

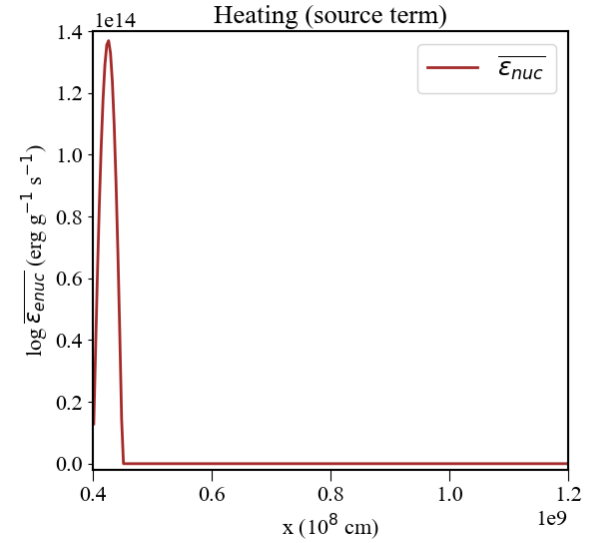
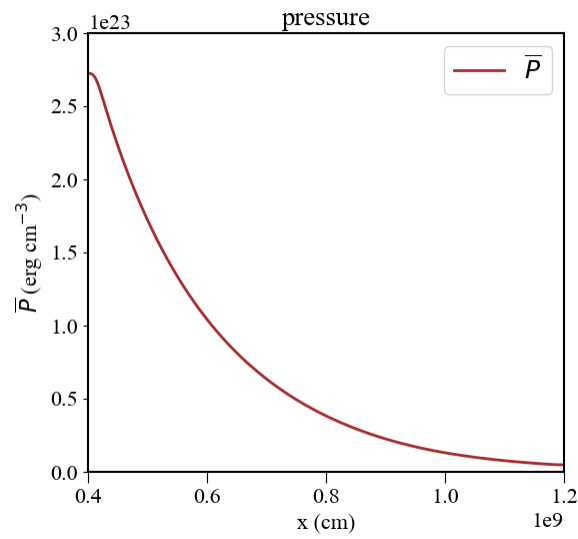
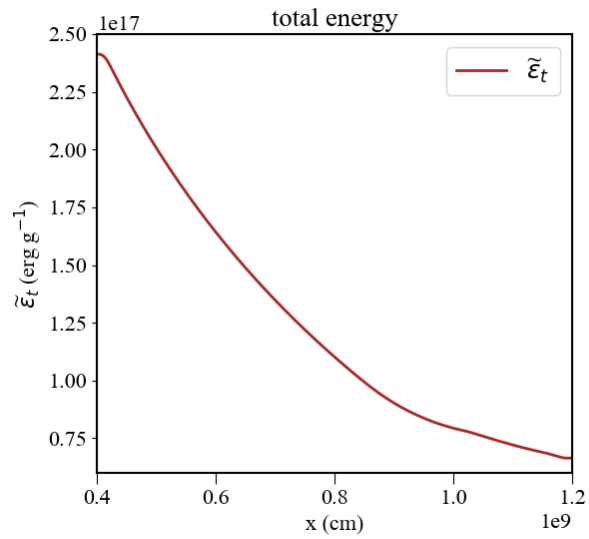
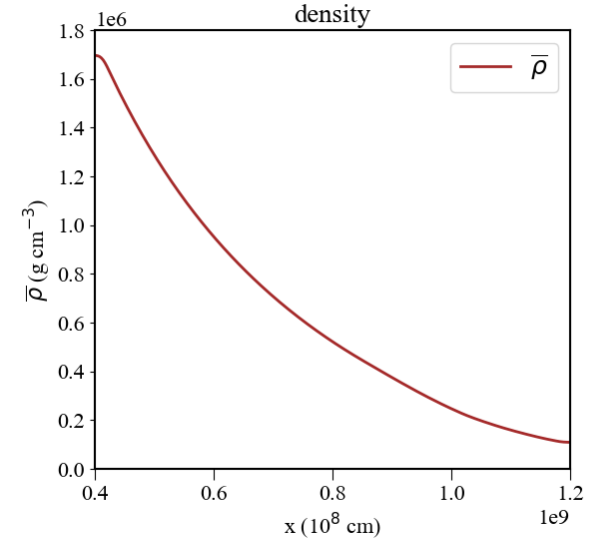
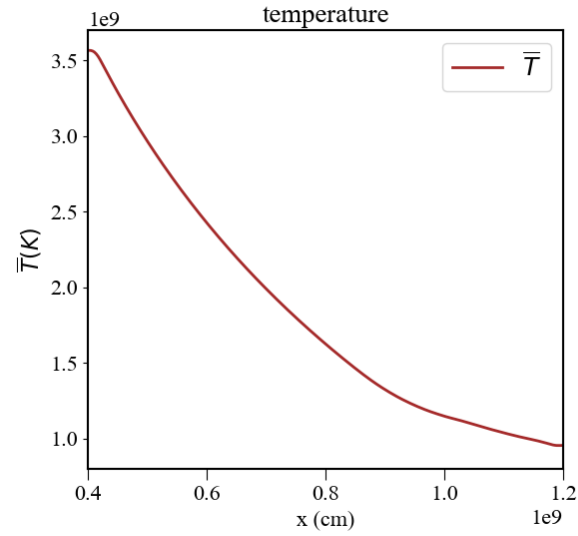
Code Comparison Project – two-layer setup

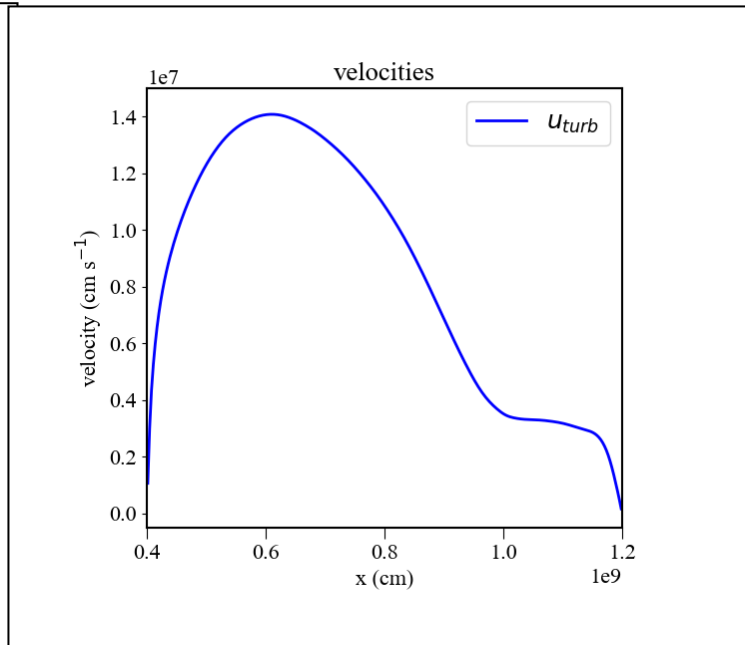
