For Usage:

Theses simulations are proficed free to use with proper reference. Please include the following two references. Suggested text is

"These simulations were produced and originally presented by in Collins et. al. 2012, and a futher analysis was presented in Burkhart, Collins & Lazarian 2015"

http://adsabs.harvard.edu/abs/2015ApJ...808...48B http://adsabs.harvard.edu/abs/2012ApJ...750...1

Contact: The data presented are reduced resolution, single resolution snapshots, for ease of manipulation and data transfer. If you are interested in higher resolution snapshots, either unigrid or full AMR, please email David C. Collins (dccollins@fsu.edu).

About:

The simulations presented here are 3d numerical experiments of isothermal, self-gravitating, supersonic MHD simulations. They have an rms Mach number of 9, gravitational binding roughly equal to the kinetic energy, and three values of plasma beta (0.2,2,and 20). The original root grid was 512^3, and four levels of adaptive refinement were added. The data presented here are 256^3 unigrid reductions, with the full resolution available upon request.

The simulations were initially driven with solenoidal turbulence at 1024^3. They were then down-sampled to 512^3 and restarted with gravity, and allowed to run for $0.6t_{\rm ff}$. Presented here are three snapshots (at 0.1, 0.3, and 0.6 $t_{\rm ff}$) from each of the three runs. The filenames represent the plasma beta that charachterizes the simulation, the resolution, and the snapshot. For example, `C12_Beta2_256_0030.h5` is from the $\beta = 2$ simulation, at 256^3, and is at 0.3 $t_{\rm ff}$. The data are cubes in hdf5, and contain a suggest scaling from code units to cgs. More details on scaling, simulation details, and results can be found in Collins et al 2012.

In `C12_Tools.tar` one will find a script for reading in the data, either with or without the yt analysis package (though we strongly recommend using yt for analysis of unigrids, and it is essential for AMR). Also provided are projections of the density along each of the axes for each of the snapshots.