

Mono Lake Excursion in the Western and Southwestern United States

J C Liddicoat [*J C Liddicoat*](Department of Environmental Science, Barnard College, Columbia University, New York, NY 10027-6598; ph: 212-854-7089; fax: 212-854-5760; e-mail: jliddico@barnard.edu); R S Coe (Earth Sciences Department, University of California, Santa Cruz, Santa Cruz, CA 95064; ph: 831-459-2393; fax: 831-459-3074; e-mail: rcoe@es.ucsc.edu)

The Mono Lake Excursion (MLE) as recorded in the Mono Basin, California, has an older part that is negative inclination and west declination. Those paleomagnetic directions are closely followed by steep positive inclination and east declination. The negative inclination/west declination occurs during low relative field intensity. A path of the Virtual Geomagnetic Poles when examined from old to young and that represents negative inclination/west declination forms a clockwise loop that reaches 35 N latitude and is centered at about 35 E longitude. That loop is followed by a smaller one that is clockwise trending and is centered at about 70 N latitude and 270 E longitude; the younger loop corresponds to steep positive inclination/east declination (Denham and Cox, 1971; Denham, 1974; Liddicoat and Coe, 1979). Discoveries of the MLE outside the Mono Basin in western North America record nearly the full excursion (Negrini, et al., 1984) or, more often, the younger portion of steep positive inclination/east declination and high relative field intensity (Liddicoat, 1992, 1996; Coe and Liddicoat, 1994). >> >>In exposed lake sediments in the Bonneville Basin (Utah) and in southern Arizona we located anomalous paleomagnetic field behavior that resembles the MLE as recorded in the Mono Basin. Carbon-14 dating of the sediments in Arizona indicates that the field behavior occurred about 28,000 years ago, a date that is within a few thousand years of the age assigned to the MLE in the Mono (Lund, et al., 1988) and Lahontan (Nevada) basins (Benson, et al., 2003).

1. Chapman Conference on Timescales of the Geomagnetic Field >>2. Contributed (oral) >>3. a) J C Liddicoat, Department of Environmental Science, Barnard College, Columbia University, New York, NY 10027-6598; b) 212-854-7089; c) 212-854-5760; d) jliddico@barnard.edu >>4. No -- Jim Channell Dept. Geological Sciences University of Florida 241 Williamson Hall PO Box 112120 Gainesville, FL 32611, USA