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Run	$\omega$ (rad/s)	$\nu$ ( $\times 10^{-6}$ m $^2$ /s)	$A_0(z_0)$ (mm/s)	$k_0(z_0)$ (m $^{-1}$ )	$\sigma(z_0)$ (m)
1	0.63	1	0.29	24.1	0.109
2	0.63	2	0.27	23.8	0.111
3	0.63	5	0.22	22.0	0.124
4	0.63	10	0.18	20.7	0.135
5	0.63	1	1.37	23.2	0.123
6	0.63	5	1.13	22.3	0.127
7	0.63	5	3.38	18.4	0.157
8	0.63	5	0.12	14.6	0.176
9	0.63	5	0.16	18.7	0.144
10	0.63	5	0.25	25.5	0.117
11	0.63	5	0.09	25.9	0.137
12	0.16	5	0.33	16.5	0.189

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TABLE 1. Parameters describing the numerical simulations performed with Grid II and  $\rho_{\text{sim}}$ , used to compare to the theory of Kistovich & Chashechkin (1998). Horizontal cross-sections of the vertical velocity field near the wave source are given by  $w(x, t) = A_0(z_0) \cos(k_0(z_0)x - \omega t) \exp[-(x - \mu(z_0))^2/2\sigma(z_0)]$ , where  $A_0$  is the velocity amplitude,  $\omega$  the angular frequency,  $k_0$  the wavenumber and  $\sigma$  the beam width. The kinematic viscosity  $\nu$  is constant throughout the simulation domain.

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Run	$\Phi(z_c)$ (10 $^{-7}$ kg/s $^3$ )	$k_c$ (m $^{-1}$ )	$\alpha$ (m $^{-1}$ )	$\delta$ (%)
1	-3.82	22.2	22.7	0.48
2	-4.15	21.0	22.1	1.08
3	-3.63	18.6	20.3	0.96
4	-2.52	17.0	18.2	2.08
5	-107	22.2	21.8	2.28
6	-92.6	18.6	20.2	0.50
7	-1721	18.2	17.9	0.74
8	-1.81	14.6	15.5	3.42
9	-2.70	17.0	17.7	0.86
10	-3.89	20.9	20.0	2.77
11	-0.91	23.7	25.2	2.20
12	-4.90	14.0	15.3	1.39

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TABLE 2. Summary of results presented in Figs. 3 and 4, where  $\Phi(z_c)$  is the horizontally-integrated vertical flux at the turning depth,  $k_c$  is the horizontal wavenumber at the turning depth,  $\alpha$  is the decay constant describing the exponential decay of the vertical flux below the turning depth, and  $\delta$  is the mean absolute percent difference between our measurements of  $A_0(z)$  and the theoretical predictions of Kistovich & Chashechkin (1998).

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$z$ (m)	$\rho_{\text{expt1}}$ (kg/m <sup>3</sup> )
0	1047.7
0.0246	1047.3
0.0819	1046.8
0.1305	1045.7
0.1728	1043.7
0.2102	1041.6
0.2438	1039.4
0.2742	1037.4
0.3020	1035.2
0.3276	1033.1
0.3513	1031.0
0.3735	1028.8
0.3942	1026.7
0.4136	1024.6
0.4320	1022.4
0.4494	1020.0
0.4659	1018.2
0.4816	1016.0
0.4965	1013.7
0.5108	1011.7

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TABLE 3. Measurements of the experimental density profile  $\rho_{\text{expt1}}$ , which is best fit by Eq. 3.5.

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$z$ (m)	$\rho_{\text{expt2}}$ ( $\text{kg}/\text{m}^3$ )
0	1053.7
0.1885	1053.6
0.2619	1051.4
0.3003	1049.2
0.3265	1047.0
0.3464	1045.1
0.3624	1042.9
0.3759	1040.9
0.3875	1039.0
0.3976	1037.0
0.4067	1035.1
0.4149	1032.3
0.4223	1031.0
0.4291	1029.3
0.4354	1027.5
0.4413	1025.4
0.4468	1023.5
0.4520	1021.7
0.4571	1020.0
0.4622	1018.0
0.4673	1016.5
0.4724	1014.6
0.4775	1012.8
0.4826	1011.2
0.4877	1009.3
0.4928	1007.9
0.4979	1006.5
0.5030	1005.3
0.5081	1004.0

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TABLE 4. Measurements of the experimental density profile  $\rho_{\text{expt2}}$ , which is best fit by Eq. (3.6)

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