



Introduction to FireMIP

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2024 FireMIP workshop

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Practical issues

- Who joins dinner?
 - Today
 - Tomorrow
- Send me your slides for a smooth meeting:
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Why FireMIP?

- Some 10 years ago a variety of global fire models started to be available
 - Do they coincide?
 - Are there structural problems?
 - Can be tell something about processes?
 - Do we have an idea of how fires were in the past?
 - Do we have an idea how fires will change in the future?

FireMIP

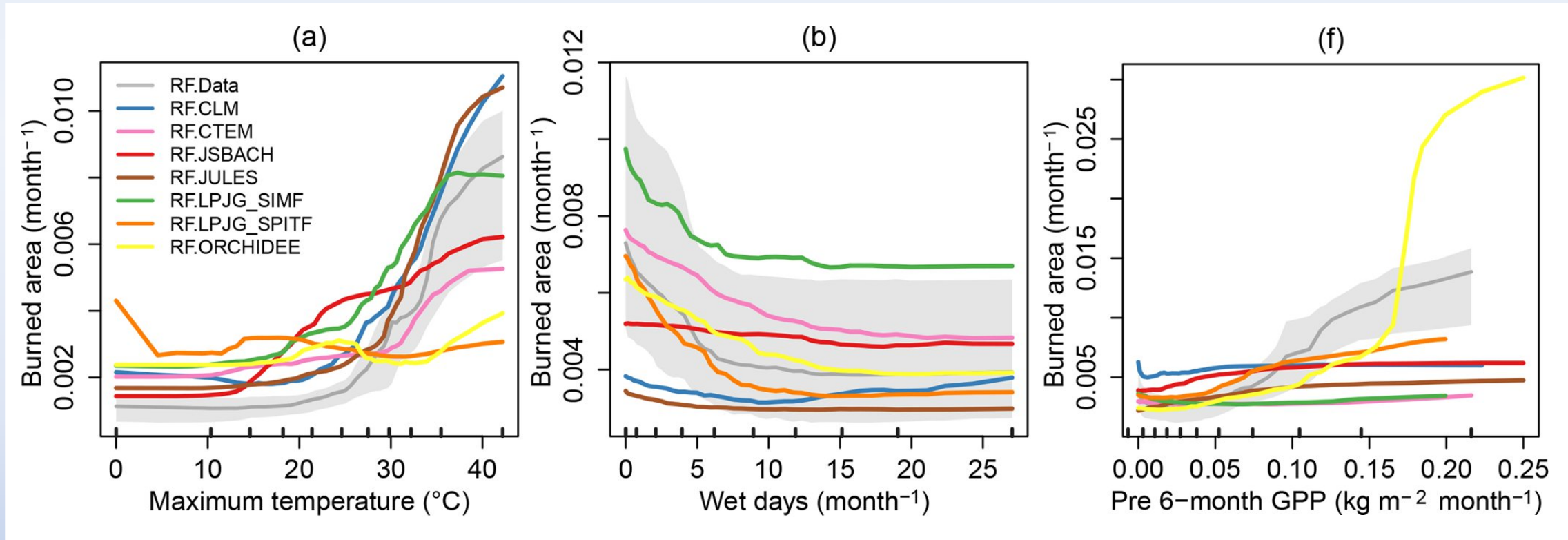
- 2014
 - Initial feasibility and 1th meeting
- 2015
 - Fire model review paper
 - First simulation protocol
 - 2th FireMIP workshop
- 2016
 - Model simulations started coming in
 - Thoughts about LGM simulations
 - 3th FireMIP workshop
- 2017
 - Lots of analysis
 - 4th FireMIP workshop
- 2018
 - 5th FireMIP workshop
 - Thinking about a new set of simulations
- 2019
 - “You modelers need to see a real fire”
 - FireMIP workshop in Kruger NP

FireMIP

- 2020-2023
 - Annual online workshops
 - Transition to ISIMIP
- 2024
 - 10 years FireMIP
 - Finally future simulations!

