

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.

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