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Atmospheric Chemistry and Physics Discussions

Interactive comment on "Regional air-quality forecasting for the Pacific Northwest using MOPITT/TERRA assimilated carbon monoxide MOZART-4 forecasts as a near real-time boundary condition" *by* F. L. Herron-Thorpe et al.

Anonymous Referee #2

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The manuscript illustrates the value of of dynamic CO boundary conditions to regional air-quality forecasting in the Pacific Northwest region. The paper is well written and results are clearly presented. However, discussion and in-depth analysis for some of the overall goals might be lacking. For example, the authors speculate that the ground elevation plays a large role in how the surface ozone concentrations change with dynamic CO boundary conditions. To prove such a point, the authors need to provide some statistics on surface sites at different elevations, e.g. at below/above 300 m. Is it possible to include some elevated ozone measurements from ozonesonde or

MOZAIC ?

Specific:

Page 3700, line 19, "Satellite overpass occurs twice daily at ∼10:30LT": Does that mean "twice" daily at 10:30am (descending) and 10:30pm (ascending) local time? It needs to be clarified.

Page 3701, line 13, "POET": Does this mean "Precursors of Ozone and their Effects in the Troposphere"?

Page 3701, line 22, "NRT": Is it "near real-time"? Please spell it out.

Page 3702, line 8, "07:15": Is this Pacific Standard Time (PST)?

Page 3702, line 6: What forecast files are needed for Mozart-4 initialization? How are they related to the analysis meteorological files available at 16:00 PST? Please elaborate.

Page 3704, line 3, "independent CO profile": Is this the CO profile obtained from model before applying averaging kernel? What does "independent" mean here?

Page 3706, line 4, using-> using.

Page 3707, line 8: Why not show an AIRNow site close to the Salt Lake City in Figure 15?

Figure 15: the locations of these AIRNow sites need to be provided. For instance, add to Figure 1.

Interactive comment on Atmos. Chem. Phys. Discuss., 12, 3695, 2012.