

## Details about the 'custom\_df.p' database

- Added a new column called '**goes\_flux**' which contains the GOES flux values in SI units ( $\text{Wm}^{-2}$ ) and corrected any funky entries.
- Changed the string **srs\_hale** column entries such that:
  - Replaced 'Alpha' with a value of 1.0
  - Beta → 2.0
  - Beta-Gamma → 3.0
  - Beta-Delta → 4.0
  - Beta-Gamma-Delta → 5.0
  - Gamma-Delta → 6.0
- Changed the string **cme\_halo** entries such that:
  - Replaced 'I' with a value of 1.0
  - II → 2.0
  - III → 3.0
  - IV → 4.0
- Removed zero values from the **cme\_kinetic\_energy** entries.
- Fixed the issue with the **flare\_end\_time** column entries - if the flare duration extended into the following day, the LMSAL entries would not register the passing of that day, i.e. the hours would change but the day would remain the same, so there were negative values.
- Added a new column called '**flare\_duration**' which contains the calculated duration of each flare event using the **flare\_start\_time** and **flare\_end\_time** columns.
- There are a few other minor changes scattered throughout some of the columns. These only involve some general tidying up - removing some out of place zeros, fixing some entry mistakes, and changing some datatypes to the format we would like.