2024 Workshop: Python for Space Science

Long title
Snakes on a Spaceship: The Python Maneuver
Conveners
Angeline Burrell
Leslie Lamarche
Alexa Halford
Hayley Clevenger
angeline.g.burrell.civ@us.navy.mil
Description

The pursuit of system science requires integrating measurements from multiple platforms into a coherent system for analysis. The variety of instrument types and data formats makes this challenging. Typically these challenges are solved separately by different research teams, leading to duplicated efforts. The reproducibility of scientific results are also affected, since most journal articles do not include complete analysis descriptions. The study of the magnetosphere and the ionosphere as a system would be enhanced if solutions to these problems were made broadly available to the community.

This year, 'Snakes on a Spaceship' will focus on Python packages developed by and for the CEDAR community and a tutorial on how to transition from scientific code to a basic publishable package.

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01-Intro.pdf (140.52 KB)
02-SoaSS_Tutorial_2024.pdf (235.05 KB)
03-CEDAR_2024_Forsythe_PyIRTAM.pdf (6.34 MB)
04-2024_cedar_snakes_cavsiopy_ceren.pdf (6.1 MB)
05-MZ_CEDAR2024_python.pdf (5.2 MB)
06-barnum_cedar_2024.pdf (5.04 MB)
07-Discussion.pdf (81.57 KB)
Justification

The challenge of performing system science is addressed by teaching the community about the existence and use of open source science software that

enables system science. Our workshop will connect scientists with a particular problem to others working to solve this problem or offering solutions. Because scientific Python software is a rapidly growing field, it is important to showcase new tools to the community. It is also important to teach new scientists and older scientists less involved with the software sharing community how they can become involved and the positive impacts this can have on their research projects.

Related to CEDAR Science Thrusts:
Manage, mine, and manipulate geoscience/geospace data and models
Workshop format
Short Presentations
Round Table Discussion
Keywords
Reproducibility, data access, data analysis, software
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