

***Interactive comment on “Interactions among
vegetation and ozone, water and nitrogen fluxes in
a coastal Mediterranean maquis ecosystem” by
G. Gerosa et al.***

Anonymous Referee #1

Received and published: 14 February 2009

General comments:

The paper presents an analysis of ozone fluxes measured over a Mediterranean maquis ecosystem. Approx. 1/3 of the total ozone flux is absorbed by the vegetation through the stomata. The non-stomatal deposition correlates with air humidity and, in a minor way, with NO₂ fluxes. The results indicate a high risk for the ecosystem due to ozone. The paper clearly presents new data for this important ecosystem in the Mediterranean area. The title and abstract of the paper is appropriate, the paper well structured and fits perfectly the scope of Biogeosciences.

Specific comments:

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page 1454 line 3: State the year of measurements.

page 1454 line 20: Please replace "... the Critical Level (5000" by "... the Critical Level for the protection of forests and semi-natural vegetation (5000".

page 1454 line 22: Please replace "... PLA. The ..." by "... PLA for forests. The ...".

page 1455 line 6: The dot at the end-of-record is missing.

page 1455 line 13: The dot at the end-of-record is missing.

page 1457 line 5: Please differentiate between absorbed and effective dose. The effective dose is the absorbed dose less the detoxification rate.

page 1459 line 1: Please replace "... zero; Grunhage et ..." by "... zero; Grünhage et ...".

page 1459 line 2/8: Please declare the units of the entities.

page 1459 line 3/5: The primes must be located under the overbars.

page 1460 line 20: Was the roughness length set to a fixed ratio of h ?

page 1461 line 4: According to eq. (1) the algebraic sign of FO_3 is negative. FO_3 and F_{stom} are denoted both with negative and with positive algebraic signs in the manuscript (e.g. Figure 1 and Figure 2). A harmonization throughout the paper is necessary, e.g. by declaration of fluxes as absolute fluxes.

page 1461 line 16/17: Which relative diffusivity ratio is used?

page 1459 line 1: Please replace "... fluxes (Grunhage " by "... fluxes (Grünhage".

page 1463 line 21: "Pal Arya, 1988" is not cited in section "References".

page 1465 line 27: The dot at the end-of-record is missing.

page 1466 line 16: " $d+z_0$ " is the momentum sink height not the canopy height.

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page 1468 line 13: The dot at the end-of-record is missing.
page 1471 line 5: Please replace "wais" by "was".
page 1471 line 11: Please replace "and Pandis (1997)" by "and Pandis (1998)".
page 1472 line 14: "Gerosa et al. 2008" a or b (see section references)
page 1474 line 1: "Bussoti et al. 2007" a or b (see section references)
page 1474 line 6: Please replace "... each specie" by "... each species".
page 1475 line 11: The dot at the end-of-record is missing.
page 1475 line 10/11: Please clarify the source of supply.
page 1478 line 4/6: "Gerosa et al. 2004" is nit cited in the text.
page 1481 line 13: Please replace "2003" by "1993".
page 1489 Figure 7: "d+z0" is the momentum sink height not the canopy height.

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6, S121–S123, 2009

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