

OBURN 14 128x64x64 vs 512x128x128

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run_ranox.py
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Datafile with space-time averages: 'D:\ranox\DATA_D\Tseries_oburn14_128x64x64_cosma_1400secs.npy'
Central time (in s): 2220.0
Averaging window (in s): 1400.0
Time range (in s from-to): 1500.0, 2940.0
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Resolution: 128 64 64
Radial size of computational domain (in cm): 3.01e+08 1.00e+09
Radial size of convection zone (in cm): 4.20e+08 9.46e+08
Extent of convection zone (in Hp): 2.227181
Overarching at inner/outer convection boundary (in Hp): 0.12 0.46
Averaging time window (in s): 1400.000000
MS velocities in convection zone (in cm/s): 1.10e+07
Convective turnover timescale (in s): 9.53e+01
P_turb o P_gas = 1.2e-04
Mach number Max 2.07e+02
Dissipation length scale (in cm): 7.93e+08
Total nuclear luminosity (in erg/s): 2.76e+46
Rate of TKE dissipation (in erg/s): 3.66e+45
Dissipation timescale for TKE (in s): 35.871395
Dissipation timescale for TKE vertical (in s): 40.023150
Dissipation timescale for TKE horizontal (in s): 142.902148
Reynolds number: 379

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run_ranox.py
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Datafile with space-time averages: 'D:\ranox\DATA_D\Tseries_oburn14_512x128x128_cosma_1400secs.npy'
Central time (in s): 2221.2
Averaging window (in s): 1400.0
Time range (in s from-to): 1500.0, 2940.0
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Resolution: 512 128 128
Radial size of computational domain (in cm): 3.00e+08 1.00e+09
Radial size of convection zone (in cm): 4.20e+08 9.50e+08
Extent of convection zone (in Hp): 2.286416
Overarching at inner/outer convection boundary (in Hp): 0.12 0.57
Averaging time window (in s): 1400.000000
MS velocities in convection zone (in cm/s): 1.09e+07
Convective turnover timescale (in s): 9.79e+01
P_turb o P_gas = 3.56e-04
Mach number Max 2.03e+02
Dissipation length scale (in cm): 8.23e+08
Total nuclear luminosity (in erg/s): 2.73e+46
Rate of TKE dissipation (in erg/s): 3.60e+45
Dissipation timescale for TKE (in s): 42.358416
Dissipation timescale for TKE vertical (in s): 117.879839
Dissipation timescale for TKE horizontal (in s): nan
Reynolds number: 2428

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