MECHANICS OF LOCAL SCOUR
DATA SUPPLEMENT

Prepared for
U. S. Department of Commerce
Bureau of Public Roads
Office of Research and Development
Structures and Applied Mechanics Division
under Contract CPR 11-8022

Civil Engineering Department
Engineering Research Center
Colorado State University
Fort Collins, Colorado

June 1966

CER66-67HWS27

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by

H. W. Shen
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and
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ABSTRACT

This supplement contains the data described in the report:

Shen, H. W., V. R. Schneider and S. S. Karaki, "Mechanics of Local Scour." Prepared for U. S. Department of Commerce, Bureau of Public Roads, Office of Research and Development, Structures and Applied Mechanics Division, under Contract No. CPR 11-8022, June 1966. Also Engineering Research Center, Colorado State University Report No. CER66HWS22.

LIST OF TABLES

TABLE A-1. SUMMARY OF GENERAL RUNS TO MAXIMUM SCOUR
CYLINDRICAL PIER DIAMETER = 0.5'

Run	Q cfs	h_o ft	$\overline{U}_\infty$ fps	F	$(d_s)_{max}$ # ft	S^* x10³	Water Temp. °F	d_{50} mm
1	3.28	0.373	1.44	0.415	0.51	2.52	61	0.24
2	5.65	0.719	1.31	0.273	0.59	0.95	59	0.24
3	1.73	0.385	0.75	0.213	0.41	1.17	60	0.24
4	2.39	0.380	1.05	0.300	0.44	1.80	60	0.24
5	4.17	0.391	1.78	0.502	0.55	1.60	60	0.24
6	6.64	0.377	2.94	0.954	0.574	2.20	61	0.24
7	7.52	0.385	3.34	0.935	0.54	2.17	64	0.24
8	7.53	0.507	2.47	0.612	0.65	1.36	59	0.24
9	6.02	0.520	1.93	0.472	0.59	1.57	63	0.24
10	4.79	0.497	1.61	0.401	0.49	1.12	68	0.24
11	3.61	0.513	1.18	0.289	0.52	0.65	68	0.24
12	2.80	0.493	0.95	0.239	0.462	0.35	67	0.24
13	3.38	0.720	0.78	0.162	2.30	0.18	66	0.24
14	2.08	0.701	0.50	0.105	0.084	0.40	70	0.24
15	4.06	0.711	0.95	0.199	0.44	0.40	68	0.24
16	5.00	0.675	1.24	0.265	0.56	0.96	62	0.24
17	5.97	0.690	1.44	0.305	0.69	1.20	60	0.24
18	6.96	0.680	1.73	0.360	0.60	1.08	66	0.24
19	7.83	0.699	1.81	0.395	0.59	0.90	62	0.24
20	7.07	0.864	1.36	0.262	0.610	1.07	66	0.24
21	6.01	0.880	1.14	0.214	0.375	0.75	67	0.24
22	4.33	0.578	1.25	0.290	0.544	0.90	74	0.46

TABLE A-2. SUMMARY OF CONSTANT HYDRAULIC CONDITION RUNS
DETERMINATION OF SCOUR PROFILE WITH TIME

Run	Q cfs	h_o ft	$\overline{U}_\infty$ fps	F	S^* x10³	t min	$(d_s)_{max}$ # ft	Water Temp. °F	d_{50} mm
23	5.20	0.827	1.048	0.204	0.2	5	0.193	76	0.46
24	5.12	0.835	1.020	0.197	0.285	10	0.258	72	0.46
25	5.12	0.807	1.057	0.207	0.300	20	0.305	74	0.46
26	5.23	0.815	1.068	0.209	0.300	30	0.313	65	0.46
27	5.12	0.775	1.100	0.221	0.276	45	0.355	71	0.46
28	5.12	0.783	1.088	0.218	0.302	60	0.350	65	0.46
29	5.13	0.782	1.090	0.218	0.325	90	0.380	72	0.46
30	5.13	0.800	1.070	0.214	0.287	120	0.383	64	0.46
31	5.14	0.804	1.070	0.211	0.263	150	0.403	69	0.46
32	5.14	0.802	1.070	0.211	0.315	180	0.394	65	0.46
34	5.12	0.801	1.065	0.211	0.275	300	0.487	73	0.46
35	5.14	0.800	1.072	0.208	0.275	600	0.534	71	0.46
36	5.08	0.797	1.064	0.211	0.275	1400	0.603	72	0.46
33	5.11	0.794	1.073	0.213	0.300	2800	0.608	70	0.46
37a	5.14	0.814	1.055	0.207	0.2875	5700	0.645	69	0.46
37b	5.14	0.814	1.055	0.207	0.2875	8580	0.665	69	0.46
37c	5.14	0.814	1.055	0.207	0.2875	10020	0.690	69	0.46
37d	5.14	0.814	1.055	0.207	0.2875	11460	0.689	69	0.46

* Water Surface Slope

\# Scour Depth Was Measured Relative to Mean Bed

TABLE A-3. SUMMARY OF HYDRAULIC CONDITIONS FOR FIXED BED RUNS.

Run	Q cfs	h_o ft	B ft	$\overline{U}_\infty$ fps	F	d_s ft	ϕ	Water temp. ^oF	2a ft
37 - 1	5.2	0.8	6.0	1.05	0.21	0.706	32^0	56^0	0.25
37 - 2	5.1	0.8	6.0	1.11	0.22	0	0^0	60^0	0.25
37 - 3	5.1	0.8	6.0	1.06	0.21	0.357	32^0	60^0	0.25
38	2.6	0.4	6.0	1.08	0.30	0.357	32^0	60^0	0.25
39	4.1	0.4	6.0	1.69	0.47	0.357	32^0	60^0	0.25
40	2.6	0.4	6.0	1.08	0.30	0.348	46^0	60^0	0.25
41	5.1	0.8	6.0	1.06	0.21	0.348	46^0	60^0	0.25
42	4.1	0.4	6.0	1.69	0.47	0.348	46^0	60^0	0.25
43	3.6	0.8	6.0	0.75	0.15	0.706	32^0	60^0	0.25
44	7.1	0.8	6.0	1.47	0.44	0.706	32^0	63^0	0.25
45	7.1	1.0	6.0	1.19	0.21	0.706	32^0	63^0	0.25
46	4.3	1.0	6.0	0.72	0.13	0.706	32^0	63^0	0.25
47	1.9	0.4	6.0	0.78	0.22	0.706	32^0	63^0	0.25
48	2.5	0.4	6.0	1.04	0.29	0.706	32^0	63^0	0.25
49	3.6	0.4	6.0	1.50	0.42	0.706	32^0	63^0	0.25
50	4.5	1.0	6.0	0.75	0.13	0.357	32^0	63^0	0.25
51	6.0	1.0	6.0	1.00	0.18	0.357	32^0	63^0	0.25
52	3.6	0.8	6.0	0.75	0.15	0.357	32^0	63^0	0.25
53	7.1	0.8	6.0	1.47	0.29	0.357	32^0	63^0	0.25
54	1.8	0.4	6.0	0.75	0.21	0.357	32^0	64^0	0.25
55*	4.8	0.8	6.0	1.00	0.20	0.357	32^0	64^0	0.25
56**	2.4	0.4	6.0	1.00	0.28	0.357	32^0	64^0	0.25
57	6.0	1.0	6.0	1.00	0.18	0.	0^0	64^0	0.25
58	4.5	1.0	6.0	0.75	0.13	0.	0^0	64^0	0.25
59	7.1	0.8	6.0	1.47	0.29	0.	0^0	64^0	0.25
60	3.6	0.8	6.0	0.75	0.15	0.	0^0	64^0	0.25
61	3.6	0.4	6.0	1.50	0.42	0.	0^0	64^0	0.25
62	2.4	0.4	6.0	1.00	0.28	0.	0^0	64^0	0.25
63	1.8	0.4	6.0	0.75	0.21	0.	0^0	64^0	0.25
64	4.8	0.8	6.0	1.00	0.20	0.708	32^0	66^0	0.345
65	3.6	0.8	6.0	0.75	0.15	0.708	32^0	66^0	0.345
66	7.0	0.8	6.0	1.43	0.28	0.708	32^0	68^0	0.345
67	3.6	0.8	6.0	0.75	0.15	0.350	32^0	68^0	0.345
68	4.8	0.8	6.0	1.00	0.20	0.350	32^0	68^0	0.345
69	7.1	0.8	6.0	1.47	0.29	0.350	32^0	70^0	0.345
70	3.6	0.8	6.0	0.95	0.15	0.	0^0	70^0	0.345
71	4.8	0.8	6.0	1.00	0.20	0.	0^0	70^0	0.345
72	7.1	0.8	6.0	1.47	0.29	0.	0^0	70^0	0.345

* Run 55 is the duplicate of run 37-3 except measurements were made at $\theta = 45^0$

