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Bapsflib: An Open-Source Python Package for the Basic Plasma Science Facility ERIK EVERSON, STEPHEN VINCENA, TROY CARTER, University of California, Los Angeles — The bapsflib package is an open-source python package designed to assist users of the Basic Plasma Science Facility (BaPSF) in their workflow from preparing for experiments to analyzing data collected from experiments. BaPSF is a jointly funded DOE/NSF collaborative user facility at the University of California, Los Angeles (UCLA) that is best known for work done on its Large Plasma Device (LaPD). As with any user facility, there are common software pain-points experienced by users and the bapsflib package is initially addressing these points by focusing on three crucial areas: (1) providing functionality to prepare and test machine configurations for desired plasma parameters; (2) building an open library of machine physical parameters; and (3) providing a clean, intuitive interface to the datasets generated during a campaign. Development of the package will also include interoperability with PlasmaPy to seamlessly connect the data wrangling capabilities of bapsflib with the analysis techniques of PlasmaPy. [Work supported by the US DOE and NSF, and performed at the Basic Plasma Science Facility, UCLA.]

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