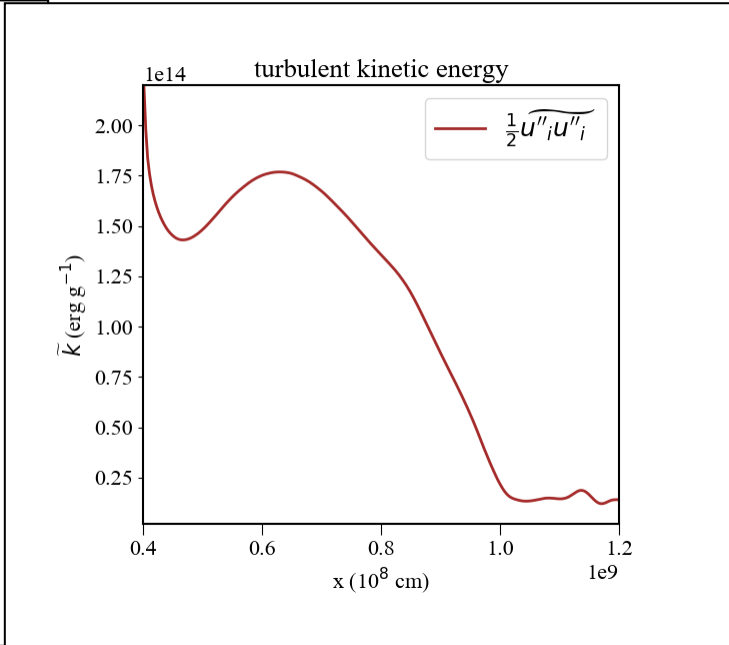
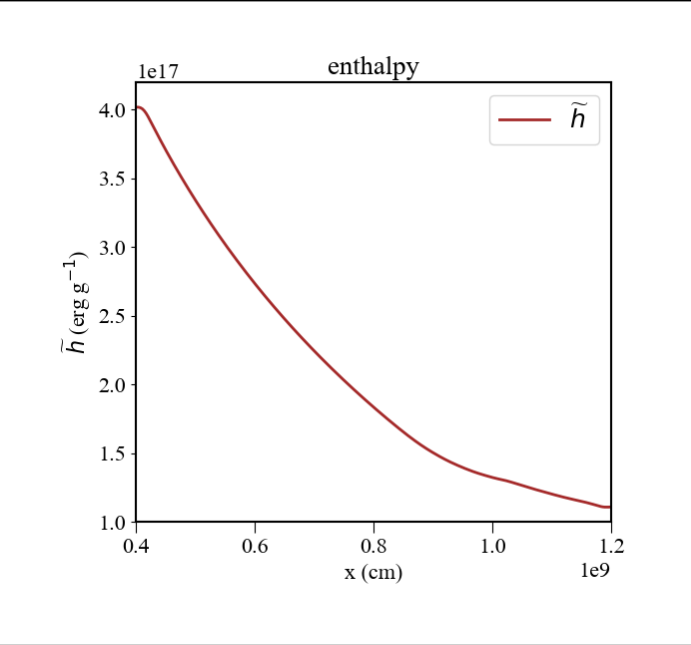
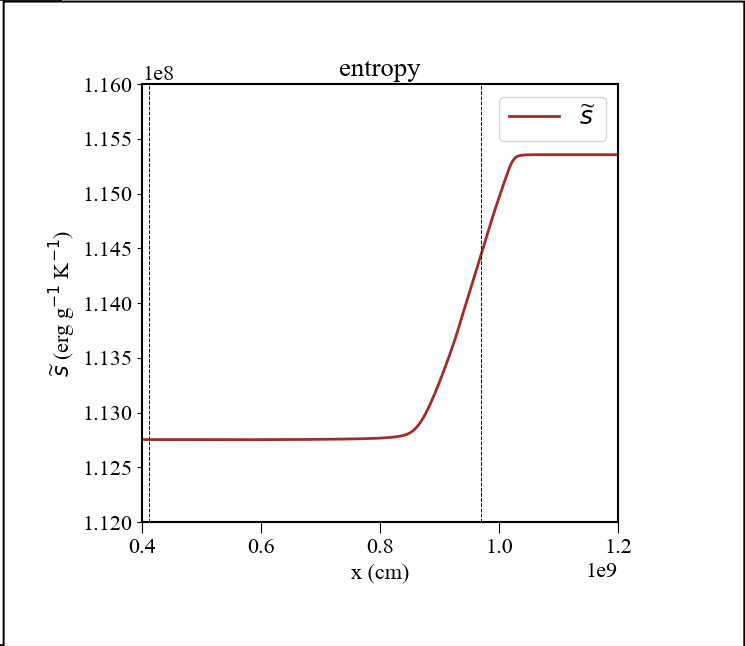
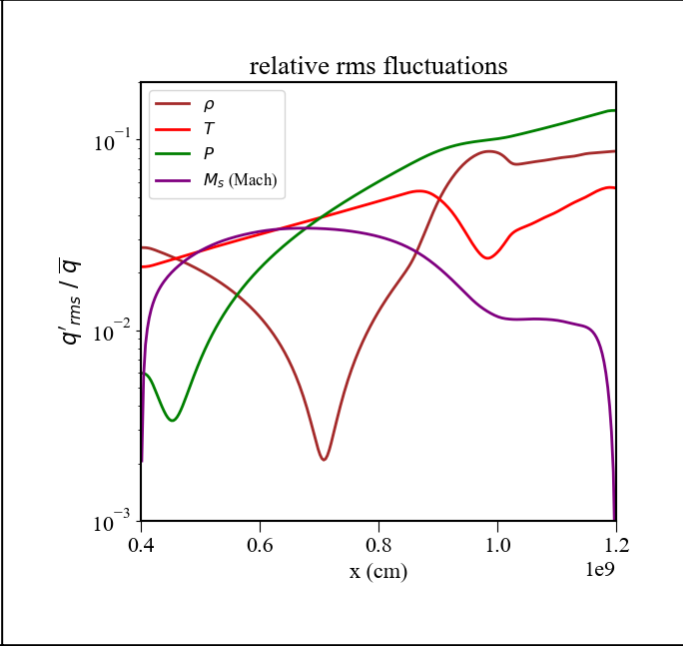
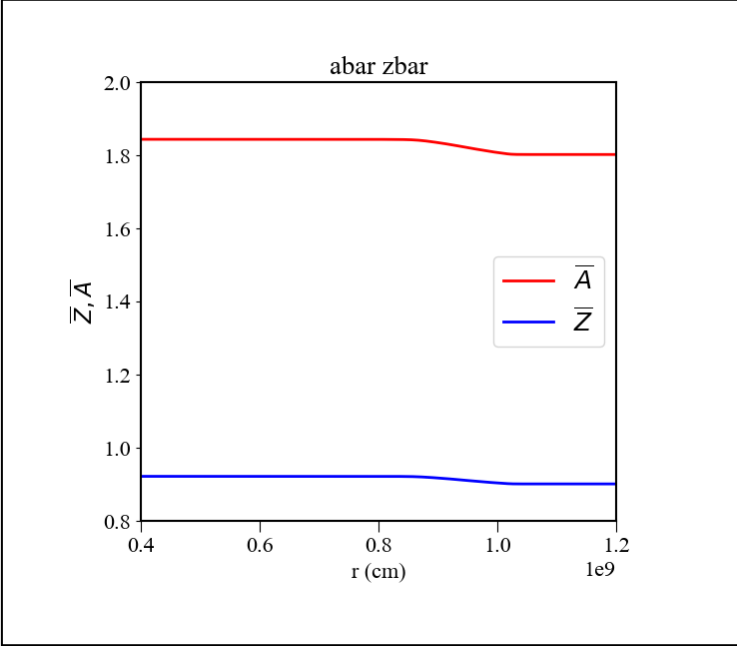
3D simulation 256cubed (Background Fields)

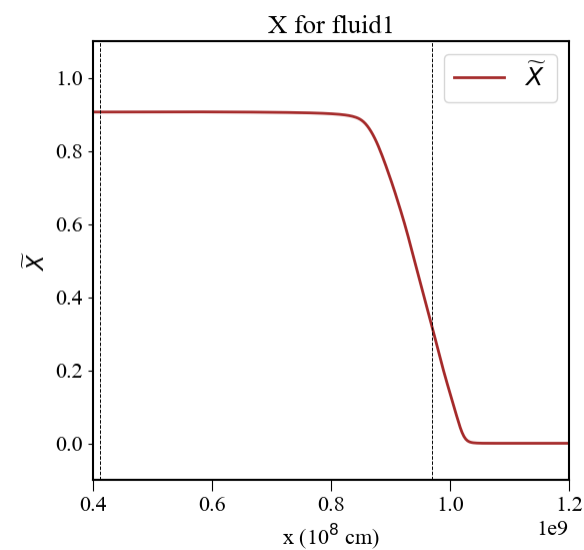
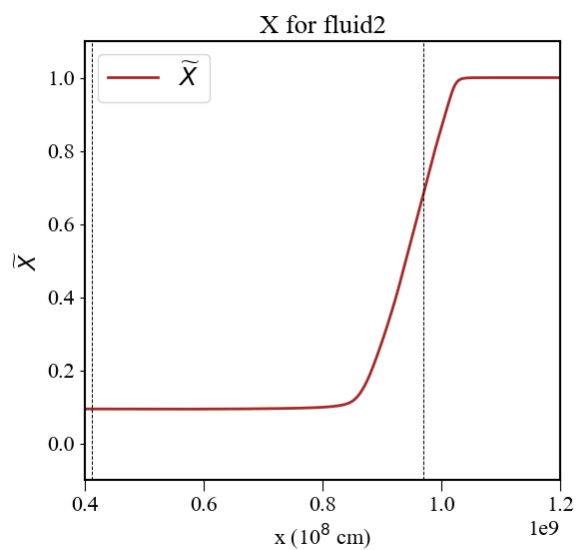