** Run 56 is the duplicate of run 38 except measurements were made at $\theta = 45^0$

TABLE A-4. VELOCITY DISTRIBUTIONS IN SECONDARY FLOW BOUNDARY LAYER*
Run 37-1

r = 0.35		r = 0.45		r = 0.55		r = 0.60		r = 0.65		r = 0.70	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.373	0.	0.	0.	0.164	0.	0.381	0.	0.414	0.	0.
0.003	0.402	0.005	0.389	0.003	0.427	0.003	0.463	0.001	0.457	0.002	0.427
0.005	0.359	0.007	0.402	0.005	0.408	0.005	0.469	0.003	0.457	0.005	0.452
0.007	0.343	0.010	0.427	0.007	0.534	0.007	0.497	0.005	0.475	0.007	0.489
0.010	0.328	0.014	0.414	0.010	0.578	0.010	0.497	0.008	0.475	0.009	0.492
0.012	0.395	0.019	0.414	0.012	0.578	0.012	0.502	0.010	0.481	0.012	0.497
0.014	0.548	0.023	0.359	0.014	0.558	0.014	0.523	0.012	0.497	0.014	0.481
0.017	0.596	0.028	0.343	0.017	0.548	0.017	0.481	0.015	0.475	0.016	0.457
0.019	0.534	0.035	0.328	0.019	0.539	0.019	0.469	0.019	0.446	0.019	0.469
0.021	0.508	0.042	0.254	0.021	0.528	0.021	0.497	0.024	0.453	0.021	0.434
0.023	0.487	0.051	0.164	0.023	0.469	0.026	0.427	0.028	0.440	0.025	0.414
0.026	0.463	0.063	0.074	0.028	0.427	0.031	0.395	0.033	0.452	0.030	0.414
0.028	0.434	0.071	0.	0.033	0.389	0.035	0.414	0.038	0.367	0.039	0.352
0.030	0.434			0.037	0.336	0.047	0.284	0.045	0.343	0.051	0.284
0.035	0.359			0.042	0.293	0.061	0.275	0.054	0.284	0.062	0.275
0.040	0.336			0.047	0.275	0.079	0.164	0.065	0.231	0.086	0.180
0.044	0.312			0.058	0.180	0.100	0.	0.077	0.164	0.096	0.
0.049	0.259			0.062	0.180			0.089	0.127		
0.060	0.207			0.076	0.			0.100	0.073		
0.072	0.147							0.105	0.		
0.084	0.073										
0.090	0.										

Run 37-2

r = 0.30		r = 0.35		r = 0.40	
z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.
0.002	0.259	0.001	0.539	0.001	0.492
0.005	0.408	0.003	0.596	0.003	0.668
0.007	0.446	0.005	0.608	0.005	0.736
0.009	0.427	0.007	0.613	0.007	0.736
0.012	0.408	0.010	0.613	0.010	0.726
0.014	0.381	0.014	0.558	0.012	0.700
0.016	0.373	0.018	0.502	0.014	0.652
0.019	0.359	0.022	0.408	0.017	0.604
0.021	0.352	0.027	0.418	0.019	0.600
0.025	0.328	0.031	0.408	0.021	0.573
0.030	0.319	0.035	0.312	0.024	0.534
0.035	0.282	0.039	0.194	0.026	0.508
0.039	0.264	0.044		0.028	0.528
0.044	0.220	0.056	0.	0.030	0.513
0.049	0.194			0.033	0.440
0.053	0.164			0.035	0.422
0.058	0.104			0.037	0.389
0.062	0.073			0.040	0.352
0.067	0.			0.042	0.359
				0.044	0.259
				0.047	0.220
				0.049	0.104
				0.051	
				0.062	0.

*See Figure VIII-12 for definition sketch

TABLE A-4. (cont.)
Run 37-3

r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.002	0.563	0.005		0.009		0.002	0.839	0.002	0.676
0.005	0.573	0.007	0.668	0.012	0.858	0.004	0.867	0.009	0.766
0.007	0.608	0.010	0.668	0.014	0.716	0.009	0.987	0.012	0.769
0.009	0.604	0.012	0.670	0.016	0.889	0.011	0.994	0.014	0.766
0.012	0.596	0.014	0.672	0.019	0.848	0.013	0.994	0.016	0.766
0.014	0.600	0.017	0.700	0.023	0.800	0.018	0.962	0.019	0.750
0.016	0.563	0.019	0.672	0.025	0.796	0.025	0.959	0.023	0.700
0.019	0.548	0.024	0.643	0.030	0.747	0.032	0.842	0.030	0.700
0.021	0.518	0.035	0.604	0.037	0.715	0.042	0.762	0.035	0.676
0.023	0.475	0.047	0.481	0.041	0.656	0.053	0.700	0.039	0.596
0.028	0.457	0.061	0.475	0.065	0.440	0.076	0.558	0.046	0.548
0.032	0.427	0.084	0.336	0.076	0.343	0.102	0.	0.069	0.422
0.039	0.293	0.112	0.	0.100	0.			0.093	0.
0.046	0.220								
0.058	0.								

Run 38

r = 0.30		r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.002	0.260	0.002	0.613	0.002	0.580	0.002	0.769	0.002	0.733	0.002	0.635	0.002	0.635
0.006	0.294	0.005	0.623	0.005	0.750	0.005	1.024	0.005	0.970	0.005	0.836	0.005	0.775
0.011	0.312	0.007	0.664	0.009	0.762	0.009	1.049	0.007	1.024	0.007	0.922	0.007	0.787
0.016	0.336	0.009	0.664	0.014	0.769	0.014	1.042	0.009	1.062	0.009	0.950	0.009	0.783
0.020	0.328	0.014	0.706	0.019	0.750	0.021	0.919	0.012	1.077	0.014	1.000	0.014	0.747
0.025	0.328	0.019	0.696	0.023	0.680	0.032	0.769	0.014	1.073	0.016	1.003	0.019	0.707
0.029	0.312	0.021	0.676	0.032	0.652	0.044	0.578	0.016	0.987	0.021	1.000	0.023	0.660
0.036	0.302	0.023	0.660	0.044	0.534	0.056	0.408	0.028	0.870	0.032	0.943	0.032	0.592
0.048	0.294	0.025	0.627	0.056	0.440	0.067	0.	0.039	0.740	0.044	0.870	0.044	0.343
0.059	0.264	0.028	0.604	0.067	0.352			0.051	0.627	0.056	0.750	0.056	0.
0.071	0.194	0.030	0.600	0.079	0.312			0.062	0.534	0.067	0.656		
0.083	0.164	0.032	0.586	0.102	0.			0.074	0.414	0.079	0.553		
0.094	0.147	0.035	0.573					0.086	0.180	0.090	0.434		
0.106	0.127	0.037	0.548					0.109	0.	0.102	0.336		
0.117	0.104	0.042	0.523							0.113	0.231		
0.129	0.073	0.046	0.513							0.125	0.		
0.140	0.	0.057	0.508										
		0.069	0.395										
		0.081	0.293										
		0.092	0.275										
		0.104	0.231										
		0.115											
		0.127	0.										

TABLE A-4. (cont.)
Run 39

r = 0.30		r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.003	0.613	0.002	0.898	0.002	0.928	0.002	1.112	0.002	0.970	0.001	0.820	0.001	0.635
0.005	0.613	0.004	0.984	0.004	1.100	0.005	1.204	0.004	1.100	0.004	1.158	0.004	0.740
0.007	0.592	0.006	1.049	0.006	1.149	0.007	1.226	0.006	1.147	0.006	1.182	0.006	0.793
0.010	0.563	0.009	1.049	0.009	1.158	0.009	1.239	0.009	1.188	0.008	1.204	0.008	0.787
0.012	0.518	0.011	1.049	0.011	1.154	0.012	1.239	0.011	1.178	0.011	1.214	0.011	0.754
0.014	0.414	0.013	1.045	0.013	1.138	0.014	1.239	0.013	1.166	0.013	1.214	0.015	0.733
0.017	0.389	0.016	1.024	0.016	1.112	0.016	1.230	0.016	1.158	0.018	1.200	0.018	0.719
0.019	0.352	0.018	0.984	0.018	1.049	0.019	1.221	0.018	1.112	0.020	1.158	0.022	0.668
0.021	0.252	0.020	0.965	0.020	1.037	0.021	1.196	0.025	1.062	0.027	1.100	0.026	0.635
0.023	0.180	0.022	0.919	0.022	0.996	0.023	1.182	0.029	0.996	0.031	1.087	0.029	0.613
0.026	0.104	0.025	0.867	0.025	0.970	0.028	1.136	0.034	0.943	0.036	1.042	0.031	0.544
0.030	0.	0.028	0.852	0.029	0.928	0.032	1.075	0.039	0.898	0.041	1.015	0.033	0.492
		0.032	0.787	0.032	0.898	0.037	1.000	0.043	0.852	0.045	0.970	0.036	0.434
		0.036	0.733	0.043	0.867	0.042	0.943	0.047	0.802	0.057	0.733	0.041	0.381
		0.041	0.676	0.055	0.696	0.046	0.855	0.053	0.736	0.068	0.567	0.045	0.312
		0.046	0.660	0.066	0.518	0.051	0.787	0.057	0.696	0.080	0.328	0.050	0.207
		0.050	0.608	0.076	0.	0.056	0.715	0.062	0.647	0.092		0.060	0.
		0.055	0.518			0.060	0.635	0.066	0.596	0.100	0.		
		0.066				0.065	0.567	0.078	0.434				
		0.073	0.			0.069	0.463	0.090					
						0.074	0.367	0.097	0.				
						0.079	0.284						
						0.093	0.						

