

## Interactive comment on "Recording of climate and diagenesis through fossil pigments and sedimentary DNA at Laguna Potrok Aike, Argentina" by A. Vuillemin et al.

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All modifications in the manuscript (.pdf) are highlighted in red font. The supplementary material has been incremented with new data and bound into one single pdf (see supplement .pdf). This document covers answers to the four referees.

Referee no.1

Minor comments:

- P18354, L2: Consider to use words instead of numbers at the beginning of a sentence.

C9753

Answer: This has been verified throughout the manuscript and modified accordingly.

- P18353, L27: Include definition of OTU.

Answer: The definition of this abbreviation, i.e. operational taxonomic units, is now mentioned in the manuscript.

- P18384: The footnotes of Figure 2 are a little bit confusing to identify the different parts of the figure.

Answer: The caption of Figure 2 has been rephrased as follows: "Figure 2. Paleoenvironmental conditions at Laguna Potrok Aike during the Holocene (A) and LGM times (B), with from left to right: Climatic and lacustrine parameters with a sagittal view of the basin and respective core section locating the 16S rRNA samples. Holocene times correspond with active Westerly winds, lake lowstand, subsaline conditions and high primary productivity in the basin and catchment, whereas LGM times are characterized by a lake highstand and active overflow, freshwater conditions, low primary productivity in the basin and catchment whereas LGM times are characterized by a lake highstand and active overflow, freshwater conditions, low primary productivity in the basin and inflows restricted to runoff from the volcanic catchment. The whole lacustrine sequence (C) is displayed as stratigraphic units in age scale and lithology log in meter scale (after Kliem et al. 2013). The sedimentation can be defined as pelagic (white), gravity (grey) and tephra (black) layers. Time abbreviations stand for Holocene (H), Younger Dryas (YD), Last Glacial Maximum (LGM), Antarctic events 1 (A1) and 2 (A2)."

Please also note the supplement to this comment: http://www.biogeosciences-discuss.net/12/C9753/2016/bgd-12-C9753-2016supplement.pdf

Interactive comment on Biogeosciences Discuss., 12, 18345, 2015.