Within the framework of 3D resistive MHD, we simulate the formation of a plasma jet with the morphology, upward velocity and timescale formation similar to those expected for Type II spicules as described in González-Avilés et al. (2018a).

In this paper, we analyze the transverse displacements and rotational type motion of the jet. We calculate time series of the velocity components in different regions in the 3D domain at final time. (Bottom) Three components of the magnetic field $B_x$, $B_y$, and $B_z$ at the plane $z=0.1$. Mm.

Newtonian CAFE solves the resistive MHD equations in three dimensions using finite volume discretization.

It is based on high-resolution shock-capturing methods, uses the HILLE, HLILC, HLLL and Roe flux formula combined with MINMOD, MC, and WENO5 reconstructors.

The divergence free magnetic field constraint is controlled using the Extended Generalized Lagrange Multiplier (EGLM).

It uses the method of lines to evolve in time and it is mounted in the driver of Cactus code to use MPI and HDF5.

We assume a gravitationally stratified solar atmosphere in hydrostatic equilibrium obeying the C7 model.