



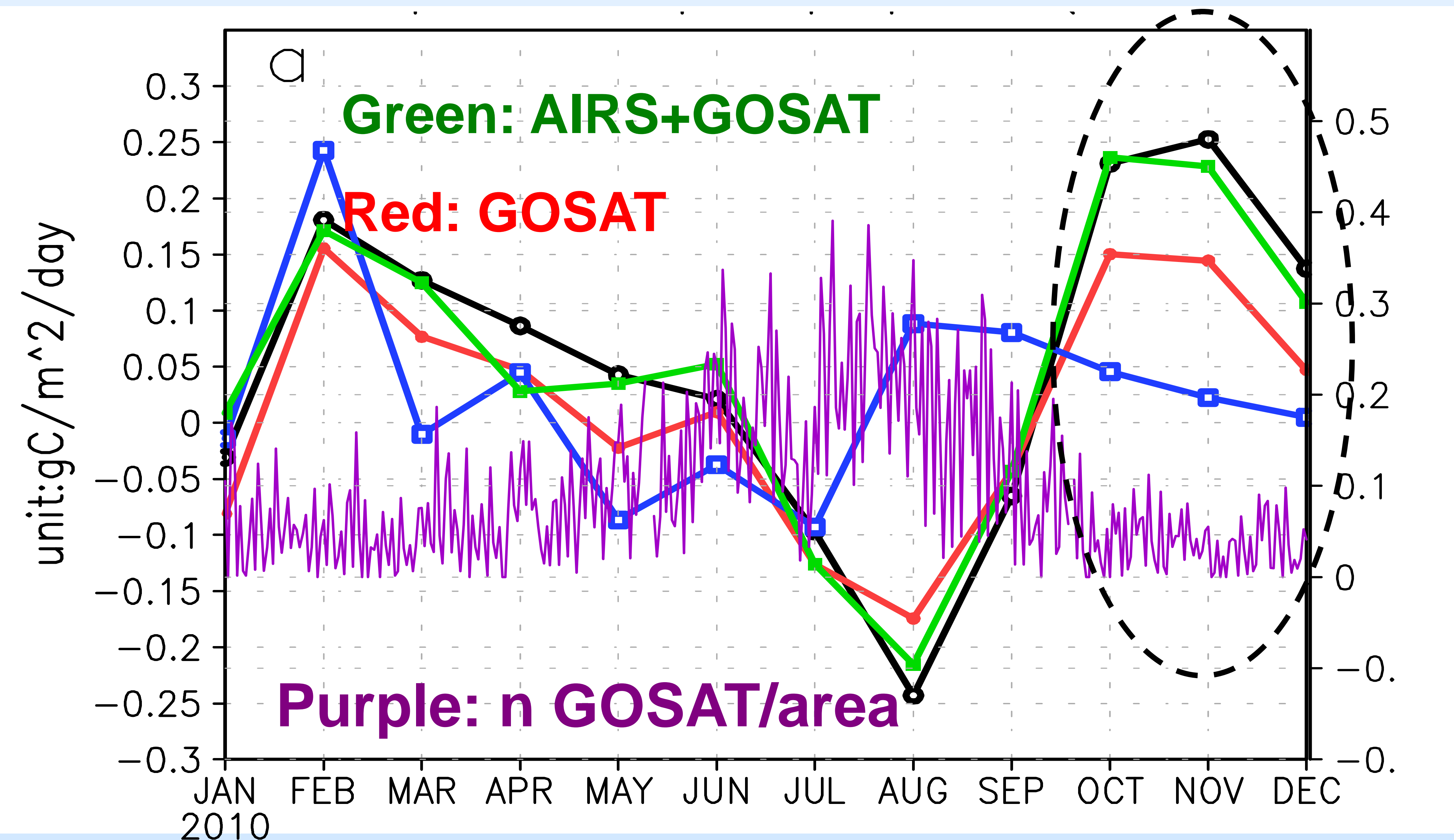
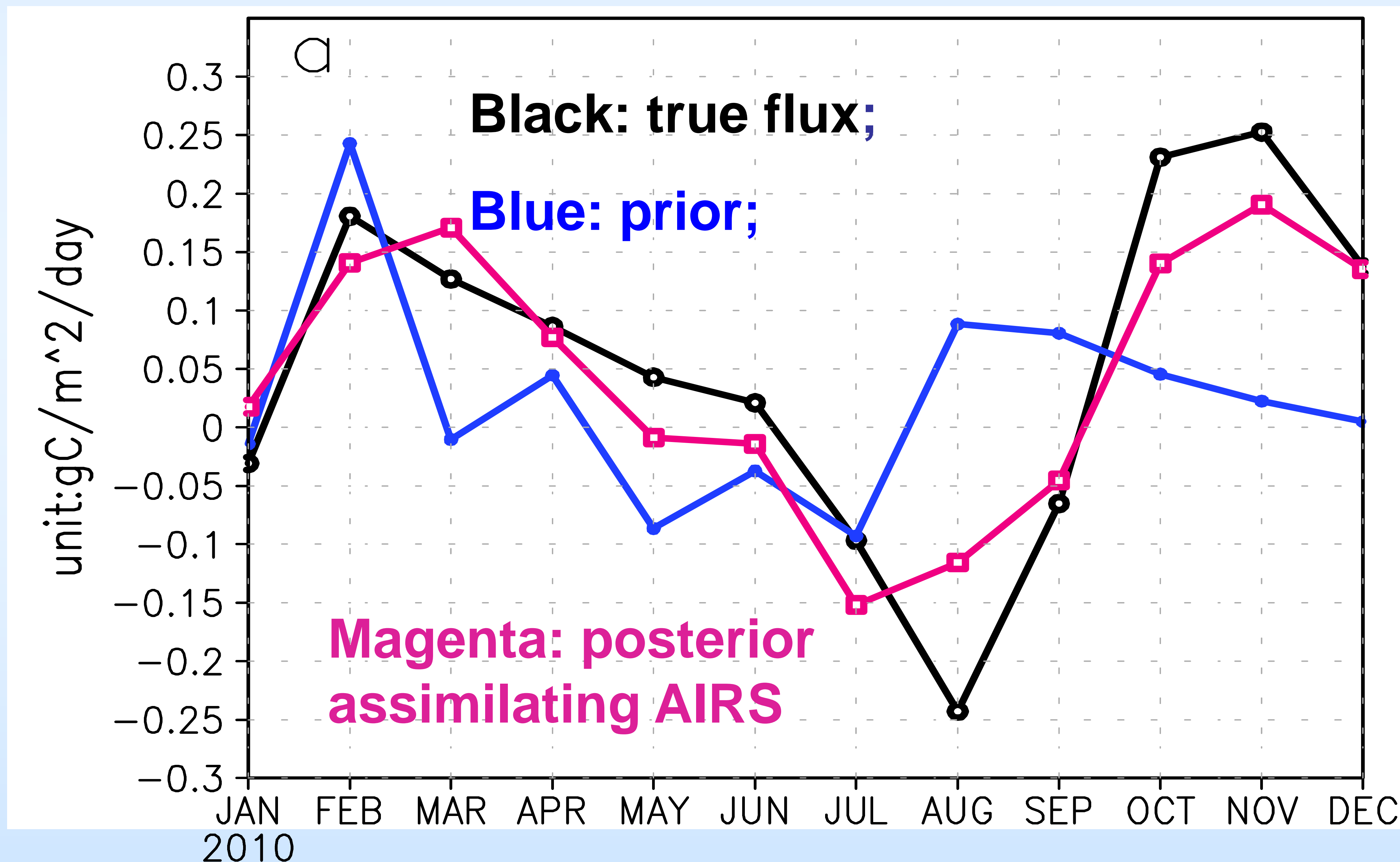
Constraining the tropical biosphere CO₂ fluxes by simultaneous assimilation of GOSAT Xco₂ and AIRS mid-troposphere CO₂ observations with variational inversion: a theoretical study

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- The **tropical CO₂ flux estimation** has large uncertainties.
- What is the **combined** impact of GOSAT Xco₂ and tropics AIRS mid-troposphere CO₂ on the tropical flux estimation?

Flux estimation (25° S-25° N, 90° W-30° W)



- The accuracy of posterior flux over tropics is comparable between AIRS and GOSAT.
- The posterior flux from GOSAT+AIRS is most accurate.
- AIRS has larger impact where GOSAT observation coverage is sparse.