Characterizing Circumstellar Particles Observed and the Data that Does It
Project Objective:
Make it fit
What for?
Quick Summer Recap

Hundreds of files like so...

Using Python to work with FITS files like this...
Understanding the process

Given a list of interesting targets, query from specific catalogues. Gather as much as possible.

Formats are not uniform, so parse necessary data with Python.

Data is all over the place. Match it to the right target.

Write the wanted data in a way that will be easy to process. This is what will be used for analysis.

Hunt it down, beat it into submission, and report to the boss.
A Better Way?

The process was repetitive and often too complicated to make significant changes.

Proposed solution:
- Make the tools
- Change the format

JSON
What influenced change?

Summer
Move quickly. Things are put together for immediate results.

Fall
Moves more slowly. Can think about what needs to be done more methodically.
Findings

- Less repetitive
- Significantly fewer lines
- Easier to update data
- Higher reusability
- Database-like storing structure

Drawbacks

- Existing code would have to be updated
- Less human-readable files
Takeaways
Acknowledgments

Farisa Morales, Mentor
Geoffrey Bryden, Co-mentor
Paul McCudden, CURE LACC
James Somers, CURE Moorpark College
Jonathan Acuna
Justin Bracks
Marlyd Mejia
Alessandra Capotosto

This work is supported by NSF grant #1460538 to Los Angeles City College