

Abstract Submitted  
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**PlasmaPy: initial development of a Python package for plasma physics**<sup>1</sup> NICHOLAS MURPHY, Harvard-Smithsonian Center for Astrophysics, ANDREW LEONARD, University of Sheffield, YI-MIN HUANG, Princeton Plasma Physics Laboratory, COLBY HAGGERTY, University of Delaware, PLASMAPY COLLABORATION — We report on initial development of PlasmaPy: an open source community-driven Python package for plasma physics [1]. PlasmaPy seeks to provide core functionality that is needed for the formation of a fully open source Python ecosystem for plasma physics. PlasmaPy prioritizes code readability, consistency, and maintainability while using best practices for scientific computing such as version control, continuous integration testing, embedding documentation in code, and code review. We discuss our current and planned capabilities, including features presently under development. The development roadmap includes features such as fluid and particle simulation capabilities, a Grad-Shafranov solver, a dispersion relation solver, atomic data retrieval methods, and tools to analyze simulations and experiments. We describe several ways to contribute to PlasmaPy. PlasmaPy has a code of conduct and is being developed under a BSD license, with a version 0.1 release planned for 2018. The success of PlasmaPy depends on active community involvement, so anyone interested in contributing to this project should contact the authors. [1] The code repository is at <https://github.com/PlasmaPy/PlasmaPy>

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