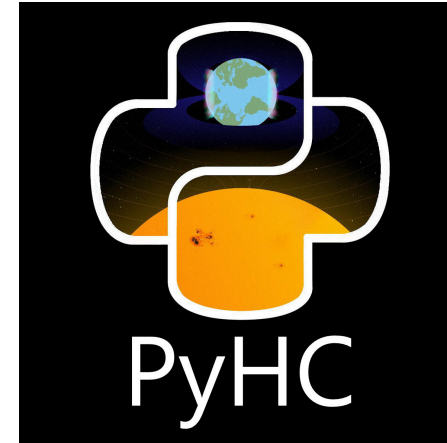
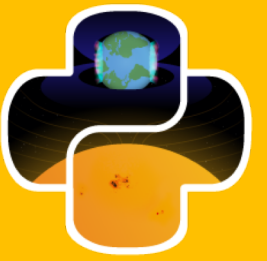


Coordinating Python Development with PyHC



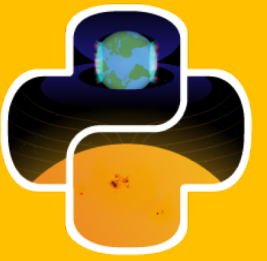
Julie Barnum¹, D. Aaron Roberts², Alexandria Ware¹, Shawn Polson¹

¹LASP/University of Colorado, ²NASA Goddard Space Flight Center



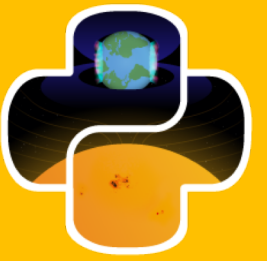
Motivation for PyHC

- Many different Python development projects
- Overlapping needs
- Varying standards
- Varying stages of development
- Lack of organized information about existing code
- Potential need for generic libraries across projects



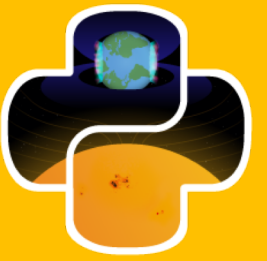
PyHC Strategic Goals

- Promote...
 - Efficient interdisciplinary research
 - Scientific reproducibility/software sustainability
 - Best practices
- Foster...
 - Open-source Python software ecosystem
 - Education/support for solar & space physics Python community
 - Increased awareness of/participation in projects
 - Space to share lessons learned
- Identify...
 - Financial support
 - Future development needs
 - Ways to minimize duplication of effort



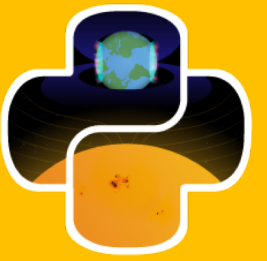
PyHC Activities

- Telecons
 - Held approx. every 2-3 weeks as schedules allow
 - Project intros/updates, continued discussions from meetings/past telecons, outside speakers
- AGU sessions
 - Past few years have held poster sessions
 - We will host another virtual poster session this year
- Twice yearly, PyHC meets in person (theoretically)
 - Open to seasoned open-source Heliophysics python developers *and* newbies alike
 - Discuss PyHC project updates, hold tutorials and hackathons, generate discussions around relevant topics, etc.



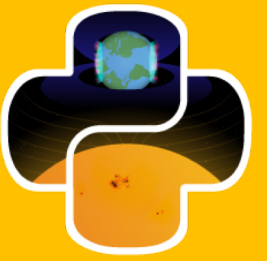
PyHC Standards

- Based on astropy standards; selected by consensus at our Fall 2018 meeting
- Comprised of 15 standards:
 - Packaging requirements
 - Open development
 - Releases
 - OS support
 - Permissive licenses
 - Version control
 - Coding style (PEP8)
 - Documentation
 - Testing
 - Dependencies
 - Python 3 utilization
 - Duplication reduction
 - Collaboration
 - Binary files
 - Code of conduct



PyHC Technical Lead

- Job description crafted at Fall 2019 meeting
 - Serve as science/software technical point of contact in PyHC
 - Help maintain and implement standards compliance criteria for PyHC projects
 - Help HDEE-funded proposers with efforts
 - Help new PyHC members learn how to contribute code
 - Maintain the PyHC website (<https://heliopython.org>)
 - Assist in planning/organizing PyHC telecons, AGU sessions, and meetings
- In June 2020, hired Shawn Polson from LASP to fill the role



Connect with PyHC

- Website: <https://heliopython.org/>
 - Upcoming telecon and meeting info on the Meetings page, PyHC packages info on Projects page, etc.
- PyHC mailing list
 - <https://heliopython.org/contact/>
- Element Chat:
<https://app.element.io/#/room/#heliopython:openastronomy.org>
- Further questions? Drop me a line. 😊
 - Julie.Barnum@lasp.colorado.edu