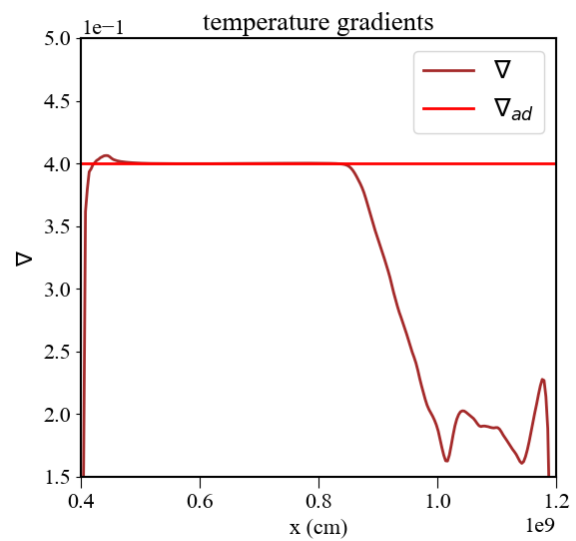
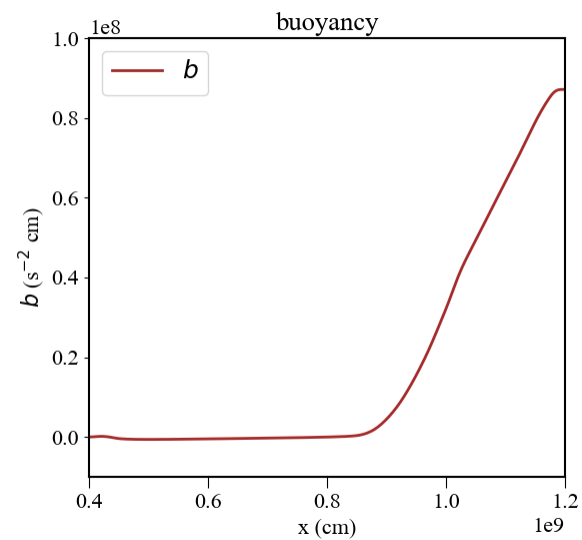
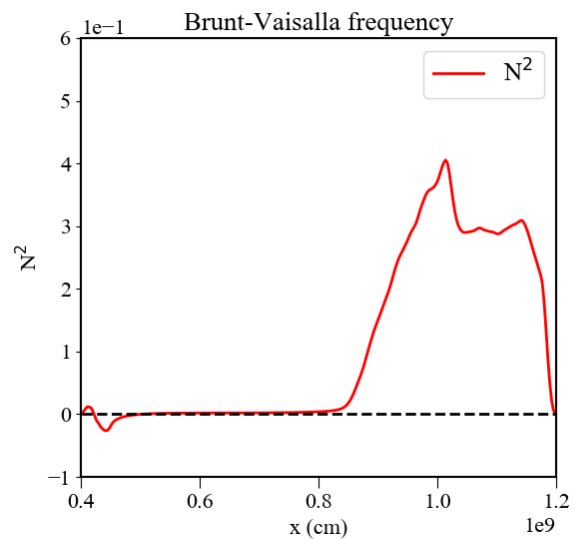
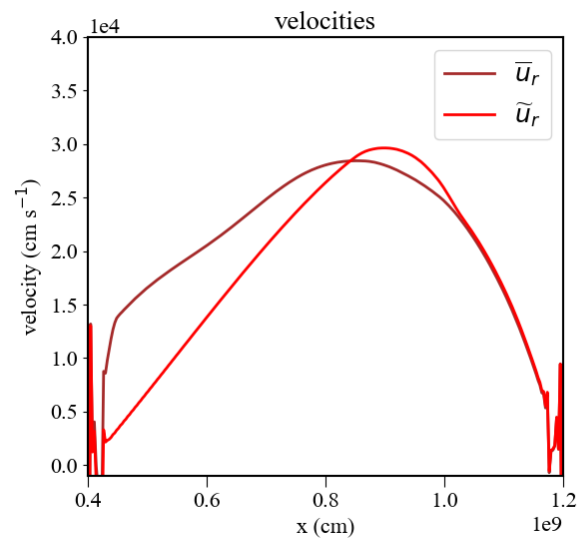
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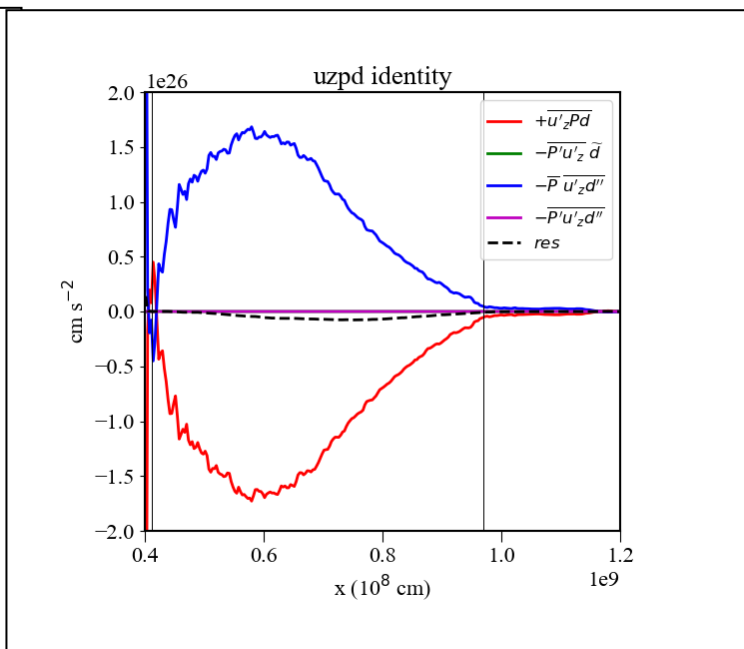
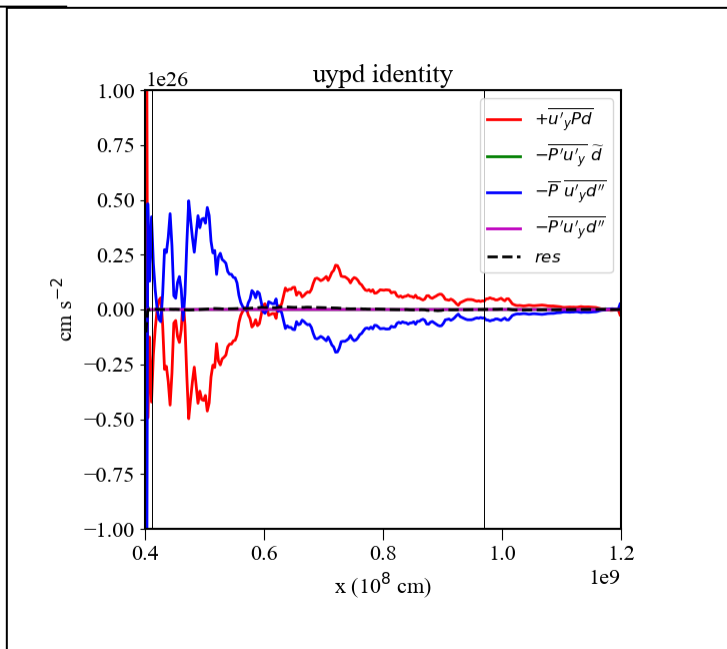
