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Refining stratigraphic correlation between the EPICA Dome C and Vostok ice cores for the last 150 kyr

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This study aims at synchronising the EPICA Dome C and Vostok ice cores. A first rough synchronisation is performed with tephra layers and ice isotopic profile. This synchronisation is then refined with high-resolution chemistry analysis and electrical measurements performed on both ice cores by matching volcanic events during the last 150 kyr. Several common events were identified along the two ice cores on the basis of acidity and sulphate spikes in ice layers. A common time scale for both core is thus derived. Thanks to this new age scale, the relative timing of climate events in both core is discussed. After accounting for thinning of the layers as they are buried within the glacier, the Dome C-Vostok accumulation ratio, expected to be roughly constant from the conventional accumulation-temperature-isotope approach, is analysed.