

Light Intensity, Nutrient, and pCO₂ Controls on Boron Isotope Fractionation in Laboratory Cultured Corals

Introduction: I am requesting funds from the Climate Center to obtain boron isotope data on laboratory-cultured coral samples in order to evaluate the potential of corals as an archive for the boron isotope paleo-pH proxy. This preliminary data will be used as the basis for a proposal to NSF to complete a detailed study as described below. Before describing this study, a brief discussion on boron isotope systematics in carbonates, as well as a review of a study on seasonal variations in the boron isotope composition of a modern natural coral will be discussed.