

SULI Computational Workshop

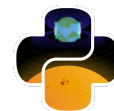
Nick Murphy¹ and David Schaffner²
on behalf of the PlasmaPy Community

¹Center for Astrophysics | Harvard & Smithsonian, ²Bryn Mawr College













We acknowledge support from:



With thanks to Peter Heuer and
Jayden Roberts for the second notebook
and corresponding functionality!



My background

- Graduate school in astronomy (University of Wisconsin) 
 - Simulated reconnection in a laboratory astrophysics experiment
- Postdoc and researcher since 2009 (Center for Astrophysics) 
 - Studied solar physics  and fundamental plasma science 
- Last 7.5 ± 0.7 (3σ) years
 - Contributing to PlasmaPy  
 - Advocating for open & reproducible plasma science  
- Hobbies
 - Playing video games from 1988 
 - Adding cat emojis to science presentations 
 - Lamenting the dire shortage of science fiction musicals  

Following along in Google Colab

- We'll post the notebook link in the chat, or:
- Go to SULI intro course website at:
<https://suli.pppl.gov/2026/course>
- Go to schedule for today (Day 9; Thursday, June 11)
- Click on [notebook 1](#) by Computational Workshop 1

What is PlasmaPy?











plasmaPy

Mission

To grow an open source **software ecosystem** for plasma research & education

Things we can do with PlasmaPy...so far!

-  Create Particle and ParticleList objects
-  Calculate plasma parameters
-  Track particle motions in EM fields
-  Represent plasma equilibria
-  Analyze data from certain lab plasma diagnostics
-  Find plasma wave dispersion relations
-  Model ion temperatures in solar wind plasma
-  Find magnetic null points

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