**The Feasibility of Measuring Abyssal Ocean Temperatures with Thermometers Embedded in Trans-Ocean Communication Cables**

Measurements of abyssal ocean temperatures are crucial for determining global ocean heat content, sea level rise, and aspects of climate change. One estimate of deep ocean warming rates is 0.005 °C / Year, resolving a warming rate of this small magnitude will require thermometers that demonstrate lower drift rates in accuracy. Deep sea thermometers are currently available with drift histories within +/- 0.002 °C for up to 14 years. However there are significant design challenges in measuring small temperature signals with embedded thermometers. Heat sources within the cables must be considered as well as thermometer placement to avoid burial. An example of abyssal temperature measurement is presented and early results of the effort are discussed.