

# Precise radiocarbon dating of Late-Glacial cooling in mid-latitude South America

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Variability of atmospheric  $^{14}\text{C}$  content often complicates radiocarbon-based chronologies; however, specific features such as periods of constant  $^{14}\text{C}$  age or steep changes in radiocarbon ages can be useful stratigraphic markers. The Younger Dryas event in the Northern Hemisphere is one of those periods, showing conspicuous  $^{14}\text{C}$  wiggles. Although the origin of those variations is not fully understood, we can make practical use of them and determine: (i) whether the Younger Dryas was global in extent: if so, (ii) were the initial cooling and the final warming synchronous worldwide; and (iii) what are the implications of these similarities/differences? Here we report high-resolution AMS  $^{14}\text{C}$  chronologies from the mid-latitudes of South America that pinpoint a cool episode between 11,400 and 10,200  $^{14}\text{C}$  yr B.P. The onset of the final cool episode of the Late Glacial in the southern mid-latitudes, i.e., the Huelmo/Mascardi Cold Reversal, preceded the onset of the Younger Dryas cold event by  $\sim 550$  c