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Decadal to centennial timescale evolution of SE Pacific climate during the late Holocene: insights from alkenone SST and leaf-wax δD

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The SE Pacific off southern Chile, where the westerlies and Antarctic Circumpolar Current intersect with South America, represents an important area for understanding the behavior of southern hemisphere mid- and high-latitude climate. Deglacial records from the Chilean margin show large–magnitude changes in SE Pacific sea surface temperature between the last glacial period and Holocene, and changes were coeval with Antarctic ice cores. Ultra-high-resolution climate records of the late Holocene from this region are, however, rare. Therefore, the magnitude, abruptness and spatial scale of decadal- to centennial-scale climate variability in the SE Pacific is not well constrained. In this poster we will discuss two ultra-high-resolution alkenone sea surface temperature records from the Chilean continental margin covering the late Holocene. These records are located close to the bifurcation of the northern Antarctic Circumpolar Current and hence help to elucidate north-south shifts of the southern hemisphere climate belts at decadal-centennial timescales. We compliment these records with indicators of terrestrial climate and hence the southern hemisphere westerlies, based on the hydrogen isotopes of plant leaf waxes.