Data Management Plan

Data Products: Data associated with this project will include the creation and compilations of nucleosynthetic yield sets (text files) and the construction of a simulated observational yield set (fits catalog). My work will also include the analysis of stars in the Milky Way Mapper abundance catalog.

Data Storage/Computation: I anticipate that 1 TB of storage will be necessary to manage the Milky Way Mapper data. This data is archived within the SDSS collaboration, but I will store it locally on an external drive. Nucleosynthtetic yields will be compiled and stored within VICE on GitHub[1]. The yield calculations and multizone modeling described in my proposal can be completed on a personal laptop or desktop computer.

Data and Research Product Dissemination: Within my proposal I have explicitly stated how each project will be documented. Nucleosynthetic yields and chemical evolution simulations with VICE will be made publicly available on GitHub and maintained by creator James Johnson and myself. Peer reviewed papers will share my findings with the broader scientific community. I anticipate that my research will result in four to five publications over the three year fellowship. Papers employing yield calculations or multi-zone modeling from VICE will outline the methodology to ensure that others can reproduce the data sets. Publications including proprietary data from Milky Way Mapper will undergo collaboration review, as outlined in the SDSS publication procedures.

Broader Impacts: Products of my Broader Impacts work will also be stored for future access. Mentor training lesson plans will be archived within the CU Prime and Access Network leadership. I will archive the Milky Way Mapper planetarium show and presenter guide with The Fiske Planetarium at CU Boulder and with SDSS's Education and Public Engagement group. The show will be stored on an external drive for continued presentation to the public at Fiske and other planetariums. Research and outreach efforts will also be documented on my personal website.

[1] https://github.com/giganano/VICE