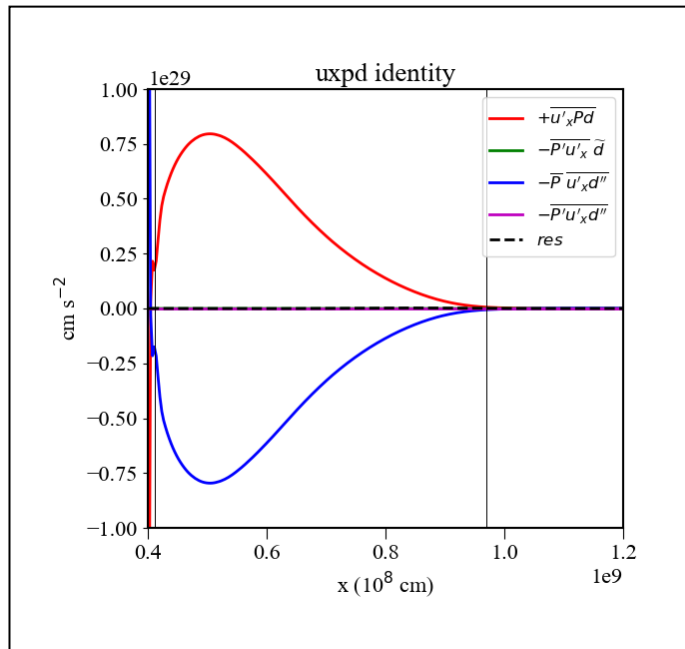
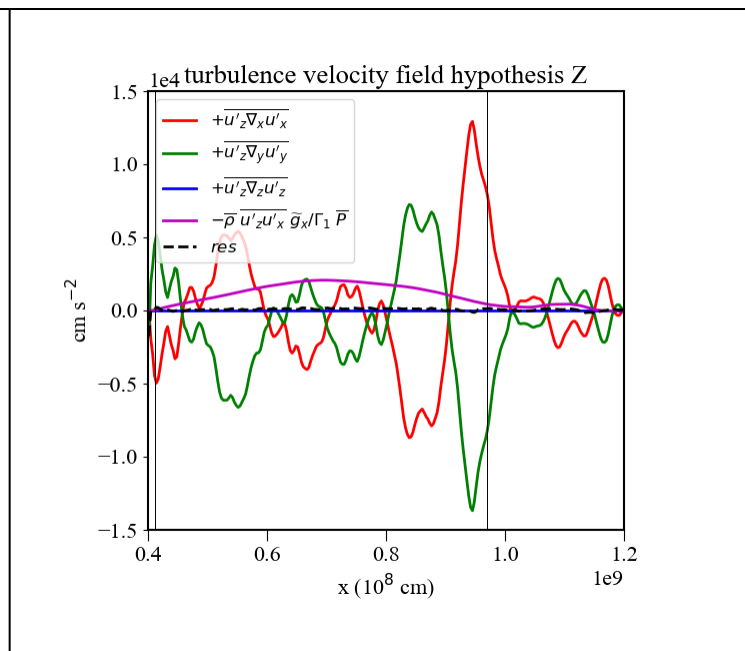
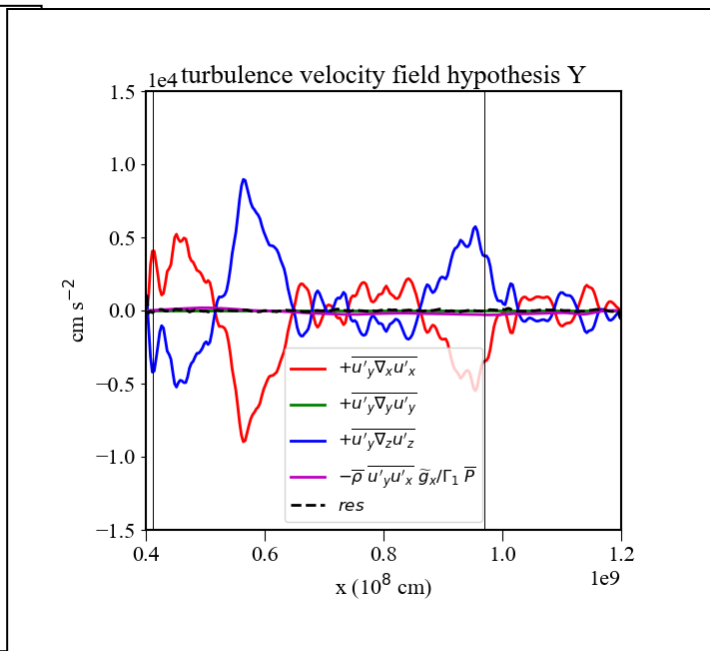
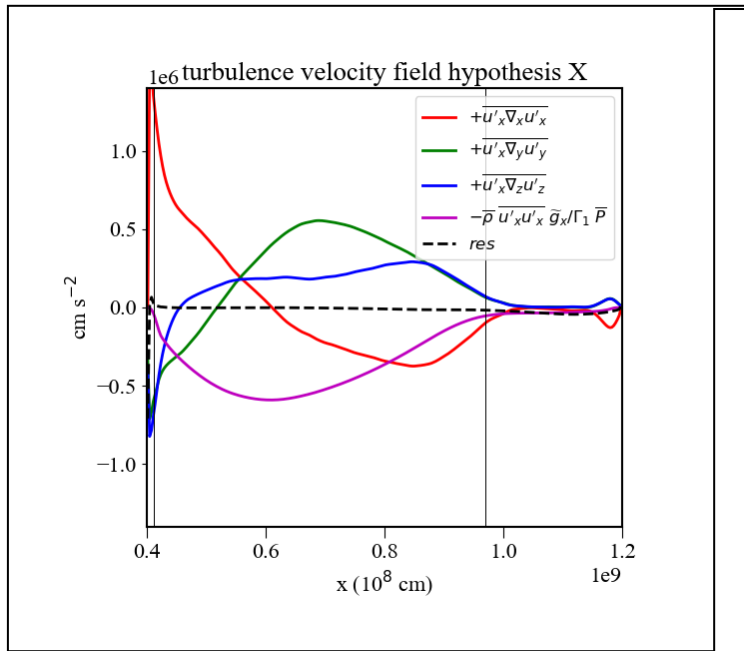
In [6]: run ransX.py
-----#
('Datafile with space-time averages: ', 'DATA/TSERIES/tseries_coptwo_256c_cosma_1500secs.npy')
