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The MIS 11 CO2-CH4 records : The Vostok record revisited and validated by the EPICA record of termination 5

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We present here the first record of atmospheric CO_2 covering the entire period of MIS 11. It has been obtained, by correcting the Vostok ice stratigraphy from flow disturbances and establishing a common ice chronology with the EPICA DC record on this period. A major control of the validity of our Vostok reconstruction is the remarkable agreement with the CO_2 and CH_4 measurements performed on the EDC core and demonstrating for the first time the changes occurring during MIS 12-11 transition (Termination 5). In particular our reconstruction reproduces the lag observed on EDC of the increase of CH_4 versus CO_2 at the beginning of the transition.

Our CO_2 and CH_4 reconstructions for MIS 11 are compared with the gas records covering the following interglacials, MIS 9,7,5 and the Holocene. The CH4 record suggests an early human influence beginning about 5.000 yr ago while this does not seem to be the case for the CO_2 record.