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Modeling the solar wind velocity as a function of height is an important task relevant to several of the PUNCH science goals. Not only does it support the work of flow tracking teams, but it also has the potential to connect the open magnetic field lines back to their source on the solar surface, helping to determine the origin of the solar wind.

The FLUX code uses a pseudo-lagrangian framework to model coronal magnetic fields, tracing discrete lines of magnetic flux, called fluxons, through the magnetic environment to determine plasma parameter values. By only performing computation along the field lines and then interpolating values in between, FLUX is highly scalable and inherently operates with an adaptive resolution.

This work describes FLUXPipe in particular, a new algorithm within FLUX that ties together the disparate routines into an automated processing pipeline. This allows the user to specify an arbitrary Carrington Rotation and the software performs all of the steps required to generate modeled output of the solar wind velocity, greatly simplifying its use by end-users. We will describe the operation of the code and how to access and install FLUX from github. Preliminary science results will also be shown.
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