

Table 1 List of conducted DNS for SHC (symmetrical). The averaging time is based on the free-fall time T_{ff} . The spatial resolution is characterized by the local maxima of $\Delta V^{1/3}/\eta$, which is the local cell size $\Delta V^{1/3}$ compared to the Kolmogorov length scale $\eta = (\nu^3/\epsilon_u)^{1/4}$. The maximum values occurred in very narrow regions in the top corner, while the rest of the domain was well resolved. Global quantities like Nu and Re deviated less than 2 percent compared to simulations with approximately 2 times finer mesh resolution, which was tested for the case $Pr = 0.1$ and $Ra = 1e11$ (CHC).

Pr	Ra	Resolution	T_{avg}/T_{ff}	$max(\Delta V^{1/3}/\eta)$	Nu	Re
0.1	1.00E+08	514x34x50	610	2.28	11.7	1740.1
0.1	2.00E+08	514x34x50	940	3.01	15.3	2379.2
0.1	3.00E+08	514x34x50	2030	3.47	17.3	2780.4
0.1	5.00E+08	1026x66x98	260	1.97	19.8	3347.3
0.1	1.00E+09	1026x66x98	540	2.50	23.2	4229.1
0.1	5.00E+09	1026x66x98	1390	4.26	31.7	6870.8
0.1	1.00E+10	1538x98x146	100	3.77	36.0	8213.1
0.1	3.00E+10	1538x98x146	180	5.62	44.5	10753.0
0.1	5.00E+10	1538x98x146	170	6.45	49.5	11991.6
0.1	7.00E+10	1538x98x146	80	6.82	52.9	13096.7
0.1	1.00E+11	2050x194x338	160	4.33	57.2	14582.3
0.1	3.00E+11	2050x98x146	70	6.69	73.8	21745.3
0.1	5.00E+11	2050x194x338	330	4.92	81.8	25433.7
1	1.00E+08	514x34x50	3090	0.62	12.7	192.4
1	5.00E+08	514x34x50	200	1.07	22.3	397.2
1	1.00E+09	1026x66x98	240	0.71	26.5	524.3
1	2.00E+09	1026x66x98	150	0.88	31.1	683.1
1	3.00E+09	1026x66x98	90	1.04	33.4	768.0
1	5.00E+09	1026x66x98	340	1.30	36.9	894.3
1	1.00E+10	1026x66x98	170	1.32	42.4	1077.7
1	3.00E+10	1026x66x98	2160	1.91	53.4	1461.5
1	5.00E+10	1538x98x146	520	1.66	59.8	1678.6
1	1.00E+11	1538x98x146	930	1.71	70.2	2074.6
1	5.00E+11	1538x98x146	440	2.30	101.7	3870.3
1	1.00E+12	1538x146x218	170	2.20	119.2	5096.0
10	1.00E+08	514x34x50	330	0.20	13.1	19.6
10	5.00E+08	514x34x50	160	0.33	23.0	41.0
10	1.00E+09	514x34x50	650	0.40	27.4	54.6
10	2.00E+09	514x34x50	9080	0.49	32.1	71.8
10	3.00E+09	514x34x50	3280	0.55	35.1	83.5
10	5.00E+09	1026x50x74	240	0.34	39.0	95.5
10	1.00E+10	1026x66x98	1680	0.45	45.7	124.5
10	3.00E+10	1026x66x98	350	0.59	58.7	182.0
10	5.00E+10	1026x66x98	1550	0.71	66.0	218.1
10	1.00E+11	1026x66x98	1150	0.86	77.5	282.1
10	5.00E+11	1538x98x146	320	0.74	110.5	475.0
10	1.00E+12	1538x98x146	410	0.91	130.3	608.9