Run 40

r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60		r = 0.65	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.001	0.402	0.002	0.820	0.002	0.836	0.002	0.820	0.002	0.820	0.002	0.820	0.001	0.434
0.004	0.492	0.005	0.867	0.005	0.928	0.005	1.037	0.005	0.996	0.005	0.926	0.004	0.592
0.006	0.508	0.007	0.892	0.007	1.012	0.007	1.080	0.007	1.015	0.007	0.928	0.006	0.635
0.008	0.528	0.009	0.898	0.009	1.037	0.009	1.082	0.009	1.032	0.009	0.928	0.008	0.638
0.011	0.544	0.012	0.898	0.012	1.042	0.012	1.080	0.012	1.037	0.012	0.925	0.011	0.638
0.013	0.544	0.016	0.895	0.014	1.045	0.014	1.075	0.014	1.042	0.014	0.913	0.015	0.635
0.018	0.528	0.021	0.874	0.016	1.045	0.019	1.049	0.016	1.041	0.016	0.898	0.020	0.627
0.022	0.518	0.025	0.852	0.021	1.037	0.023	1.006	0.019	1.032	0.019	0.889	0.024	0.618
0.027	0.502	0.030	0.836	0.025	1.019	0.028	0.970	0.021	1.019	0.023	0.852	0.029	0.578
0.031	0.481	0.035	0.811	0.030	0.984	0.032	0.928	0.025	1.012	0.028	0.820	0.038	0.508
0.036	0.457	0.044	0.750	0.035	0.934	0.042	0.836	0.030	0.970	0.032	0.750	0.048	0.414
0.041	0.440	0.053	0.656	0.044	0.852	0.051	0.715	0.035	0.919	0.037	0.676	0.057	0.284
0.045	0.414	0.063	0.544	0.053	0.733	0.060	0.578	0.039	0.892	0.046	0.592	0.089	0.
0.050	0.395	0.072	0.492	0.063	0.643	0.069	0.452	0.049	0.820	0.056	0.492		
0.055	0.373	0.081	0.402	0.072	0.567	0.079	0.293	0.059	0.750	0.065	0.380		
0.059	0.328	0.090	0.284	0.081	0.492	0.104	0.	0.067	0.680	0.074	0.254		
0.064	0.293	0.110	0.	0.090	0.402			0.076	0.592	0.092	0.		
0.068	0.264			0.100	0.284			0.086	0.518				
0.073	0.220			0.120	0.			0.095	0.414				
0.078	0.180							0.104	0.312				
0.082	0.127							0.113	0.194				
0.087	0.073							0.130	0.				
0.100	0.												

TABLE A-4. (cont.)
Run 41

r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.002	0.440	0.002	0.635	0.002	0.544	0.002	0.750	0.002	0.733	0.002	0.643
0.005	0.518	0.005	0.704	0.005	0.733	0.005	0.976	0.005	0.867	0.005	0.704
0.007	0.523	0.007	0.711	0.007	0.820	0.007	0.987	0.007	0.916	0.007	0.715
0.009	0.523	0.009	0.711	0.009	0.874	0.009	0.987	0.009	0.922	0.009	0.715
0.012	0.523	0.012	0.707	0.012	0.886	0.012	0.981	0.012	0.919	0.012	0.711
0.016	0.513	0.014	0.704	0.014	0.889	0.014	0.967	0.014	0.913	0.014	0.700
0.021	0.487	0.016	0.692	0.016	0.889	0.019	0.928	0.016	0.901	0.019	0.664
0.025	0.452	0.021	0.676	0.021	0.855	0.023	0.898	0.021	0.870	0.023	0.623
0.030	0.414	0.025	0.635	0.025	0.803	0.028	0.845	0.025	0.833	0.032	0.481
0.035	0.367	0.030	0.600	0.030	0.769	0.037	0.769	0.030	0.793	0.042	0.312
0.039	0.352	0.035	0.563	0.039	0.696	0.046	0.668	0.035	0.754	0.051	0.127
0.044	0.275	0.039	0.518	0.049	0.635	0.056	0.592	0.039	0.700	0.062	0.
0.049	0.231	0.049	0.440	0.058	0.553	0.065	0.518	0.049	0.613		
0.053	0.164	0.058	0.352	0.067	0.481	0.074	0.402	0.060	0.497		
0.058	0.104	0.067	0.231	0.076	0.427	0.083	0.328	0.069	0.367		
0.062	0.	0.076		0.086	0.367	0.093	0.147	0.079	0.147		
		0.089	0.	0.095	0.284	0.102	0.100	0.086	0.		

Run 42

r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.002	0.984	0.002	1.158	0.002	1.269	0.002	1.409	0.002	1.182
0.005	1.136	0.005	1.214	0.004	1.465	0.005	1.465	0.005	1.279
0.007	1.170	0.007	1.290	0.005	1.554	0.007	1.484	0.007	1.300
0.009	1.170	0.009	1.331	0.009	1.563	0.009	1.493	0.009	1.311
0.014	1.147	0.014	1.341	0.012	1.571	0.014	1.484	0.014	1.311
0.019	1.100	0.019	1.331	0.014	1.563	0.019	1.456	0.019	1.290
0.023	1.037	0.023	1.279	0.019	1.528	0.023	1.409	0.023	1.269
0.032	0.943	0.028	1.214	0.023	1.493	0.032	1.269	0.032	1.147
0.042	0.836	0.037	1.087	0.028	1.447	0.042	1.136	0.042	1.037
0.051	0.733	0.046	0.956	0.037	1.300	0.051	1.024	0.051	0.898
0.060	0.592	0.056	0.820	0.046	1.182	0.060	0.867	0.060	0.769
0.069	0.492	0.065	0.715	0.056	0.970	0.069	0.696	0.069	0.656
0.079	0.328	0.074	0.592	0.065	0.733	0.079	0.367	0.079	0.544
		0.083	0.492	0.074	0.613	0.088	0.231	0.088	0.367
		0.093	0.328			0.097	0.	0.097	0.231
								0.106	0.

TABLE A-4. (cont.)
Run 43

r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60		r = 0.65	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.002	0.367	0.002	0.434	0.002	0.434	0.002	0.414	0.002	0.481	0.002	0.452	0.002	0.343
0.005	0.402	0.005	0.463	0.005	0.492	0.005	0.475	0.005	0.492	0.007	0.508	0.005	0.481
0.007	0.408	0.007	0.492	0.007	0.513	0.007	0.487	0.012	0.523	0.009	0.518	0.007	0.487
0.009	0.389	0.012	0.492	0.012	0.513	0.009	0.492	0.016	0.523	0.012	0.518	0.009	0.497
0.014	0.373	0.016	0.475	0.016	0.502	0.012	0.487	0.025	0.507	0.016	0.513	0.012	0.507
0.019	0.343	0.021	0.446	0.021	0.475	0.014	0.475	0.035	0.446	0.021	0.492	0.016	0.487
0.023	0.319	0.030	0.408	0.030	0.402	0.019	0.446	0.044	0.389	0.035	0.452	0.021	0.457
0.028	0.275	0.039	0.336	0.039	0.328	0.023	0.395	0.053	0.328	0.044	0.373	0.025	0.427
0.037	0.220	0.049	0.264	0.049	0.254	0.032	0.312	0.062	0.275	0.053	0.312	0.030	0.389
0.046	0.104	0.058	0.164	0.058	0.147	0.042	0.243	0.072	0.231	0.062	0.264	0.039	0.352
		0.067	0.073	0.067	0.073	0.069	0.	0.081	0.164	0.072	0.167	0.049	0.293
		0.076	0.	0.076	0.			0.090	0.073	0.081	0.073		
								0.100	0.	0.090	0.		

Run 43. (cont.)

r = 0.70		r = 0.75	
z	u_r	z	u_r
0.	0.	0.	0.
0.002	0.402	0.002	0.328
0.005	0.422	0.005	0.381
0.007	0.434	0.007	0.389
0.009	0.440	0.009	0.395
0.014	0.427	0.014	0.389
0.019	0.414	0.019	0.373
0.023	0.395	0.023	0.352
0.028	0.352	0.028	0.328
0.037	0.312	0.032	0.302
0.046	0.243	0.042	0.254
0.056	0.164	0.051	0.194
0.065	0.073	0.060	0.127
0.074	0.	0.069	0.073
		0.074	0.

