

New Hg⁰ soil emissions parametrization for more accurate light dependence

- Reference GEOS-Chem (v12.8.1) simulation shows too high Hg⁰ soil emissions (E) at night and in forested areas, since radiation (R_g) dependence of parametrization is in exponential term:

$$E = aC \exp(bR_g)$$

- Adopt new parametrization in the form proposed by Khan et al., *ESPI* (2019):

$$E = aC^b R_g^c$$

a , b , c are tunable coefficients, C is Hg soil concentration map

- Modeled response of Hg⁰ soil emissions to deforestation and diurnal cycle of emissions agree better with observations
- Expected submission of paper: January 2023

