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Snow albedo parametrization to explain EPICA DC air content variability

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The origin of orbital frequencies found in air content record still remains an open issue. One proposed mechanism is the long-term changes in the amount of annual absorbed solar radiation by the near-surface snow cover. Insolation, by leaving its imprint on the snow structure would affect the transition between snow and firn and would be therefore a controlling factor of the porosity at close-off. We propose here an albedo parametrization with the zenith angle based on measurements in order to estimate the long-term changes of annual absorbed solar radiation.