MEASUREMENTS OF HYDROGEN ISOTOPES IN ATMOSPHERIC METHANE FROM A SAMPLING OF NOAA FLASK NETWORK SITES

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ABSTRACT

We present preliminary results from hydrogen isotopic measurements in atmospheric methane obtained from the NOAA CCGG Cooperative Air Sampling Network. Recent developments at INSTAAR, University of Colorado have brought on line the capability to measure hydrogen deuterium ratios in methane using continuous flow mass spectrometry coupled with an extraction combustion sample preparation system. Preliminary results show reproducibility of cylinder air samples to less than ± 2 ‰. Data from several months of samples from six network sites are presented, including data from: Barrow and Cold Bay, Alaska, U.S.A; Tutuila American Samoa; Black Sea, Constanta, Romania; Park Falls Wisconsin, U.S.A.; and Baltic Sea, Poland.