('Central time (in s): ', 1017.1)
('Averaging windows (in s): ', 1500.0)
('Time range (in s from-to): ', 0.0, 1999.0)
-----#
Resolution: 256 256 256
Radial size of computational domain (in cm): 4.02e+08 1.20e+09
Radial size of convection zone (in cm): 4.11e+08 9.70e+08
Extent of convection zone (in Hp): 2.850421
Averaging time window (in s): 1500.000000
RMS velocities in convection zone (in cm/s): 1.73e+07
Convective turnover timescale (in s) 6.45e+01
P_turb o P_gas 1.32e-03
Mach number Max 3.43e-02
Mach number Mean 2.74e-02
Dissipation length scale (in cm): 1.49e+09
Total nuclear luminosity (in erg/s): 4.51e+45
Rate of TKE dissipation (in erg/s): 1.02e+45
Dissipation timescale for TKE (in s): 42.955814
Reynolds number: 1008

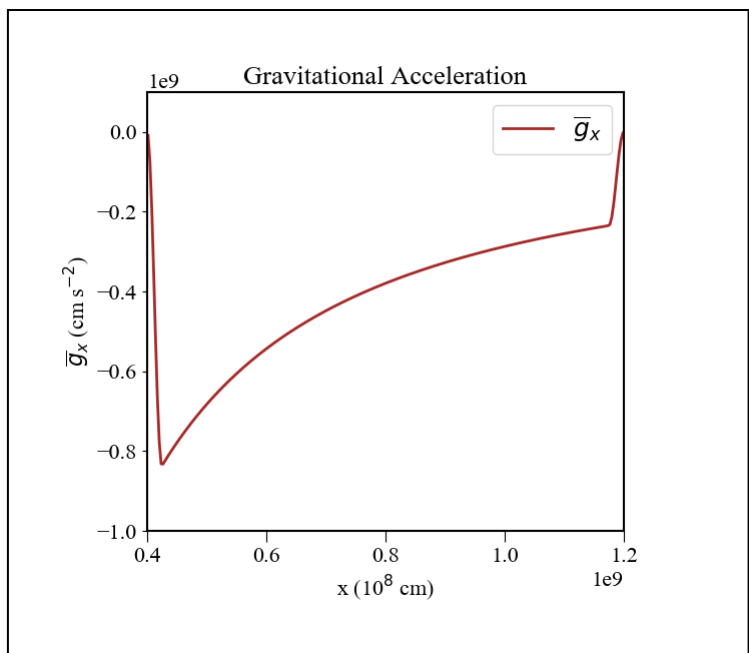
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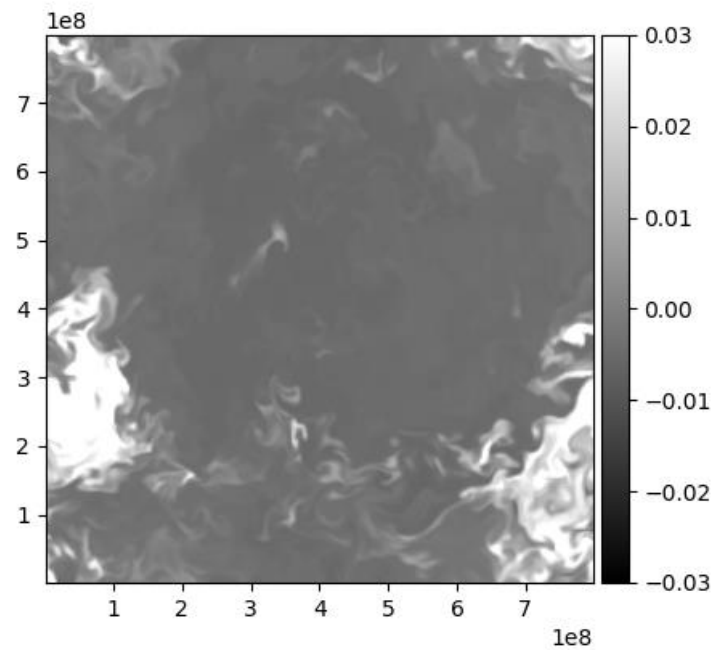
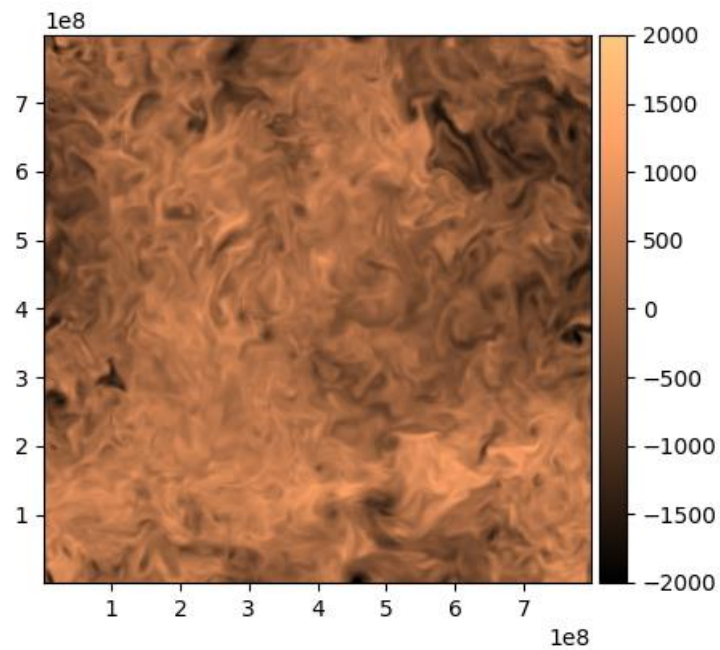
