

## ***Interactive comment on “Sensitivity of Global Modeling Initiative chemistry and transport model simulations of radon-222 and lead-210 to input meteorological data” by D. B. Considine et al.***

### **Anonymous Referee #2**

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The paper describes  $^{222}\text{Rn}$  and  $^{210}\text{Pb}$  simulations. All with the same model but with meteorology that comes from different sources. I found the paper interesting to read, but failed to extract much new information out of it. The paper remains a number of figures with attached thorough discussion. The use of the RANDAB database is new. I have only some minor comments.

I miss some reference to the intercomparison paper of Dentener et al.: Dentener, F., J. Feichter and A. Jeuken, Simulation of Radon222 using on-line and off-line global models, Tellus 51b, 573-602, 1999.

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On page 5328, line 17: should be superior to... I disagree with the wording here. I understand that the advantage is that you separate the effect of meteorology, but using 'superior' suggests major flaws in other intercomparisons. I would suggest, 'has the advantage compared to other approaches'

Page 5330, line 2, near the tropopause. I would add 'in the tropics'

Page 5332: A large part of this section seems a repetition of earlier paragraphs.

Page 5334: "suggesting that annually averaged  $^{222}\text{Rn}$  emissions....too large". Could this theoretically also mean that transport is too slow? I would suggest to also put the spread in the model average, similar to the spread in the measurements.

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Interactive comment on Atmos. Chem. Phys. Discuss., 5, 5325, 2005.

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