

Supplement of

Simulation of radon-222 with the GEOS-Chem global model:

Emissions, seasonality, and convective transport

5

Bo Zhang, Hongyu Liu, James H. Crawford, Gao Chen, T. Duncan Fairlie, Scott Chambers,

Chang-Hee Kang, Alastair G. Williams, Kai Zhang, David B. Considine, Melissa

P. Sulprizio, and Robert M. Yantosca

10

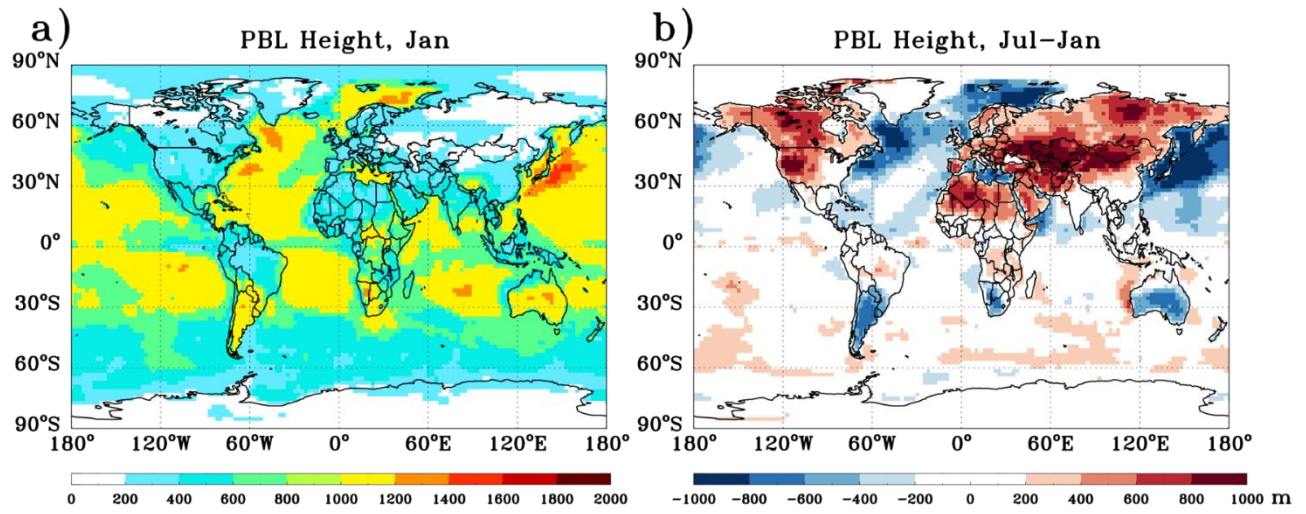
Supplement of Atmos. Chem. Phys., **21**, 1861–1887, 2021

<https://doi.org/10.5194/acp-21-1861-2021-supplement>

Correspondence to: Hongyu Liu (hongyu.liu-1@nasa.gov), Bo Zhang (bo.zhang@nianet.org)