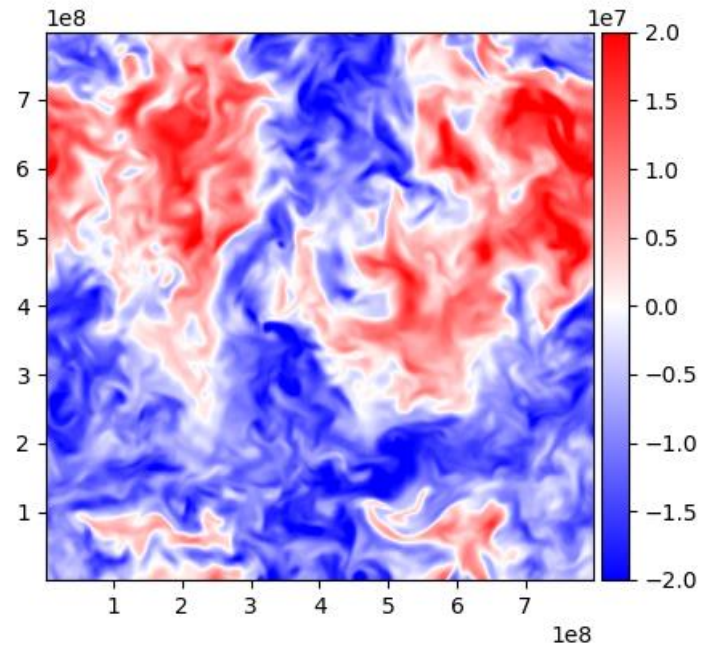
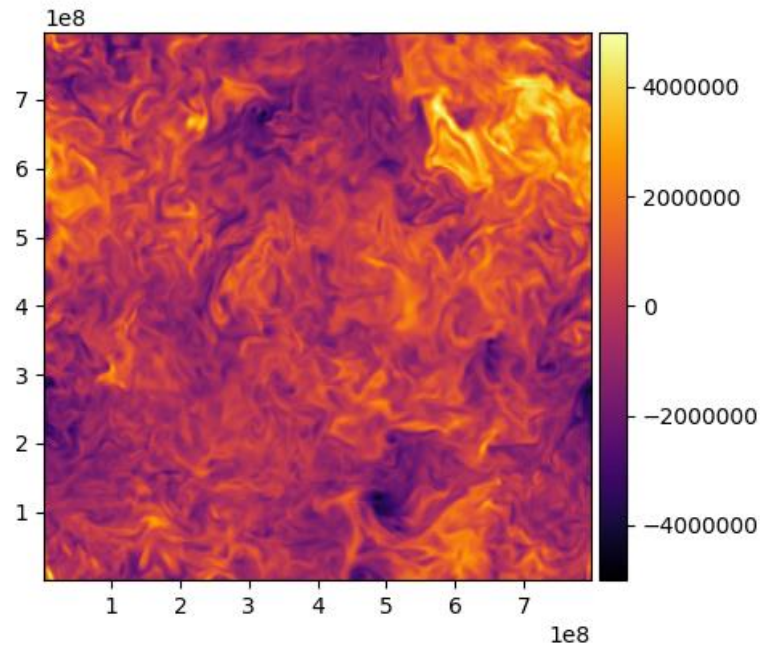








Temp (UP-LEFT), VelX (UP-RIGHT), Rho(DOWN-LEFT), X2(DOWN-RIGHT) - time: 1012.044 s, x = 800000000.0 cm



Temp (UP-LEFT), VelX (UP-RIGHT), Rho(DOWN-LEFT), X2(DOWN-RIGHT) - time: 1012.044 s, y = 400000000.0 cm

