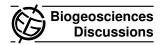
Biogeosciences Discuss., 6, C2834–C2835, 2009 www.biogeosciences-discuss.net/6/C2834/2009/ © Author(s) 2009. This work is distributed under the Creative Commons Attribute 3.0 License.



## Interactive comment on "European emissions of isoprene and monoterpenes from the Last Glacial Maximum to present" by G. Schurgers et al.

## **Anonymous Referee #2**

Received and published: 4 November 2009

## **General Comments**

Overall I found this paper a very informative read and the authors should be credited for a very good attempt to reconstruct European isoprene and monoterpene emissions over the last 20k years. This work provides a good insight to the likely (since true validation is not possible) changes in the biogenic emissions resulting from variations in climate and CO2 concentrations. The paper should be accepted for publication with minor adjustments (see comments below).

Section 2.2: The accuracy (and composition) of the CRU data is not mentioned. How good is this data set?

Page 8814, Line 8: The authors should briefly describe the inhibition model of Arneth

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et al. (2007b) (i.e. include model parameterization) which is used for simulation (1).

Section 3.1: Are isoprene emissions from shrubs found within warmer Mediterranean regions significant?

Section 3.2: Why are the estimates of Steinbrecher et al. (2009) significantly lower? Please comment.

Figures 4 and 5 are particularly interesting. It would be beneficial if they could aligned side by side in the finished manuscript.

Page 8821, Line 13: Please state the likely timescales these changes are likely to occur on?

Page 8821, Line 24 to Page 8822, Line 2: I found this section of text slightly disjointed and difficult to understand. Please rephrase to make it clearer.

Page 8823, Line 25: The short lifetimes of oxidation products would also contribute to the uncertainty in ice-core samples.

## Typos:

Page 8806, Line 6 and elsewhere: Capitalization: 'earth' should be 'Earth'.

Page 8812, Line 18: Missing closing bracket.

Page 8816, Line 29: '...for monoterpenes...'

Page 8820, Line 12: There is a colon where there should be a full stop (else lose the capitalization on the following 'The').

Interactive comment on Biogeosciences Discuss., 6, 8805, 2009.