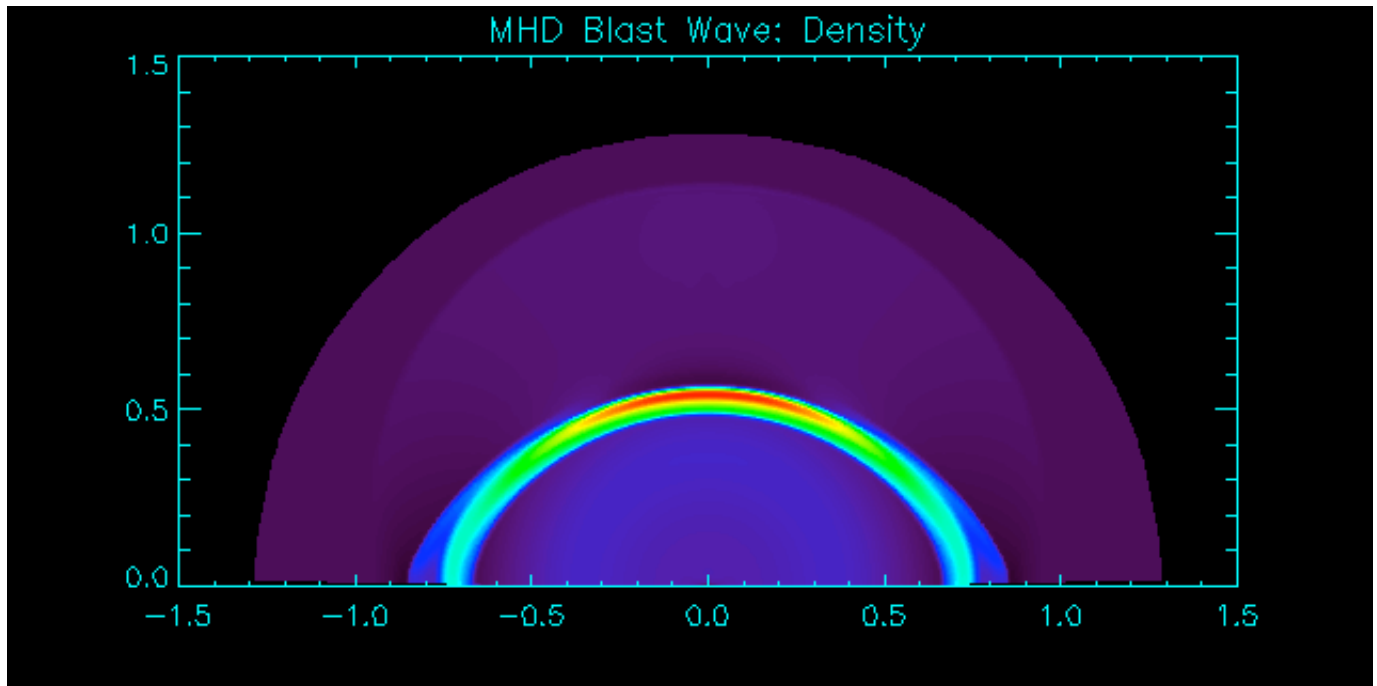


Magnetohydrodynamic Blast Wave

Author: John Hayes

Description

A spherical region of initial radius 0.2 cm expands into a medium of much lower density, creating a blast wave. A 140-gauss uniform magnetic field parallel to the polar axis threads the problem domain. The overdensity factor is 100; the overpressure factor is 1.0×10^6 . An ideal gas is assumed with a gamma of $5/3$. The picture below shows the spatial distribution of density at an evolution time of 0.005 seconds.



The subroutine used to initialize this problem is the same as that used for the hydrodynamic blast wave (only the zmp_inp files differ).

The zmp_inp file used to configure the code is available [here](#).

The assembled HDF data file from which the figure was generated is available [here](#).

The IDL program used to create the image is available [here](#).