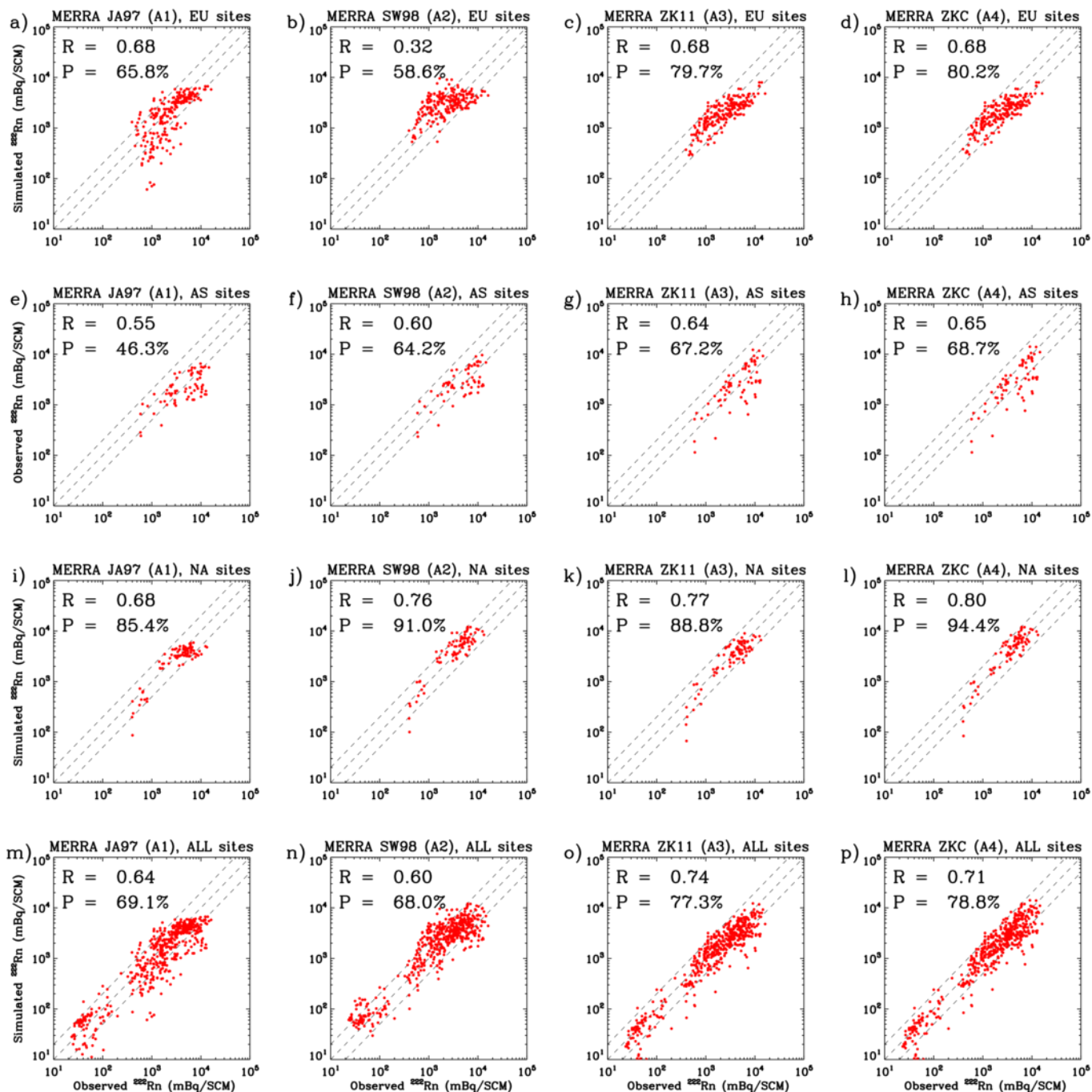
15

20



5

Figure S1. Monthly mean planetary boundary layer height (m) in MERRA for (a) January and (b) the difference between July and January 2013.



5 **Figure S2.** Same as Fig. 6, but the measured ^{222}Rn concentrations at European sites are applied with scaling factors suggested by Schmithüsen et al. (2017).

