Data Formats: in-class assignment

1. Got to https://vizier.cds.unistra.fr/viz-bin/VizieR
2. Under “Find Catalogs among <big number> available” type Fullard
3. Click on “ReadMe+ftp” on the Fullard+ 2020 entry.
4. Write a short paragraph describing the FAIR data principles that the VizieR catalog service is using. Are there any missing? The full list is at https://www.go-fair.org/fair-principles/
5. Explore the data formats that are available under the “FTP” tab on the right hand side of the page (not the top bar in blue). Write down which are human readable and which are binary or compressed formats. Which would you prefer to work with?
6. Download the txt and txt.gz files for one of the tables. Verify that they are the same once the compressed format has been extracted. Do the comparison with the command

   ```
   git diff --no-index <path> <path>
   ```

   Where <path> is the path to each file. You will need to rename the extracted file or place it into a separate directory, or it will likely overwrite the uncompressed file or fail to extract.

   If you are using Windows, you may need 7-zip to extract the data https://7-zip.org/. On Mac, you should be able to use the built-in archive manager.

7. Try reading the data in using the programming language and packages you are most comfortable with. Write down the methods you tried, including code snippets, and which data you managed to read, if any. You do not have to succeed. Discuss the problems with people at your table if you run out of ideas. The astropy package has capabilities that may be useful https://docs.astropy.org/en/stable/io/fits/index.html and similarly R has https://cran.r-project.org/web/packages/FITSio/index.html .

   Submit your paragraphs and comparison on D2L.