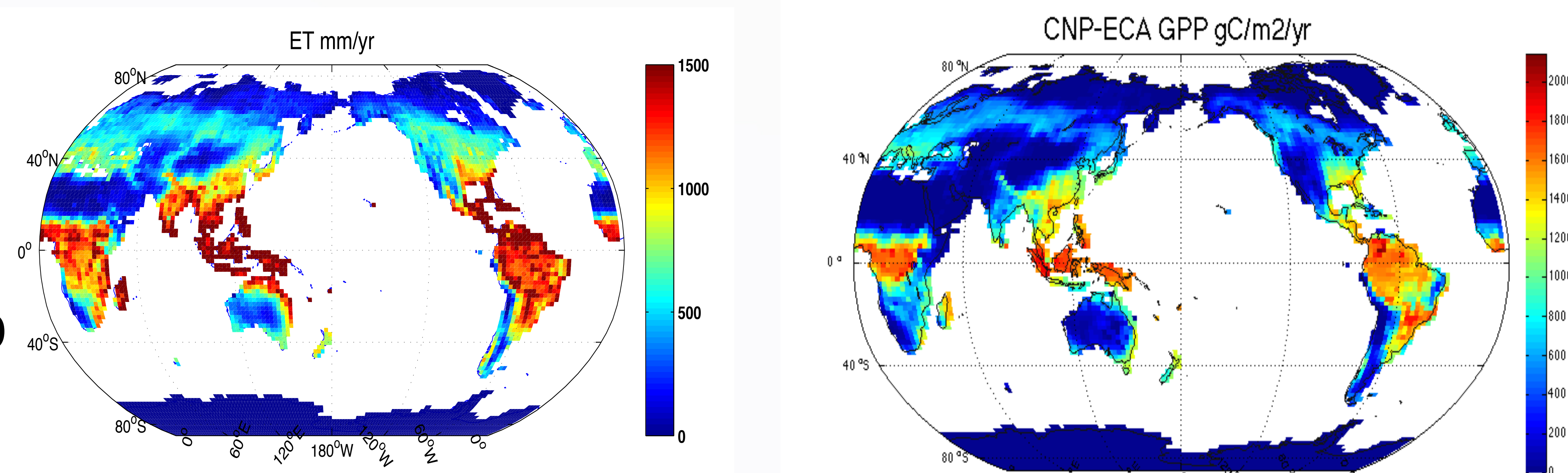## Global ALMv1-CaNDy simulations and evaluation underway





- In ALMv0, CLM4CN, and CLM4.5
  - GPP is predicted to have an unrealistic dip in the diurnal cycle
- Problem has been rectified in ALMv1-CaNDy
- Motivated our integration of root and leaf traits

ACME  Accelerated Climate Modeling for Energy

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