Run 44

r = 0.35		r = 0.40		r = 0.45		r = 0.50		r = 0.55		r = 0.60		r = 0.65		r = 0.70	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.	0.
0.001	0.518	0.001	0.715	0.002	0.928	0.001	0.733	0.002	0.820	0.002	0.518	0.003	0.402	0.002	0.676
0.004	0.715	0.004	0.852	0.005	0.996	0.004	0.898	0.005	0.956	0.005	0.733	0.005	0.592	0.005	0.733
0.006	0.769	0.006	0.898	0.007	1.037	0.006	1.012	0.007	0.996	0.007	0.867	0.006	0.715	0.007	0.750
0.008	0.769	0.008	0.898	0.009	1.037	0.008	1.012	0.012	1.024	0.009	0.898	0.009	0.750	0.009	0.750
0.011	0.750	0.013	0.883	0.014	1.024	0.013	0.996	0.016	1.012	0.012	0.883	0.012	0.750	0.014	0.733
0.015	0.733	0.018	0.803	0.019	0.984	0.018	0.943	0.021	0.984	0.014	0.867	0.017	0.733	0.019	0.715
0.020	0.673	0.027	0.750	0.028	0.852	0.022	0.854	0.030	0.883	0.019	0.852	0.021	0.715	0.024	0.696
0.029	0.544	0.036	0.656	0.037	0.733	0.031	0.733	0.039	0.769	0.023	0.836	0.026	0.676	0.032	0.635
0.038	0.434	0.045	0.518	0.046	0.613	0.041	0.592	0.049	0.635	0.032	0.769	0.035	0.635	0.042	0.567
0.048	0.362	0.055	0.284	0.056	0.518	0.050	0.434	0.058	0.518	0.042	0.696	0.044	0.567	0.051	0.492
0.057	0.231	0.065	0.164	0.065	0.367	0.059	0.284	0.067	0.434	0.051	0.613	0.054	0.492	0.060	0.402
0.075	0.	0.070	0.	0.074	0.164	0.070	0.	0.076	0.231	0.060	0.544	0.063	0.402	0.069	0.231
				0.080	0.			0.086	0.	0.059	0.434	0.072	0.328	0.086	0.
										0.079	0.367	0.081	0.164		
										0.038	0.231	0.084	0.		
										0.105	0.				

TABLE A-5. SUMMARY OF COMING FLOW VELOCITY DISTRIBUTIONS*
Run 37-1

r_t = 0.55		r = 0.65		r = 0.73		r = 0.85		r = 0.95		r = 1.05		r = 1.31		r = 5.00	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.916	0.750	0.914	0.865	0.914	1.062	0.914	1.108	0.912	1.087	0.914	1.098	0.914	1.098	0.819	1.249
0.844	0.820	0.856	0.865	0.898	1.056	0.856	1.103	0.880	1.087	0.879	1.098	0.889	1.098	0.805	1.249
0.775	0.796	0.625	0.898	0.875	1.051	0.810	1.093	0.833	1.070	0.833	1.123	0.798	1.077	0.722	1.253
0.729	0.820	0.463	0.937	0.825	1.047	0.764	1.087	0.787	1.051	0.787	1.087	0.683	1.051	0.606	1.217
0.659	0.836	0.347	0.934	0.783	1.042	0.717	1.077	0.741	1.047	0.740	1.082	0.567	1.006	0.490	1.192
0.543	0.861	0.231	0.950	0.736	1.030	0.671	1.077	0.694	1.040	0.694	1.037	0.451	0.973	0.375	1.123
0.497	0.836	0.174	0.816	0.690	1.022	0.625	1.062	0.671	1.037	0.648	1.047	0.382	0.904	0.282	1.070
0.428	0.861	0.162	0.889	0.643	1.017	0.578	1.051	0.625	1.037	0.602	1.022	0.312	0.864	0.213	1.009
0.370	0.874	0.139	0.836	0.597	1.012	0.532	1.047	0.579	1.037	0.555	1.024	0.266	0.817	0.143	0.922
0.312	0.898	0.116	0.830	0.551	1.000	0.486	1.032	0.533	1.004	0.509	1.012	0.220	0.711	0.097	0.858
0.266	0.889	0.104	0.840	0.505	0.994	0.440	1.027	0.486	0.984	0.463	0.989	0.174	0.635	0.074	0.861
0.196	0.852	0.093	0.810	0.435	0.989	0.393	1.017	0.440	0.956	0.416	0.962	0.150	0.548	0.051	0.769
0.141	0.855	0.081	0.790	0.389	0.984	0.347	1.000	0.394	0.928	0.370	0.942	0.127	0.578	0.028	0.696
0.081	0.817	0.069	0.733	0.342	0.978	0.301	0.989	0.347	0.916	0.324	0.878	0.104	0.452	0.016	0.457
0.023	0.807	0.058	0.660	0.296	0.962	0.255	0.962	0.301	0.883	0.278	0.867	0.093	0.440	0.004	0.207
0.	0.578	0.046	0.638	0.250	0.945	0.208	0.928	0.255	0.836	0.231	0.803	0.081	0.427	0.	0.231
-0.023	0.528	0.035	0.592	0.227	0.934	0.162	0.867	0.209	0.775	0.185	0.743	0.069	0.395		
-0.047	0.440	0.023	0.578	0.180	0.904	0.116	0.810	0.162	0.715	0.139	0.664	0.058	0.367		
-0.054	0.434	0.012	0.518	0.157	0.880	0.069	0.726	0.116	0.578	0.093	0.548	0.046	0.220		
-0.065	0.381	0.	0.492	0.134	0.855	0.023	0.623	0.093	0.518	0.069	0.492	0.035	0.164		
-0.070	0.367	-0.012	0.402	0.111	0.817	0.	0.567	0.070	0.502	0.046	0.440	0.030	0.207		
-0.074	0.381	-0.023	0.373	0.088	0.790	-0.023	0.518	0.047	0.389	0.024	0.312	0.025	0.073		
-0.081	0.343	-0.034	0.328	0.065	0.762	-0.046	0.427	0.023	0.284	0.	0.	0.021	0.		
-0.086	0.328	-0.042	0.284	0.042	0.726	-0.069	0.373	0.	0.			0.			
-0.093	0.231	-0.046	0.264	0.018	0.672	-0.093	0.328								
-0.098	0.284	-0.051	0.259	-0.005	0.631	-0.116	0.312								
-0.104	0.231	-0.056	0.231	-0.028	0.581	-0.162	0.293								
-0.088	0.275	-0.058	0.259	-0.051	0.548	-0.187	0.275								
-0.089	0.231	-0.060	0.164	-0.075	0.518	-0.211	0.275								
-0.116	0.207	-0.065	0.194	-0.097	0.463	-0.234	0.259								
-0.111	0.275	-0.072	0.147	-0.120	0.440	-0.257	0.257								
-0.158	0.275	-0.079	0.127	-0.143	0.414										
-0.128	0.164	-0.088	0.	-0.167	0.414										
-0.139	0.104	-0.097		-0.190	0.402										
-0.151	0.164														
-0.174	0.127														
-0.224	0.														

* See Figure VIII - 10 for definition sketch

TABLE A-5. (cont.)
Run 37-2

r = 0.64		r = 0.70		r = 0.8		r = 1.0		r = 2.67		r = 4.0	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.815	0.890	0.825	0.931	0.817	0.994	0.824	1.100	0.838	1.166	0.806	1.277
0.794	0.890	0.802	0.932	0.796	0.994	0.808	1.100	0.822	1.166	0.797	1.277
0.771	0.890	0.779	0.931	0.773	1.008	0.761	1.100	0.799	1.166	0.774	1.277
0.748	0.888	0.756	0.932	0.750	1.014	0.715	1.100	0.776	1.166	0.750	1.277
0.725	0.892	0.732	0.927	0.727	1.015	0.669	1.100	0.752	1.164	0.727	1.277
0.702	0.890	0.709	0.932	0.704	1.018	0.646	1.099	0.731	1.164	0.704	1.277
0.678	0.892	0.663	0.934	0.680	1.018	0.622	1.099	0.706	1.163	0.681	1.277
0.648	0.897	0.640	0.932	0.657	1.017	0.599	1.098	0.683	1.163	0.659	1.277
0.632	0.898	0.617	0.934	0.634	1.016	0.576	1.098	0.660	1.162	0.635	1.275
0.609	0.897	0.594	0.934	0.611	1.014	0.553	1.094	0.637	1.160	0.612	1.275
0.586	0.897	0.570	0.932	0.588	1.010	0.530	1.090	0.614	1.156	0.589	1.273
0.563	0.897	0.547	0.932	0.565	1.008	0.507	1.091	0.590	1.152	0.565	1.273
0.540	0.897	0.524	0.932	0.542	1.006	0.484	1.089	0.567	1.152	0.541	1.271
0.516	0.894	0.501	0.930	0.518	1.006	0.460	1.088	0.564	1.149	0.518	1.269
0.493	0.892	0.478	0.932	0.495	1.006	0.437	1.084	0.521	1.144	0.493	1.267
0.470	0.892	0.455	0.930	0.472	1.005	0.414	1.080	0.448	1.140	0.472	1.265
0.447	0.890	0.432	0.930	0.449	1.000	0.391	1.074	0.475	1.138	0.444	1.263
0.424	0.889	0.408	0.924	0.426	0.999	0.368	1.070	0.452	1.141	0.426	1.261
0.401	0.889	0.385	0.920	0.403	0.992	0.345	1.058	0.428	1.128	0.403	1.257
0.378	0.888	0.362	0.919	0.380	0.990	0.322	1.048	0.406	1.123	0.380	1.249
0.355	0.887	0.339	0.916	0.357	0.980	0.299	1.040	0.372	1.123	0.357	1.233
0.331	0.886	0.316	0.912	0.333	0.974	0.275	1.024	0.359	1.118	0.334	1.228
0.308	0.878	0.293	0.908	0.310	0.964	0.252	1.008	0.336	1.109	0.311	1.219
0.285	0.874	0.270	0.903	0.287	0.950	0.229	0.990	0.313	1.103	0.288	1.204
0.262	0.868	0.246	0.884	0.264	0.939	0.206	0.973	0.290	1.092	0.265	1.190
0.239	0.856	0.223	0.866	0.241	0.912	0.183	0.962	0.266	1.080	0.241	1.168
0.216	0.846	0.200	0.844	0.218	0.890	0.160	0.934	0.243	1.066	0.218	1.141
0.193	0.812	0.177	0.819	0.195	0.870	0.137	0.910	0.220	1.051	0.195	1.106
0.168	0.805	0.154	0.786	0.171	0.840	0.113	0.878	0.197	1.037	0.172	1.070
0.146	0.770	0.131	0.744	0.148	0.808	0.090	0.838	0.174	1.016	0.149	1.019
0.123	0.734	0.108	0.702	0.125	0.770	0.067	0.789	0.151	0.976	0.116	0.973
0.100	0.670	0.085	0.634	0.102	0.732	0.044	0.718	0.128	0.950	0.093	0.916
0.077	0.641	0.061	0.556	0.079	0.684	0.021	0.597	0.104	0.907	0.069	0.842
0.054	0.562	0.038	0.440	0.056	0.616			0.081	0.850	0.046	0.747
0.031	0.410	0.015	0.314	0.033	0.534			0.058	0.787	0.023	0.638
0.007	0.302	0.	0.	0.009	0.365			0.035	0.700	0.	0.452
0.	0.			0.	0.			0.012	0.590		
								0.	0.522		

