



Firnair sampling at Kohnen Station, Antarctica: estimation of the age difference between air and ice from CO₂-data

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During the EPICA-DML field season 2005/06 the Division of Climate and Environmental Physics of the University of Bern (CEP) carried out a firn experiment in collaboration with the Alfred Wegener Institute, Bremerhaven. Firn air samples were taken at Kohnen Station, Antarctica (75°0.15'S, 0°04'E). Emphasis was put on the close off zone, where sampling was carried out in 1m resolution. The CO₂ concentration of each sample was monitored with a LI-COR CO₂/H₂O analyzer already in the field. Furthermore, borehole measurements were carried out to trace seasonal variation of the temperature in the firn. Application of a firn diffusion model results in an age difference of approximately 800 years between air and surrounding ice at the firn-ice transition.