

Interactive comment on “The Meteorology-Chemistry Interface Processor (MCIP) for the CMAQ modeling system” by T. L. Otte and J. E. Pleim

Anonymous Referee #3

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This manuscript provides an updated overview of Meteorology-Chemistry Interface Processor (MCIP, the interface software that links meteorological model output and CMAQ).

CMAQ has been widely used in the AQ community. This manuscript provides important technical and scientific information on MCIP and the publication of this paper is certainly of great help to the CMAQ user community.

I recommend “accepted with minor revisions”. Please see comments below.

General Comments: This manuscript documents scientific changes and technical upgrades in the MCIP. It seems that some detailed discussions should be included in the

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MCIP user guide. Thus the paper can be focused on overall design and infrastructure of MCIP.

Specific comments:

(1) Page 1485. Figure 1: spell out CMAS. Figure 1 is discussed on page 1451, and the CMAS is spelled out on page 1471.

(2) State up-front that the WRF model discussed in the manuscript is referred to WRF-ARW unless WRF-NMM is explicitly stated. Use ‘ARW’ throughout the text, except for the discussions on WRF-NMM.

(3) Page 1457, second paragraph in section 2.2. The discussions on required fields (e.g., UST, ALBEDO) and preferable (e.g., LAI, CANWAT) can be summarized.

(4) Page 1458, lines 13-14: Is the hourly or more frequent model output also required for MM5 setup?

(5) The authors provide reference to ACM2, but not to other schemes (e.g., NOAH LSM, Ferrier microphysics scheme). The Pleim-Xiu LSM was first mentioned on page 1456, and the reference is cited on page 1467.

(6) Page 1472, line 17: the authors miss ‘to’ in the phrase “link another meteorological model CMAQ”

(7) Page 1480, Table 2: please explain ‘dot points’ and ‘cross points’

Interactive comment on Geosci. Model Dev. Discuss., 2, 1449, 2009.