Measurement programs working to better our understanding of the global carbon cycle incorporate many different strategies for the collection of raw data. Programs may collect both continuous insitu and discrete flask measurements from fixed locations as well as mobile platforms like aircraft, shipboard & vans. Collected data must be stored in a central repository to be processed and analyzed. Details of the collection equipment, analysis instruments and potential issues must be documented. Many different users will interact with the data at various stages to manage logistics and perform quality control. Finally, processed data must be publicly available to the community for comparisons and further analysis.

A thoughtfully implemented data management strategy is essential to the long term success of a trace gas measurement program. Utilizing a well designed database management system will allow multi user access in a secure environment while maintaining accountability, data integrity and flexibility. We will discuss basic concepts, design strategies and implementation details from the CCGG database system.