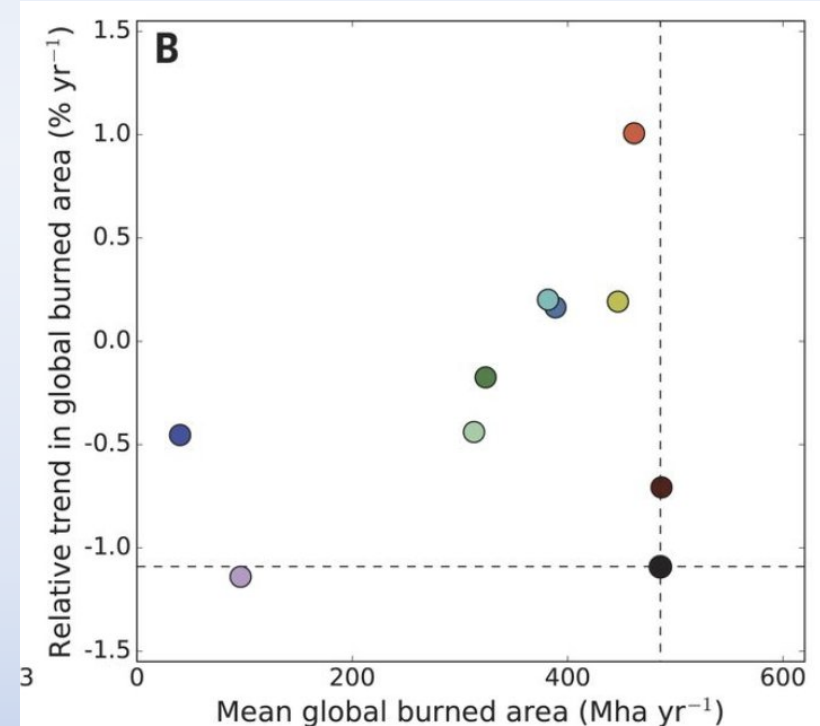
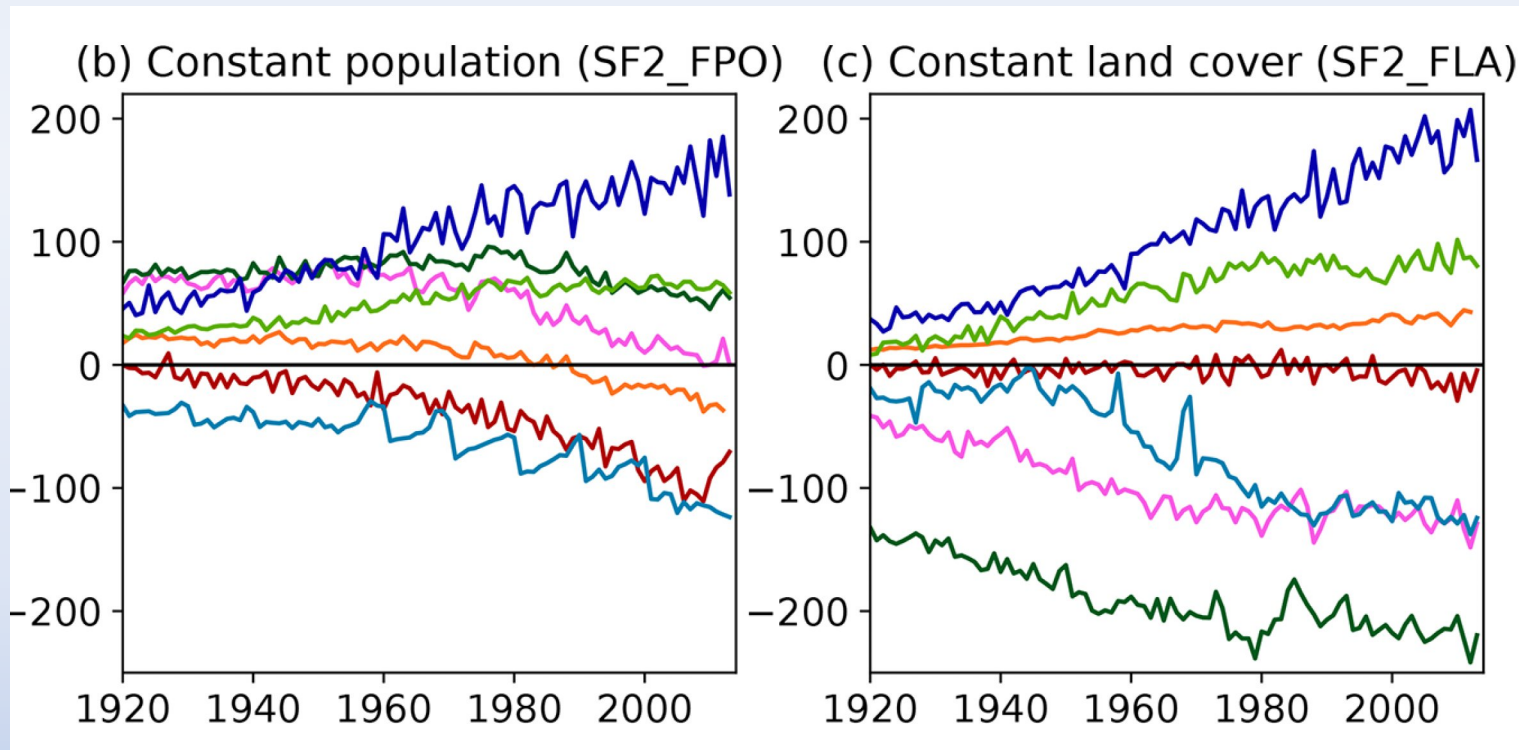
So what have you finally managed to do?