5

10

15

20

25

30

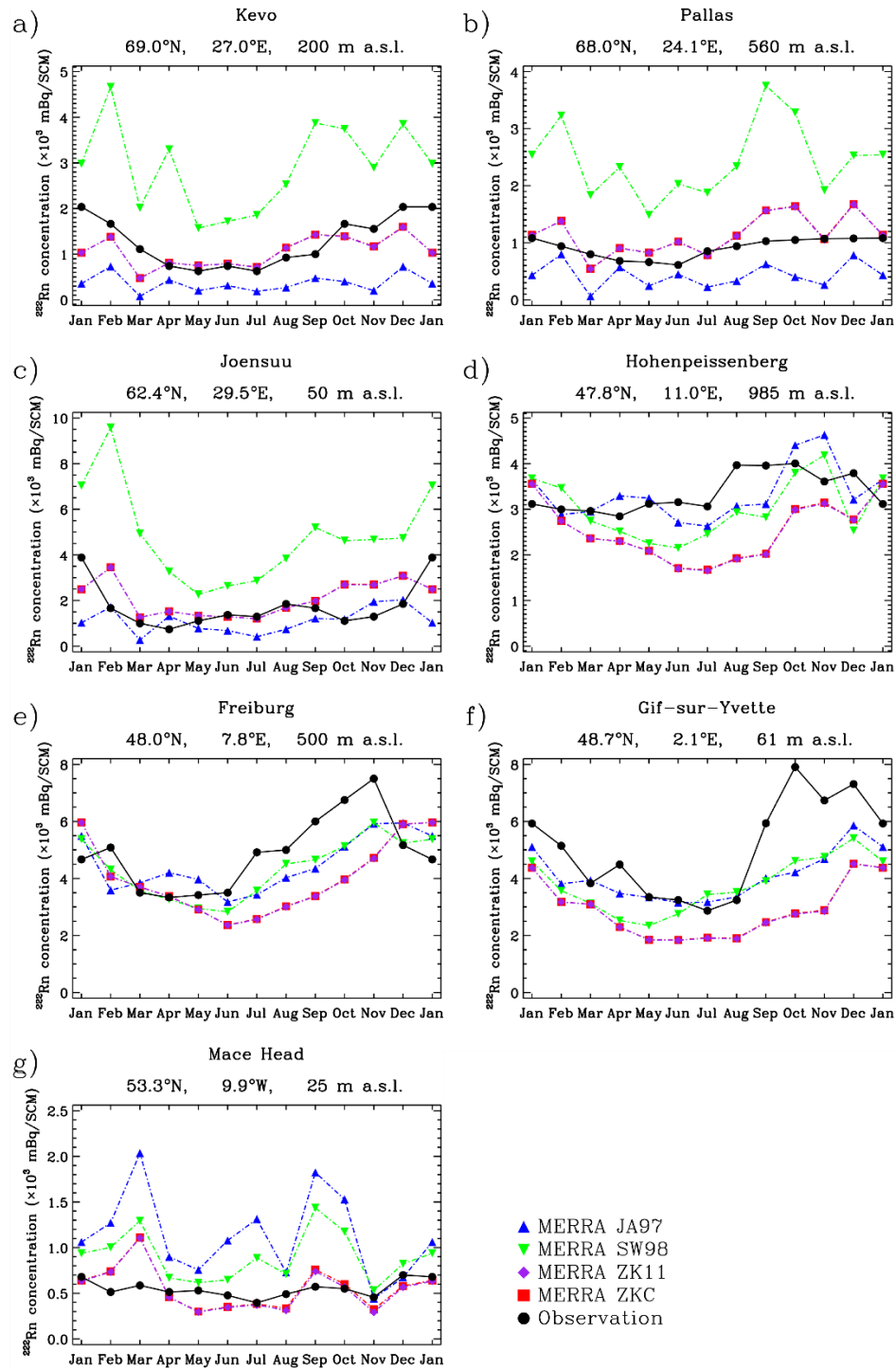


Figure S3. Same as Fig. 8, but the measured ^{222}Rn concentrations at European sites are applied with scaling factors suggested by Schmithüsen et al. (2017).

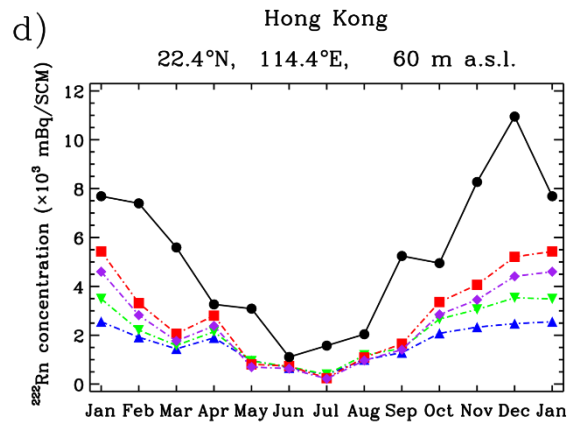
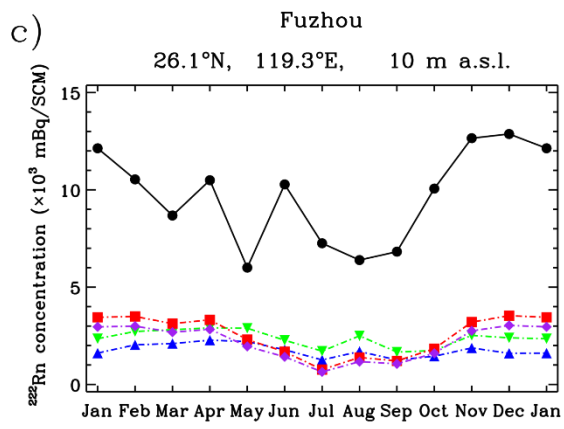


Figure S4. Same as Fig. 9c and 9d, but the simulated ^{222}Rn concentrations are sampled at the gridboxes corresponding to the site locations.