

# Individual Evaluation Form

Proposal Number: 07-CCSP\_07-0001

Organization Name: LMD/IPSL

Principal Investigator: Emily Chien

## Evaluation Summary

Solicitation Title: Earth Science Document Review  
Solicitation Number: NNH07ZDA001R  
Evaluation Status: Submitted ( 07/17/2007 @ 05:13:31 EDT by Gregory Carmichael )  
Review: CCSP - AIR QUALITY CHAPTER ONLY [ CCSP AIR QLTY ]  
Reviewer: Gregory Carmichael ( Reviewer )

## Overall Grade:

## Evaluation Criteria

**Question 1 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

This chapter deals with the decision support system for air quality aspects. It focuses on the air quality model decision support tool, specifically the CMAQ model. The lead author is one of the main developers of CMAQ and he and his co-authors have presented a balanced report on the challenges and capabilities of the use of air quality models in discussion support applications. Technically I feel they have done a very good job in addressing the main issues. One of the key issues is identification of model uncertainties, followed by approaches to quantify these, followed by approaches to reduce these uncertainties. The report addresses these steps. Two major themes are the need for a closer integration with observations and a tighter coupling with global models.

**Question 2 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

yes they have done a nice job

**Question 3 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

not appropriate as this is more of a review of model status

**Question 4 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

yes

**Question 5 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

yes

**Question 6 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

yes

**Question 7 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

not appropriate

**Question 8 : Please distinguish issues you consider to be of general/major concern(s) from other, less significant point(s).**

I found no major gaps in the chapter. A few specific comments are presented below: Page 42 line 919: I do not think that model parameters presently are arbitrarily chosen. They are chosen based on best available information and experience. I suggest ending the sentence after  $\zeta$  model

inputs. Page 47 top: I do not understand the aspect of the sentence dealing with the incommensurability of the modeling of nature. Page 57: line 55: The discussion of the linkages of scales from regional to global and the time scales to address climate/air quality issues is important. This paragraph is insightful. However I do not like the statement that the generation of a mega model under one computer code would be impractical. I suggest that this sentence can be removed and simply move on to the statements that follow that offers a constructive path to proceed. All in all a nice job. The chapter would benefit from a careful editing.