TABLE A-5. (cont.)
Run 37-3

r = 0.45		r = 0.50		r = 0.60		r = 0.80		r = 1.00		r = 2.00		r = 4.00	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.787	0.740	0.770	0.824	0.769	0.913	0.763	1.047	0.764	1.158	0.769	1.228	0.769	1.249
0.579	0.740	0.741	0.824	0.614	0.913	0.750	1.047	0.741	1.158	0.741	1.228	0.741	1.249
0.394	0.740	0.556	0.848	0.394	0.904	0.625	1.068	0.718	1.154	0.695	1.228	0.695	1.249
0.243	0.736	0.509	0.830	0.208	0.877	0.486	1.053	0.695	1.152	0.648	1.228	0.648	1.243
0.127	0.762	0.278	0.839	0.116	0.830	0.370	1.047	0.671	1.149	0.602	1.228	0.602	1.241
0.012	0.803	0.162	0.892	0.049	0.803	0.278	1.045	0.648	1.149	0.556	1.228	0.556	1.233
-0.069	0.800	0.046	0.800	0.012	0.766	0.185	1.017	0.625	1.147	0.509	1.219	0.509	1.228
-0.116	0.800	0.	0.793	0.	0.758	0.116	0.981	0.602	1.147	0.463	1.208	0.463	1.217
-0.139	0.750	-0.046	0.733	-0.023	0.723	0.069	0.948	0.579	1.145	0.440	1.204	0.417	1.206
-0.162	0.715	-0.053	0.730	-0.058	0.586	0.046	0.919	0.556	1.143	0.417	1.198	0.370	1.200
-0.171	0.692	-0.058	0.696	-0.079	0.425	0.023	0.870	0.532	1.145	0.394	1.190	0.324	1.182
-0.180	0.668	-0.063	0.696	-0.093	0.414	0.012	0.830	0.509	1.143	0.370	1.175	0.278	1.158
-0.190	0.647	-0.065	0.692	-0.104	0.302	0.	0.807	0.486	1.141	0.347	1.166	0.232	1.143
-0.199	0.638	-0.067	0.715	-0.127	0.147	-0.012	0.772	0.463	1.141	0.324	1.156	0.208	1.130
-0.208	0.563	-0.069	0.707			-0.023	0.700	0.440	1.136	0.301	1.143	0.185	1.117
-0.218	0.539	-0.072	0.707			-0.046	0.596	0.417	1.130	0.278	1.136	0.162	1.098
-0.225	0.487	-0.076	0.672			-0.058	0.508	0.394	1.126	0.255	1.119	0.139	1.075
-0.232	0.402	-0.081	0.660			-0.069	0.427	0.370	1.121	0.232	1.112	0.116	1.049
-0.236	0.387	-0.086	0.660			-0.081	0.194	0.347	1.115	0.208	1.100	0.093	1.022
-0.241	0.352	-0.093	0.643			-0.093	0.	0.324	1.108	0.185	1.077	0.070	0.996
-0.245	0.319	-0.104	0.596					0.301	1.095	0.162	1.065	0.046	0.931
-0.250	0.312	-0.116	0.567					0.278	1.090	0.139	1.045	0.023	0.842
-0.255	0.302	-0.139	0.469					0.255	1.077	0.116	1.019	0.	0.754
-0.259	0.194	-0.150	0.408					0.232	1.070	0.093	0.989	-0.012	0.
-0.264	0.207	-0.174	0.302					0.208	1.056	0.070	0.943		
-0.266	0.194							0.185	1.042	0.046	0.883		
-0.269	0.164							0.162	1.027	0.023	0.807		
-0.273	0.164							0.139	1.012	0.	0.		
-0.289	0.							0.116	0.992				
								0.093	0.970				
								0.069	0.925				
								0.046	0.870				
								0.023	0.793				
								0.	0.676				
								-0.023	0.487				
								-0.046	0.				

TABLE A-5 (Cont.)
Run 38

r = 0.45		r = 0.50		r = 0.60		r = 0.70		r = 0.80		r = 1.0	
z	u_r	z	u_r	z	u_r	z	u_r	z	u_r	z	u_r
0.633	0.758	0.605	0.898	0.540	1.077	0.478	1.130	0.415	1.077	0.320	1.219
0.610	0.762	0.582	0.895	0.526	1.070	0.455	1.136	0.401	1.080	0.300	1.214
0.586	0.762	0.559	0.889	0.517	1.051	0.431	1.126	0.387	1.080	0.283	1.212
0.563	0.758	0.536	0.883	0.499	1.027	0.411	1.121	0.371	1.080	0.260	1.210
0.540	0.762	0.512	0.877	0.482	0.996	0.397	1.119	0.353	1.075	0.244	1.210
0.517	0.775	0.489	0.867	0.459	0.950	0.346	1.033	0.334	1.065	0.228	1.200
0.494	0.796	0.466	0.855	0.436	0.922	0.325	1.070	0.316	1.062	0.205	1.188
0.471	0.810	0.443	0.845	0.413	0.907	0.304	1.049	0.304	1.062	0.184	1.166
0.448	0.820	0.411	0.824	0.390	0.898	0.281	1.019	0.288	1.056	0.140	1.147
0.424	0.845	0.390	0.814	0.367	0.883	0.260	1.000	0.269	1.042	0.124	1.126
0.401	0.855	0.369	0.796	0.346	0.845	0.237	0.973	0.258	1.037	0.107	1.093
0.378	0.870	0.346	0.779	0.323	0.827	0.216	0.937	0.242	1.024	0.087	1.056
0.355	0.876	0.325	0.656	0.300	0.793	0.193	0.877	0.225	0.996	0.070	1.024
0.332	0.867	0.302	0.676	0.276	0.740	0.170	0.769	0.207	0.984	0.054	0.984
0.309	0.855	0.279	0.596	0.256	0.664	0.151	0.608	0.186	0.962	0.043	0.953
0.286	0.820	0.260	0.463	0.232	0.553	0.128	0.264	0.170	0.943	0.031	0.907
0.262	0.754	0.237	0.259	0.209	0.367			0.154	0.925	0.020	0.842
0.239	0.668							0.131	0.885	0.013	0.762
0.216	0.544							0.107	0.803	0.001	0.567
0.193	0.293							0.087	0.635		

r = 1.2		r = 1.5		r = 2.0		r = 4.0	
z	u_r	z	u_r	z	u_r	z	u_r
0.320	1.230	0.325	1.254	0.302	1.253	0.325	1.323
0.297	1.233	0.302	1.255	0.279	1.253	0.302	1.327
0.286	1.226	0.279	1.255	0.256	1.247	0.279	1.319
0.274	1.217	0.256	1.249	0.232	1.243	0.256	1.313
0.262	1.214	0.232	1.239	0.209	1.228	0.232	1.302
0.251	1.204	0.209	1.226	0.186	1.210	0.209	1.283
0.228	1.194	0.186	1.204	0.163	1.188	0.186	1.265
0.205	1.178	0.163	1.182	0.140	1.158	0.163	1.243
0.181	1.154	0.140	1.147	0.117	1.126	0.140	1.214
0.158	1.126	0.117	1.112	0.094	1.095	0.117	1.175
0.135	1.103	0.094	1.068	0.070	1.024	0.094	1.136
0.112	1.051	0.070	1.019	0.047	0.937	0.070	1.093
0.089	1.017	0.047	0.943	0.024	0.817	0.059	1.056
0.066	0.959	0.024	0.880	0.001	0.664	0.036	0.978
0.043	0.913	0.013	0.803			0.024	0.901
0.020	0.836	0.001	0.643			0.013	0.836
0.001	0.656					0.001	0.733

