

Data Management Plan

The main purpose of the proposal is to establish a partnership between UNT and UTD and to mentor bridge fellows from groups underrepresented in astronomy. The research that bridge fellows conduct may involve the use of observational and simulation data, and may generate research products.

Products of the Research

Depending on the exact research projects, the products can include QSO spectra and new or improved analysis methods of numerical simulation results. All the QSO data stemming from this research, including raw data and final, calibrated spectra will be made public on a dedicated UNT website, following the policies of, e.g., [23]).

Data Format

Simulation results will be stored in HDF5 format, which is a widely used data file format in computational astrophysics with a strong community support.

Access to Data and Data Sharing Practices and Policies

Simulation data will be stored on national computing facilities. All Co-PIs of this proposal have exclusive access to the Texas Advanced Computing Center (TACC). In addition, all computational faculty on this proposal (Li, King, and Kesden) have regular awards with various national computing facilities, including the NSF Extreme Science and Engineering Discovery Environment (XSEDE) systems and the NASA Pleiades cluster.

The raw simulation data will be made available via Globus Online data sharing software. Globus Online is free to install and use for users at non-profit research and education institutions. It is a “software-as-a-service” approach to large file transfer. We will create shareable links using Globus Online that will allow secure access to our data from anywhere in the world.

Archiving of Data

TACC can provide long-term storage for simulation data. Although we do not expect to store much of the data as simulation data can be reasonably easily reproduced. Analysis scripts are stored on GitHub.

Software

Analysis scripts for simulation and observational data will be made public on GitHub repositories.