Python in Heliophysics (PyHC) Community Meeting

May 21-23, 2019

DOI:

Meeting materials are located at <http://heliopython.org/meetings/>

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# Introduction

In 2018, the Python in Heliophysics Community (PyHC) was established to bring together developers from the different Python software packages for heliophysics in order to increase collaboration and coordination of software development efforts. The goals of this group are to share knowledge and recommendations, develop standards for new and existing projects, and provide support for tools and libraries that are used by multiple projects. At our first community meeting in November 2018, it was agreed that the community should continue to meet twice annually. We held our second meeting on May 21-23, 2019, at LASP in Boulder, Colorado. The meeting consisted of a mix of presentations, discussions, and an “unconference,” which allowed us to organize a set of discussions based around consensus on topics of interest. This report summarizes the discussions and outcomes of this meeting, and is intended to act both as a report to NASA, a historical document capturing the status of this project, and a resource for other communities which may choose to carry out a similar effort.

# Meeting Overview

The meeting spanned two and a half days, and was attended by about 25 people, both in person and remotely. The first day started with overviews and status reports from existing Python software packages: HAPI, PlasmaPy, SunPy, NDCube, MAVEN PyTPlot and PyDIVIDE, VEX magnetospheres, SunCASA, and PySPEDAS. We also discussed the National Academy of Sciences report on Open Source Software and Reproducibility, and plans for submitting HDEE and NSF CSSI proposals. Wednesday was dedicated to unconference sessions and hackathons, which were used as a way to explore further topics that had come up during the previous day, and to make rapid progress on the heliopython.org website and the project taxonomy.

We spent a significant amount of time discussing the organization and governance of PyHC.