

## Data Management Plan

The main objective of this proposal is to determine the integrity of archived extracted gas samples collected in the 1980s throughout the Atlantic Ocean and if they are suitable for measurement of gases that could not be measured at that time. The collection of these samples is reported in various published and unpublished data reports and sample processing logs. If the samples prove to still be good after 3 – 4 decades of storage, this information will be organized in computer files containing dates and locations of collection, sample depths, temperature and salinity of the samples, and sample processing information including volume of gas recovered and gas extraction efficiency, and other sample processing information. The objective of the data management plan is to manage this sample archive and to make its existence and the sample information available to members of the scientific community who may be interested in measuring a variety of gases on the samples. This will be done by placing the computer files containing the sample information and a readme file describing what is in these files in the BCO-DMO archive. SF<sub>6</sub>, Ar and N<sub>2</sub> will be measured on several dozen samples and these data will be included in the computer files. We will also report the existence of these files to colleagues, particularly those involved in measuring <sup>39</sup>Ar and other radioactive isotopes of noble gases by the ATTA method. We have participated with this group of scientists in several workshops over the past 6 years evaluating how this technique can be applied to a variety of problems in the earth sciences.