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# An extended climate archive from the Eastern Alpine ice coring site of Mt Ortles

Giuliano Dreossi (1), Luca Carturan (2), Fabrizio De Blasi (2), Gabrielli Paolo (3), Andrea Spolaor (1), Gabrieli Jacopo (4), Carlo Barbante (4), Roberto Seppi (5), Roberto Dinale (6), Thomas Zanoner (2), Barbara Stenni (1), Dalla Fontana Giancarlo (2), and Lonnie G. Thompson (3)

(1) Dipartimento di Scienze Ambientali, Informatica e Statistica, Università Ca' Foscari Venezia, Italy, (2) Dipartimento Territorio e Sistemi Agro-forestali, Agripolis, Università di Padova, Italy, (3) Byrd Polar and Climate Research Center and School of Earth Sciences, The Ohio State University, USA, (4) IDPA-CNR Istituto per la Dinamica dei Processi Ambientali, Università Ca' Foscari di Venezia, Italy , (5) Dipartimento di Scienze della Terra e dell'Ambiente, Università di Pavia, Italy, (6) Ufficio Idrografico - Provicina autonoma di Bolzano, Italy

Oxygen and hydrogen stable isotope content of ice cores has been extensively used for temperature reconstruction. The most elevated glaciers of the Alpine area have been utilized for ice coring for more than four decades, but the scarcity of drilling projects in the Eastern Alps and of isotopic records covering a long time period for the entire Alpine region suggest that the paleoclimatic potential of this mountain area is still largely unexploited. In autumn 2011 four deep cores were drilled on Mt Ortles, South Tyrol, Italy, at 3859 m a.s.l. An extensive reconstructed temperature record for the Ortles summit, based on the surrounding meteorological station data, is available for the last 150 years, while an automatic weather station had been operating from 2011 to 2015 in proximity of the drilling site. A preliminary age scale has been utilized for dating the two cores for which the isotopic record is available (core #1 and #2), creating an Ortles stacked record and comparing the Ortles data to temperatures and to other Alpine isotope records. The comparison among different ice core locations shows some similarities in the observed fluctuations, despite the considerable distance between the sites and the substantial geographical variability of temperature, precipitation and moisture source patterns characterizing the Alps.