TABLE A-5. (Cont.)
Run 39

z \ r	0.45	0.50	0.60	0.65	0.70	0.80	1.0	1.2	1.5	2.0	3.0	4.0
0.326	1.272	1.573	1.685	1.753	1.839	1.920	1.990	1.995	2.092	2.036	1.952	1.964
0.303	1.275	1.578	1.678	1.751	1.822	1.902	1.980	1.988	2.063	2.025	1.928	1.923
0.280	1.280	1.582	1.656	1.737	1.810	1.875	1.956	1.963	2.046	2.000	1.879	1.886
0.257	1.293	1.573	1.651	1.723	1.793	1.855	1.939	1.949	2.017	1.966	1.852	1.839
0.234	1.297	1.575	1.634	1.700	1.768	1.831	1.899	1.908	1.980	1.932	1.787	1.793
0.211	1.302	1.565	1.608	1.675	1.733	1.804	1.878	1.869	1.939		1.771	1.740
0.188	1.307	1.550	1.590	1.659	1.704	1.765	1.839	1.837	1.897	1.854	1.706	1.695
0.164	1.313	1.545	1.565	1.636	1.672	1.721	1.795	1.802	1.856		1.664	1.636
0.141	1.322	1.537	1.555	1.614	1.629	1.670	1.746	1.780	1.801	1.732	1.622	1.581
0.118	1.315	1.525	1.545	1.571	1.590	1.624	1.682	1.706	1.746	1.690	1.552	1.519
0.095	1.315	1.510	1.528	1.528	1.544	1.563	1.619	1.628	1.638	1.583	1.479	1.448
0.072	1.305	1.490	1.497	1.487	1.469	1.493	1.546	1.605	1.542	1.542	1.413	1.373
0.049	1.285	1.465	1.439	1.433	1.429	1.432	1.438	1.512	1.386	1.385	1.319	1.249
0.025	1.243	1.418	1.356	1.345	1.340	1.324	1.327	1.410	1.214	1.181	1.191	1.264
0.002	1.210	1.361	1.289	1.285	1.258	1.204	1.147	1.151	0.814		0.869	0.896
-0.021	1.140	1.279	1.182	1.172	1.126	1.047	0.892					
-0.044	1.050	1.195	1.045	1.005	0.966	0.820	0.528					
-0.067	0.929	1.037	0.844	0.517	0.693	0.545						
-0.090	0.776	0.861	0.542	0.367	0.312							
-0.113	0.568	0.723										
-0.137	0.284	0.518										
-0.160		0.306										

Run 40

z \ r	0.44	0.60	0.80	1.00	1.20	1.50	2.00	3.00	4.00	5.00	7.50
0.361	0.742	1.014	1.151	1.154	1.154	1.133	1.129	1.110	1.147	1.150	1.067
0.338	0.742	1.014	1.145	1.154	1.151	1.129	1.118	1.116	1.145	1.146	1.067
0.315	0.743	1.011	1.141	1.145	1.145	1.125	1.106	1.109	1.137	1.140	1.064
0.292	0.746	1.013	1.136	1.136	1.136	1.117	1.094	1.100	1.124	1.129	1.062
0.268	0.755	1.014	1.123	1.126	1.126	1.113	1.079	1.092	1.110	1.121	1.061
0.245	0.765	1.013	1.117	1.117	1.117	1.088	1.065	1.082	1.095	1.109	1.047
0.222	0.783	1.012	1.103	1.101	1.101	1.071	1.045	1.065	1.083	1.094	1.031
0.199	0.809	1.010	1.093	1.087	1.087	1.050	1.031	1.041	1.063	1.075	1.016
0.176	0.819	1.010	1.081	1.068	1.068	1.030	1.007	1.028	1.051	1.054	0.995
0.153	0.838	1.005	1.065	1.054	1.054	1.011	0.994	1.001	1.028	1.032	0.972
0.130	0.855	0.998	1.049	1.037	1.037	0.980	0.969	0.976	1.009	1.006	0.945
0.106	0.874	0.995	1.026	1.015	1.015	0.946	0.948	0.947	0.983	0.981	0.912
0.095										0.962	
0.083	0.898	0.986	0.985	0.981	0.981	0.907	0.910	0.910	0.931	0.938	0.871
0.071				0.961	0.961	0.887	0.885	0.894	0.898	0.903	
0.060	0.914	0.970	0.948	0.929	0.929	0.860	0.866	0.871	0.863	0.872	0.817
0.049			0.918	0.891	0.891	0.833	0.838	0.842	0.803	0.802	
0.037	0.921	0.895	0.871	0.863	0.863	0.804	0.809	0.809	0.724	0.607	0.792
0.025		0.849	0.780	0.797	0.797	0.761	0.779	0.762	0.629	0.567	
0.014	0.913	0.726	0.579	0.733	0.733	0.650	0.729	0.700	0.466	0.	0.708
0.005		0.620	0.	0.	0.						
0.002											0.667
0.						0.	0.				
-0.002								0.	0.		
-0.009	0.844	0.558									0.612
-0.020	0.797	0.487									
-0.021											0.
-0.032	0.758	0.431									
-0.044	0.696	0.392									
-0.056	0.645	0.371									
-0.067	0.583										
-0.079	0.525	0.255									
-0.102	0.402	0.									
-0.125	0.237										
-0.171	0.										

TABLE A-5. (cont.)
Run 41

z \ r	0.45	0.5	0.6	0.8	1.00	1.20	1.5	2.00	4.00	7.50
0.760	0.589	0.593	0.762	0.977	1.024	1.076	1.044	1.046	1.101	1.076
0.736	0.589	0.596	0.762	0.978	1.018	1.074	1.045	1.046	1.101	1.074
0.713	0.593	0.593	0.766	0.978	1.015	1.075	1.044	1.046	1.101	1.071
0.690	0.593	0.594	0.769	0.978	1.012	1.076	1.045	1.048	1.101	1.071
0.667	0.595	0.596	0.769	0.978	1.011	1.072	1.049	1.048	1.099	1.071
0.644	0.600	0.596	0.766	0.978	1.012	1.071	1.044	1.049	1.101	1.071
0.620	0.597	0.600	0.762	0.979	1.011	1.068	1.044	1.049	1.098	1.071
0.597	0.595	0.604	0.758	0.978	1.008	1.064	1.042	1.048	1.097	1.069
0.574	0.607	0.608	0.754	0.977	1.009	1.063	1.039	1.045	1.095	1.069
0.551	0.608	0.609	0.780	0.974	1.006	1.061	1.037	1.045	1.092	1.069
0.528	0.613	0.610	0.782	0.974	1.004	1.061	1.037	1.042	1.088	1.070
0.505	0.615	0.612	0.784	0.970	1.009	1.058	1.034	1.042	1.088	1.064
0.482	0.625	0.618	0.784	0.973	1.008	1.058	1.031	1.038	1.088	1.062
0.458	0.625	0.621	0.780	0.970	1.004	1.054	1.029	1.035	1.081	1.055
0.435	0.626	0.622	0.778	0.966	1.001	1.052	1.022	1.031	1.070	1.053
0.412	0.628	0.626	0.778	0.968	1.001	1.050	1.020	1.027	1.060	1.050
0.389	0.628	0.628	0.772	0.965	0.994	1.048	1.018	1.022	1.050	1.043
0.366	0.635	0.629	0.768	0.964	0.996	1.047	1.015	1.018	1.039	1.040
0.343	0.641	0.632	0.765	0.956	0.991	1.043	1.005	1.007	1.031	1.035
0.319	0.646	0.637	0.765	0.955	0.986	1.034	0.995	0.997	1.020	1.025
0.296	0.651	0.639	0.770	0.946	0.986	1.026	0.982	0.983	1.010	1.015
0.273	0.662	0.646	0.773	0.940	0.984	1.015	0.976	0.970	0.994	1.002
0.250	0.670	0.664	0.775	0.931	0.980	0.998	0.963	0.947	0.977	0.983
0.227	0.684	0.670	0.776	0.922	0.968	0.981	0.945	0.934	0.960	0.966
0.203	0.690	0.678	0.781	0.916	0.963	0.964	0.937	0.914	0.946	0.946
0.180	0.696	0.690	0.784	0.904	0.945	0.950	0.913	0.898	0.924	0.920
0.157	0.713	0.696	0.786	0.900	0.927	0.924	0.894	0.878	0.901	0.895
0.134	0.729	0.700	0.792	0.895	0.902	0.893	0.877	0.855	0.866	0.874
0.111	0.752	0.719	0.794	0.875	0.877	0.856	0.847	0.824	0.795	0.842
0.088	0.786	0.732	0.799	0.854	0.832	0.808	0.820	0.781	0.708	0.807
0.065	0.794	0.740	0.790	0.831	0.758	0.731	0.772	0.716	0.440	0.739
0.042	0.795	0.744	0.769	0.760	0.444	0.723	0.700	0.602	0.	0.680
0.030					0.	0.				
0.021							0.			
0.019	0.780	0.733	0.709	0.590				0.		0.597
0.012										
-0.005	0.758	0.693	0.682							
-0.028	0.680	0.638	0.544							
-0.051	0.574	0.546	0.424							
-0.074	0.412	0.272	0.232							
-0.090		0.								
-0.097	0.280									
-0.120	0.188									
-0.144	0.									

