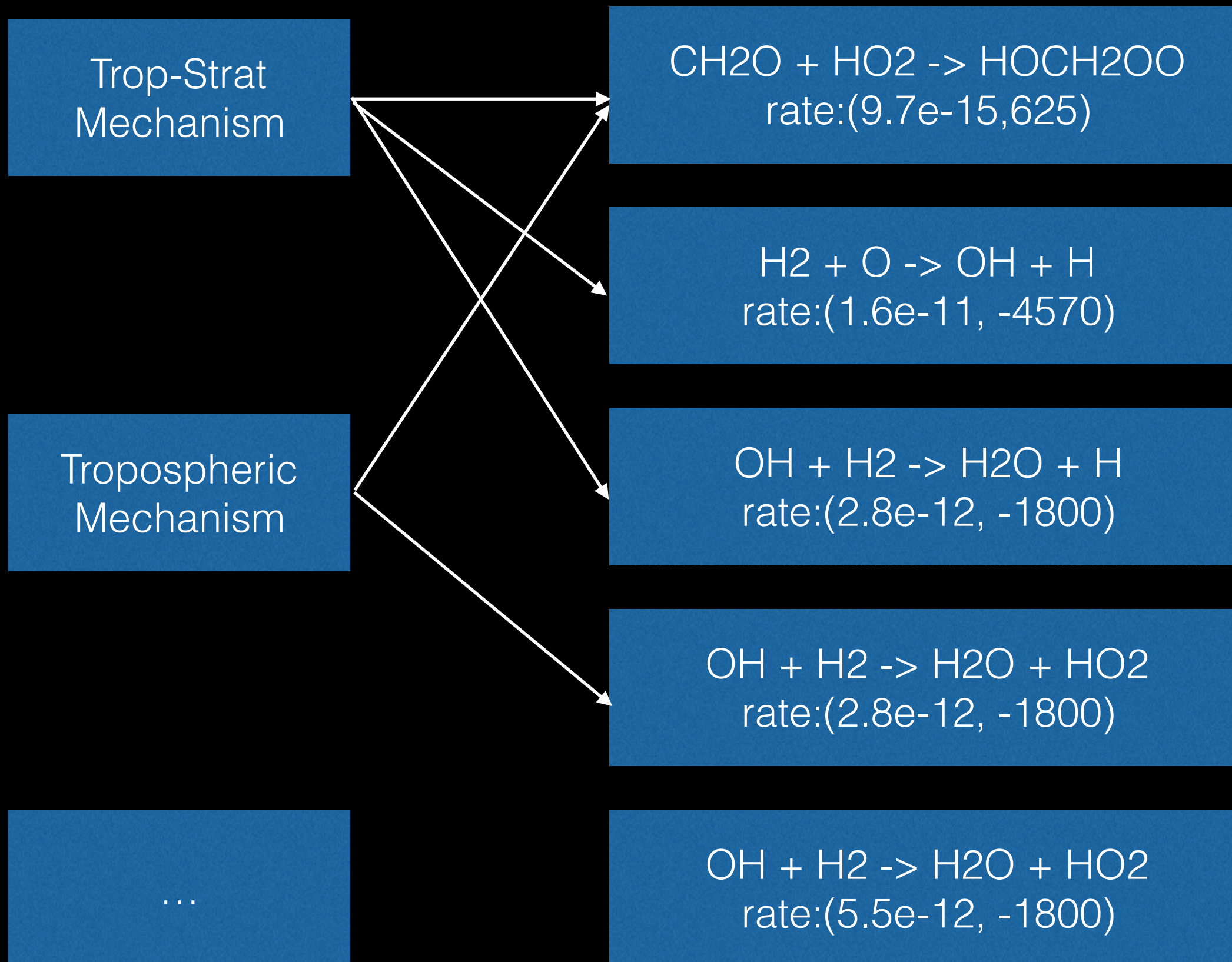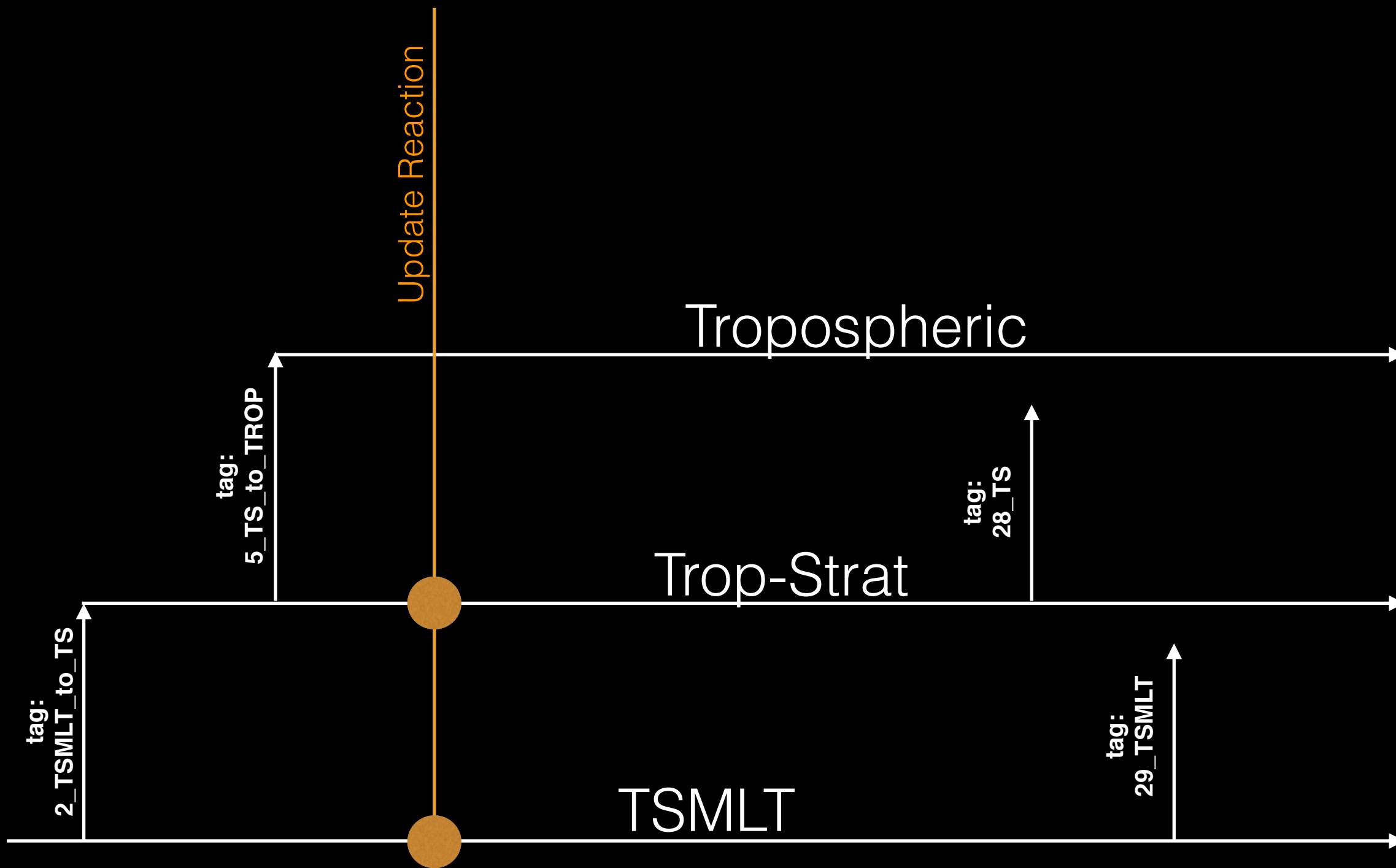# Chemistry Café

- Unify updates of chemical reactions

- Track changes to Mechanisms (Tags)

- Mechanism reports for preprocessors

  - KPP

  - CESM chemistry preprocessor

- Comments and references for reactions, species, tags

- Species data as well (tracking unclear)

Mechanisms are collections of reactions

Trop-Strat Mechanism

Tropospheric Mechanism

…

CH2O + HO2 -> HOCH2OO
rate:(9.7e-15,625)

H2 + O -> OH + H
rate:(1.6e-11, -4570)

OH + H2 -> H2O + H
rate:(2.8e-12, -1800)

OH + H2 -> H2O + HO2
rate:(2.8e-12, -1800)

OH + H2 -> H2O + HO2
rate:(5.5e-12, -1800)

Versioning: Mechanisms and Tags

- Mechanisms change when a reaction is edited
- Tags do not change when a reaction is edited
- Tags are a snapshot of a mechanism at some point in time
- A new mechanism is created from a tag of another mechanism

Edit Reaction
(what the Café does for the user)

- Copy old reaction -> new reaction

- User edits new reaction

- Move all Mechanism pointers to new reaction

- Leave all Tag pointers with old reaction

- old reaction and new reaction stay in the database