- Understand model limitations -> Improve fire models

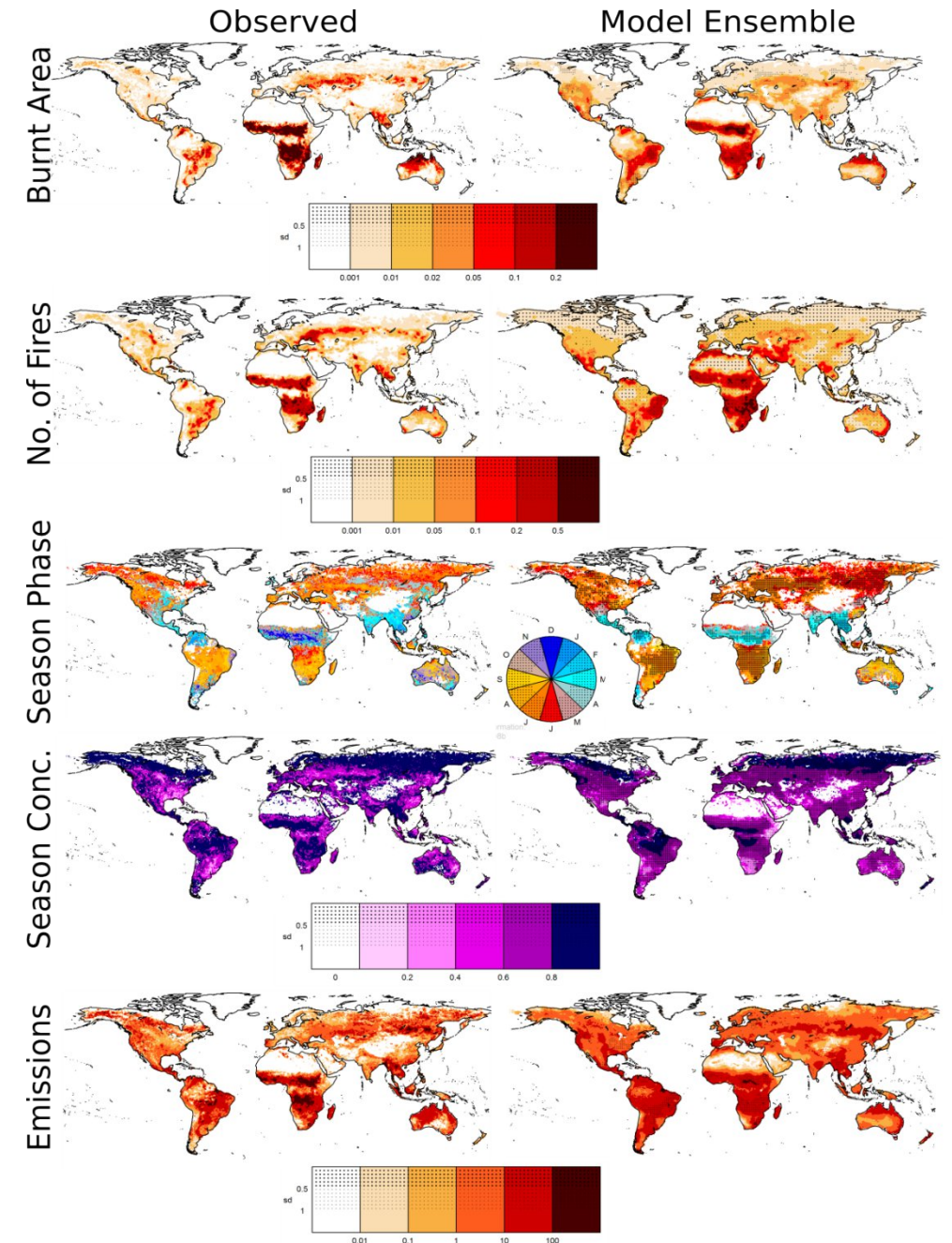


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Show that global fire models do reasonably well for many key variables