TABLE A-5. (cont.)
Run 42

z \ r	0.45	0.50	0.55	0.60	0.70	0.80	1.00	1.20	1.50	2.00	3.00	5.00	7.50
0.400	0.953	1.143	1.299	1.599									
0.394												1.857	1.582
0.377	0.967	1.143	1.304	1.482	1.673	1.673	1.670						
0.370												1.851	1.582
0.368								1.814	1.827	1.777			
0.354	0.981	1.144	1.312	1.472	1.664	1.664	1.660						
0.347											1.818	1.841	1.582
0.345								1.811	1.811	1.770			
0.331	1.007	1.144	1.312	1.458	1.653	1.654	1.513						
0.324											1.813	1.830	1.581
0.322								1.800	1.790	1.759			
0.308	1.031	1.158	1.312	1.445	1.646	1.643	1.649						
0.301											1.809	1.814	1.581
0.299								1.786	1.780	1.751			
0.285	1.046	1.162	1.319	1.431	1.642	1.632	1.637						
0.278											1.799	1.803	1.568
0.275								1.770	1.765	1.728			
0.262	1.056	1.169	1.324	1.411	1.637	1.620	1.622						
0.255											1.780	1.790	1.560
0.252								1.745	1.739	1.715			
0.238	1.079	1.179	1.324	1.389	1.628	1.606	1.612						
0.232											1.762	1.782	1.541
0.229								1.724	1.715	1.694			
0.215	1.094	1.193	1.326	1.380	1.609	1.587	1.602						
0.208											1.736	1.766	1.524
0.206								1.705	1.694	1.661			
0.192	1.111	1.199	1.332	1.380	1.599	1.572	1.589						
0.185											1.705	1.736	1.497
0.183								1.673	1.671	1.620			
0.169	1.126	1.233	1.338	1.374	1.578	1.555	1.571						
0.162											1.660	1.705	1.476
0.160								1.640	1.629	1.618			
0.146	1.151	1.270	1.343	1.369		1.531	1.546						
0.143					1.562								
0.139											1.618	1.666	1.442
0.137								1.602	1.585	1.541			
0.123	1.165	1.301	1.346	1.373	1.533	1.496	1.503						
0.116											1.553	1.587	1.408
0.113								1.562	1.529	1.492			
0.100	1.202	1.333	1.369	1.374	1.496	1.458	1.463						
0.093											1.473	1.514	1.363
0.090								1.493	1.462	1.417			
0.076	1.227	1.342	1.380	1.373	1.445	1.404	1.394						
0.069											1.366	1.291	1.326
0.067								1.127	1.363	1.332			
0.053	1.243	1.340	1.380	1.355	1.377	1.325	1.301						
0.046											1.253	0.	1.264
0.044								1.299	1.239	1.196			
0.030	1.219	1.290	1.331	1.257	1.198	1.159	1.154						
0.023											1.053		1.165
0.021								1.085	1.004	1.102			
0.011							0.						
0.009								0.	0.	0.			
0.007	1.165	1.165	1.145	1.038	0.827	0.775					0.		
0.000													1.024
-0.005						0.							
-0.016	1.059	1.008	0.950	0.802	0.								
-0.023													0.840
-0.039	0.928	0.836	0.772	0.686									
-0.046													0.
-0.063	0.759	0.813	0.621	0.642									
-0.086	0.605	0.441	0.335	0.615									
-0.109	0.373	0.		0.088									

TABLE A-5. (cont.)
Run 43

r / z	0.45	0.50	0.60	0.80	1.00	1.20	1.50	2.00	3.00	4.00	5.00
0.750			0.663	0.749	0.795	0.797	0.810	0.790	0.826	0.833	0.832
0.727			0.658	0.751	0.795	0.797	0.808	0.788	0.826	0.833	0.832
0.704			0.658	0.745	0.795	0.795	0.810	0.788	0.826	0.833	0.822
0.681	0.461	0.531	0.658	0.750	0.795	0.793	0.808	0.788	0.826	0.833	0.822
0.657	0.461	0.529	0.658	0.750	0.796	0.793	0.808	0.786	0.826	0.833	0.822
0.634	0.469	0.529	0.658	0.756	0.798	0.793	0.808	0.786	0.826	0.831	0.819
0.611	0.472	0.529	0.659	0.758	0.794	0.793	0.803	0.786	0.826	0.830	0.815
0.588	0.469	0.531	0.658	0.758	0.794	0.793	0.801	0.784	0.822	0.824	0.815
0.565	0.466	0.524	0.659	0.754	0.794	0.793	0.786	0.784	0.820	0.824	0.814
0.542	0.460	0.524	0.668	0.754	0.793	0.793	0.781	0.783	0.820	0.822	0.810
0.519	0.463	0.524	0.672	0.758	0.796	0.790	0.774	0.783	0.815	0.820	0.810
0.495	0.469	0.524	0.676	0.760	0.793	0.788	0.769	0.783	0.814	0.820	0.808
0.472	0.475	0.526	0.681	0.761	0.793	0.783	0.767	0.783	0.799	0.812	0.808
0.449	0.475	0.526	0.680	0.760	0.793	0.779	0.767	0.766	0.793	0.810	0.808
0.426	0.483	0.529	0.682	0.758	0.788	0.777	0.765	0.758	0.790	0.808	0.810
0.403	0.488	0.530	0.689	0.748	0.782	0.777	0.761	0.750	0.776	0.805	0.810
0.380	0.488	0.529	0.688	0.748	0.782	0.777	0.756	0.748	0.776	0.803	0.802
0.357	0.489	0.526	0.689	0.750	0.781	0.701	0.758	0.740	0.774	0.805	0.797
0.333	0.488	0.528	0.689	0.750	0.779	0.768	0.756	0.736	0.772	0.798	0.784
0.310	0.494	0.531	0.694	0.750	0.774	0.768	0.754	0.723	0.758	0.793	0.776
0.287	0.497	0.538	0.695	0.738	0.766	0.768	0.750	0.706	0.752	0.790	0.767
0.264	0.497	0.536	0.695	0.738	0.760	0.762	0.743	0.696	0.749	0.775	0.758
0.241	0.502	0.539	0.700	0.738	0.750	0.752	0.732	0.686	0.743	0.765	0.745
0.218	0.511	0.541	0.700	0.740	0.740	0.743	0.718	0.686	0.732	0.756	0.724
0.194	0.513	0.536	0.688	0.740	0.731	0.735	0.698	0.674	0.718	0.743	0.706
0.171	0.520	0.539	0.676	0.738	0.724	0.718	0.676	0.662	0.706	0.730	0.680
0.148	0.523	0.550	0.672	0.738	0.706	0.711	0.656	0.643	0.692	0.711	0.655
0.125	0.523	0.582	0.668	0.735	0.690	0.688	0.631	0.633	0.676	0.688	0.628
0.102	0.523	0.591	0.657	0.737	0.672	0.664	0.600	0.604	0.654	0.646	0.581
0.079	0.526	0.593	0.641	0.684	0.644	0.632	0.561	0.551	0.620	0.591	0.553
0.055	0.538	0.589	0.614	0.633	0.605	0.581	0.505	0.480	0.553	0.531	0.510
0.032	0.538	0.579	0.596	0.563	0.552	0.528	0.427	0.384	0.463	0.468	0.478
0.022									0.207		
0.016										0.433	
0.009	0.539	0.566	0.569	0.484	0.470	0.442	0.340	0.348	0.287		
-0.002							0.302	0.315			
-0.014	0.514	0.540	0.527	0.395	0.237	0.345					
-0.033						0.328					
-0.037	0.531	0.521	0.483	0.320	0.052						
-0.060	0.502	0.492	0.427	0.269							
-0.083	0.454	0.456	0.370	0.224							
-0.106	0.418	0.405	0.319	0.185							
-0.130	0.360	0.364	0.284	0.179							
-0.153	0.282	0.297	0.244	0.179							
-0.176	0.242	0.269	0.197	0.171							
-0.199	0.187	0.193	0.155	0.1637							
-0.222	0.145	0.052	0.137	0.1637							
-0.245	0.052	0.037	0.104	0.156							
-0.269		0.	0.104								