Use the models: estimate pre-industrial fire emission

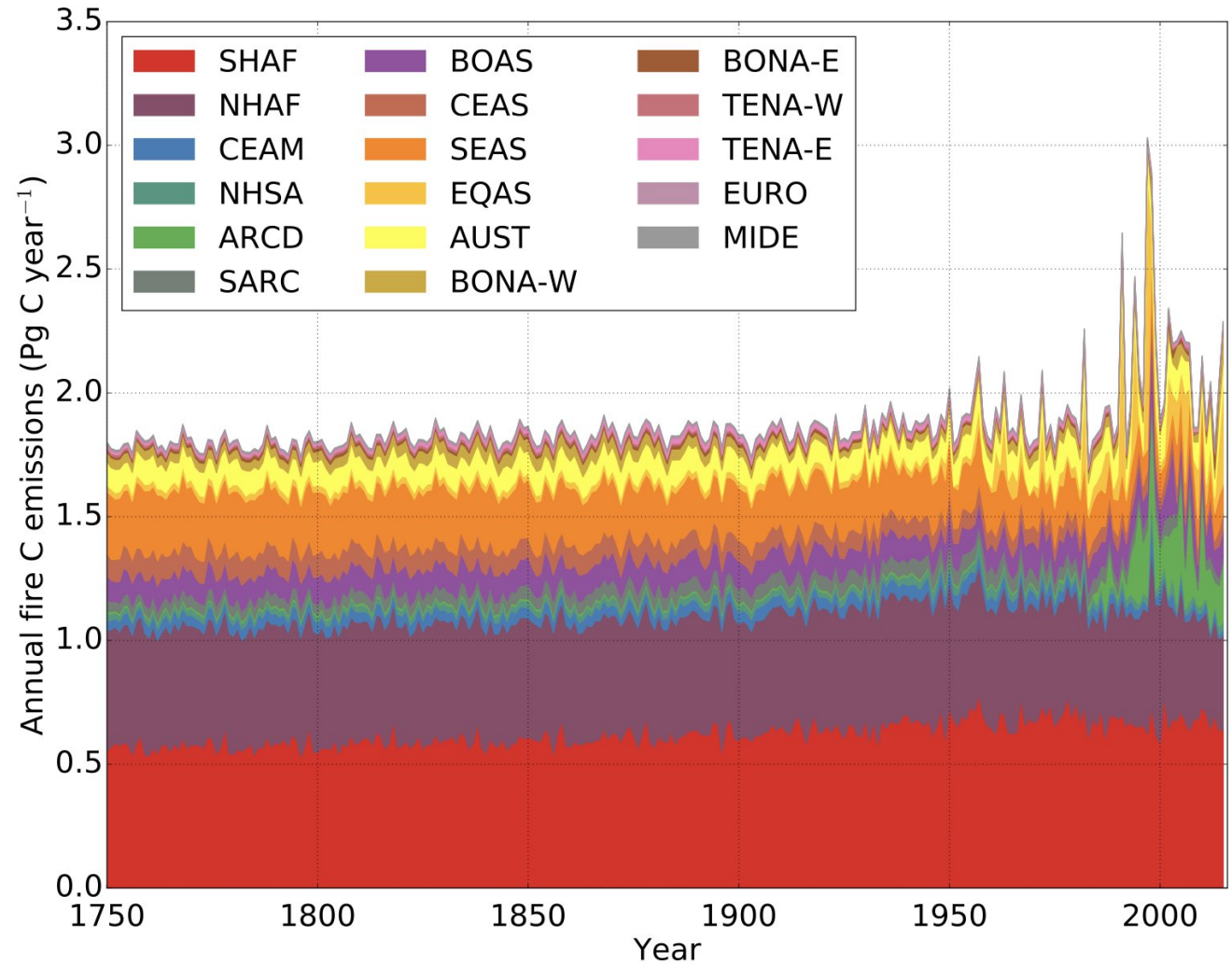
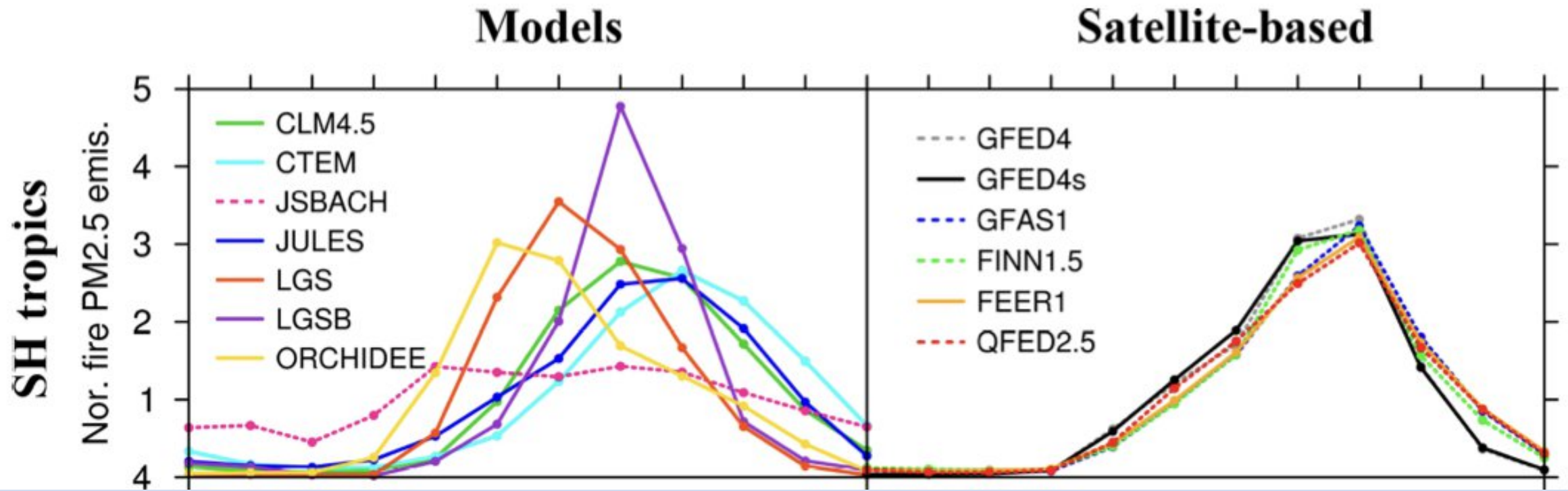
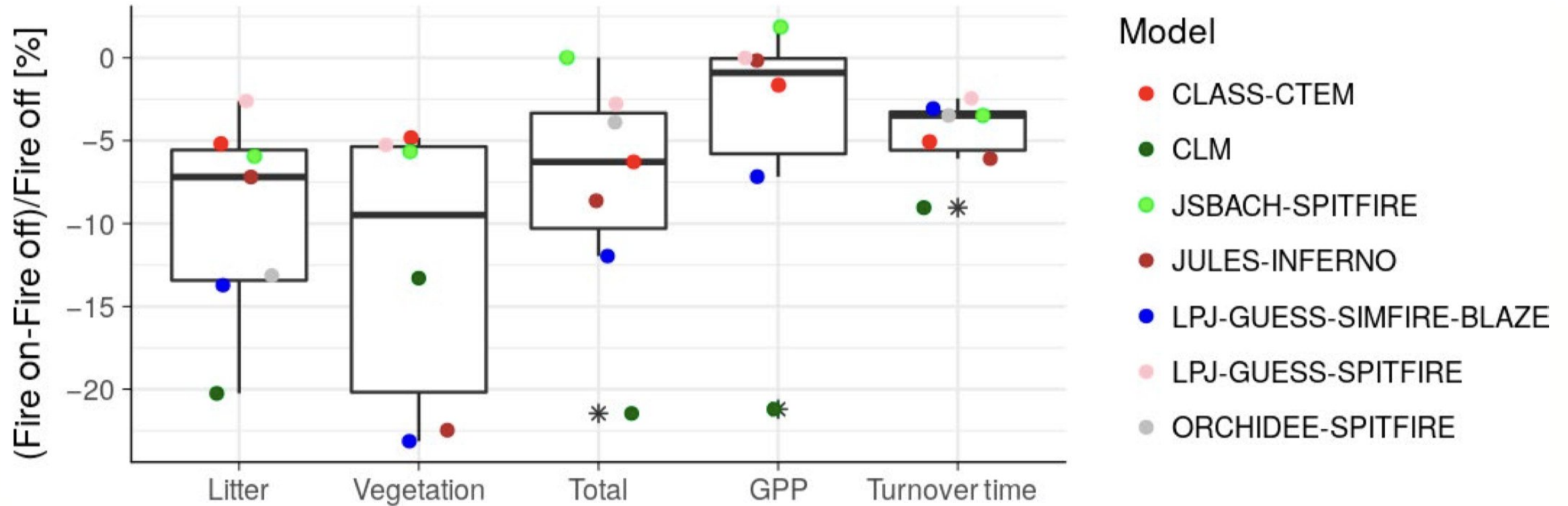


Figure 5. Global biomass burning carbon emissions (1750–2015).

Use the models: multi-model speciated emissions



Use the models: impact of fire on the carbon cycle



Existing simulations

- First round of FireMIP
 - 1700-2013
 - 9 models
 - Transient and sensitivity runs (no fire, fixed Land use, population, CO₂, climate)
 - Last Glacial Maximum
- 2019 Simulations
 - Transient and sensitivity runs (1700-2018)
 - Nitrogen sensitivity and interaction with CO₂ fertilization (woody encroachment)
- Now fire sector in ISIMIP protocol

We want people to use the simulations!

- Let us know what you are working on
 - Avoiding different groups working on the same topic
 - Modelers and coordinators get first refusal
- Invite modelers and coordinators at an early stage to get feedback on why different models behave as they do
- We have spreadsheet with who is doing what, and which models did submit: https://docs.google.com/spreadsheets/d/1qr-iWfl4xAzMXAX_DWfh-SWyocITHnm8FTI_UjEWqtl/edit#gid=0

2024 FireMIP meeting

- Finally again in-person
- Fire sectors within ISIMIP
- Finally future simulations

Thanks to everybody who
has been participating in
FireMIP!