TABLE A-5. (cont.)
Run 44

z \ r	0.45	0.50	0.6	0.8	1.0	1.2	1.5	2.0	3.0	5.0
0.699	0.848									
0.692		0.940	1.084	1.317	1.423	1.465	1.467	1.533	1.509	1.540
0.669	0.848	0.943	1.095	1.313	1.423	1.465	1.471	1.530	1.509	1.540
0.646	0.852	0.945	1.108	1.319	1.421	1.465	1.476	1.525	1.505	1.540
0.623	0.858	0.962	1.115	1.319	1.419	1.465	1.471	1.526	1.505	1.539
0.600	0.861	0.970	1.119	1.323	1.417	1.465	1.469	1.523	1.505	1.539
0.576	0.867	0.976	1.123	1.329	1.413	1.465	1.469	1.523	1.498	1.535
0.553	0.877	0.976	1.128	1.327	1.411	1.464	1.458	1.523	1.496	1.535
0.530	0.883	0.978	1.133	1.327	1.411	1.464	1.452	1.523	1.496	1.537
0.507	0.886	0.981	1.136	1.329	1.409	1.462	1.452	1.523	1.485	1.533
0.484	0.892	0.984	1.138	1.329	1.407	1.462	1.452	1.523	1.489	1.530
0.461	0.901	0.992	1.143	1.331	1.407	1.462	1.451	1.519	1.489	1.530
0.438	0.913	1.003	1.149	1.331	1.404	1.460	1.447	1.514	1.489	1.528
0.414	0.916	1.015	1.156	1.333	1.404	1.458	1.440	1.510	1.487	1.519
0.391	0.922	1.027	1.158	1.329	1.402	1.451	1.434	1.494	1.473	1.507
0.368	0.925	1.030	1.161	1.337	1.400	1.447	1.434	1.493	1.462	1.498
0.345	0.931	1.037	1.163	1.341	1.396	1.445	1.424	1.485	1.451	1.485
0.322	0.940	1.034	1.175	1.339	1.396	1.438	1.419	1.476	1.441	1.473
0.299	0.948	1.047	1.182	1.353	1.388	1.432	1.402	1.462	1.436	1.456
0.275	0.950	1.051	1.188	1.367	1.380	1.426	1.384	1.444	1.424	1.447
0.252	0.965	1.056	1.194	1.377	1.375	1.423	1.371	1.430	1.413	1.430
0.229	0.978	1.065	1.200	1.380	1.371	1.406	1.357	1.417	1.394	1.406
0.206	0.984	1.073	1.208	1.373	1.369	1.394	1.345	1.402	1.371	1.390
0.183	0.978	1.080	1.217	1.365	1.361	1.375	1.331	1.380	1.355	1.363
0.160	0.970	1.082	1.228	1.341	1.349	1.357	1.319	1.351	1.333	1.337
0.137	0.976	1.084	1.233	1.315	1.339	1.337	1.281	1.319	1.300	1.296
0.113	0.984	1.090	1.241	1.309	1.319	1.335	1.249	1.279	1.269	1.265
0.090	0.994	1.095	1.241	1.292	1.300	1.290	1.194	1.217	1.230	1.212
0.067	1.003	1.110	1.233	1.271	1.257	1.253	1.158	1.152	1.190	1.161
0.044	1.012	1.123	1.223	1.245	1.185	1.182	1.045	1.056	1.115	1.075
0.021	1.019	1.130	1.202	1.147	1.075	1.034	0.945	0.956	0.989	0.913
0.014										0.787
-0.002	1.019	1.133	1.170	1.501	0.861	0.779	0.852		0.567	
-0.025	1.009	1.098	1.143	0.864	0.508					
-0.049	0.996	1.073	1.012	0.672	0.284					
-0.072	0.976	1.009	0.959	0.534	0.					
-0.095	0.919	0.940	0.766	0.457						
-0.118	0.861	0.848	0.638	0.352						
-0.141	0.772	0.743	0.558	0.264						
-0.164	0.704	0.638	0.475	0.231						
-0.188	0.608	0.544	0.352	0.164						
-0.211	0.518	0.475	0.254	0.						
-0.234	0.440	0.422	0.180							
-0.257	0.367	0.312	0.127							
-0.280	0.319	0.243								
-0.303	0.254	0.164								
-0.326	0.231	0.								
-0.349	0.231									
-0.373	0.194									
-0.396	0.164									
-0.419	0.									
-0.442	0.									

TABLE A-5. (cont.)
Run 45

z \ r	0.45	0.50	0.60	0.80	1.0	1.50	2.0	3.0	5.0
0.880	0.686	0.651	0.717	0.754	0.848	0.882	0.883	0.904	0.902
0.857	0.686	0.651	0.717	0.761	0.841	0.888	0.883	0.904	0.902
0.833	0.683	0.651	0.713	0.763	0.839	0.888	0.887	0.904	0.898
0.810	0.683	0.651	0.711	0.781	0.844	0.894	0.890	0.904	0.898
0.787	0.689	0.651	0.715	0.782	0.836	0.894	0.895	0.906	0.898
0.764	0.689	0.653	0.719	0.784	0.838	0.894	0.897	0.907	0.898
0.741	0.695	0.660	0.719	0.789	0.838	0.901	0.898	0.906	0.898
0.718	0.704	0.662	0.717	0.800	0.838	0.903	0.903	0.906	0.898
0.695	0.714	0.660	0.719	0.802	0.843	0.908	0.906	0.906	0.898
0.671	0.725	0.664	0.721	0.802	0.844	0.908	0.907	0.906	0.898
0.648	0.731	0.664	0.725	0.810	0.850	0.910	0.912	0.906	0.898
0.625	0.735	0.668	0.723	0.810	0.850	0.915	0.903	0.906	0.898
0.602	0.737	0.676	0.733	0.817	0.850	0.912	0.904	0.904	0.898
0.579	0.737	0.682	0.734	0.817	0.850	0.912	0.903	0.904	0.895
0.556	0.732	0.686	0.740	0.817	0.845	0.907	0.904	0.904	0.895
0.532	0.737	0.692	0.743	0.817	0.845	0.907	0.902	0.904	0.892
0.509	0.740	0.688	0.747	0.817	0.845	0.908	0.902	0.903	0.888
0.486	0.740	0.688	0.747	0.822	0.845	0.904	0.893	0.903	0.886
0.463	0.740	0.688	0.748	0.819	0.845	0.901	0.887	0.898	0.886
0.440	0.738	0.692	0.748	0.819	0.845	0.895	0.884	0.896	0.886
0.417	0.733	0.692	0.748	0.819	0.845	0.892	0.874	0.891	0.886
0.394	0.733	0.692	0.748	0.819	0.842	0.884	0.866	0.879	0.879
0.370	0.746	0.692	0.748	0.819	0.840	0.874	0.860	0.868	0.879
0.347	0.746	0.697	0.752	0.816	0.832	0.867	0.848	0.864	0.876
0.324	0.749	0.697	0.754	0.812	0.822	0.864	0.836	0.858	0.875
0.301	0.750	0.701	0.748	0.812	0.822	0.860	0.829	0.858	0.863
0.278	0.760	0.701	0.748	0.809	0.819	0.852	0.816	0.852	0.850
0.255	0.756	0.708	0.748	0.804	0.815	0.844	0.800	0.841	0.836
0.231	0.756	0.710	0.748	0.800	0.815	0.839	0.793	0.820	0.822
0.208	0.750	0.719	0.748	0.796	0.815	0.824	0.790	0.805	0.800
0.185	0.745	0.720	0.748	0.793	0.815	0.800	0.783	0.783	0.780
0.162	0.744	0.725	0.750	0.788	0.812	0.775	0.772	0.775	0.765
0.139	0.738	0.728	0.752	0.776	0.812	0.760	0.747	0.762	0.741
0.116	0.738	0.730	0.748	0.761	0.803	0.746	0.716	0.749	0.735
0.092	0.737	0.726	0.740	0.750	0.767	0.729	0.696	0.735	0.671
0.069	0.737	0.716	0.735	0.754	0.749	0.698	0.665	0.710	0.688
0.046	0.733	0.707	0.735	0.765	0.716	0.656	0.638	0.684	0.656
0.023	0.726	0.695	0.735	0.731	0.518	0.601	0.612	0.652	0.614
0.	0.713	0.682	0.720	0.618	0.424	0.565	0.595	0.616	0.586
-0.023	0.688	0.674	0.684	0.520	0.274	0.553	0.593	0.587	0.574
-0.030									0.567
-0.039							0.600		
-0.046	0.676	0.664	0.637	0.440	0.179			0.570	
-0.056								0.567	
-0.069	0.650	0.635	0.582	0.344	0.149				
-0.092	0.593	0.598	0.510	0.298	0.171				
-0.116	0.535	0.538	0.460	0.264	0.171				
-0.139	0.489	0.480	0.385	0.237	0.1798				
-0.162	0.449	0.428	0.328	0.243					
-0.185	0.405	0.367	0.284						
-0.208	0.367	0.328	0.237						
-0.231	0.332	0.247	0.179						
-0.255	0.274	0.205	0.1637						
-0.278	0.212	0.1637							
-0.301	0.1798	0.1467							
-0.324	0.1637								

TABLE A-5. (cont.)
Run 46

z \ r	0.45	0.50	0.6	0.8	1.0	1.5	2.0	3.0	5.0
0.738	0.463								
0.727	0.455	0.512	0.604	0.691	0.765	0.788	0.817	0.803	0.801
0.704	0.449	0.518	0.607	0.689	0.766	0.795	0.817	0.803	0.800
0.681	0.449	0.518	0.616	0.687	0.773	0.795	0.817	0.805	0.800
0.657	0.452	0.522	0.620	0.687	0.778	0.793	0.807	0.802	0.895
0.634	0.457	0.524	0.624	0.690	0.788	0.787	0.802	0.798	0.895
0.611	0.460	0.524	0.624	0.695	0.788	0.774	0.802	0.786	0.800
0.588	0.464	0.524	0.624	0.695	0.775	0.779	0.795	0.774	0.895
0.565	0.464	0.524	0.622	0.693	0.771	0.776	0.800	0.763	0.790
0.542	0.464	0.524	0.620	0.693	0.771	0.776	0.819	0.761	0.776
0.519	0.464	0.522	0.629	0.693	0.771	0.762	0.806	0.761	0.773
0.495	0.464	0.518	0.629	0.693	0.771	0.758	0.798	0.766	0.768
0.472	0.464	0.516	0.626	0.688	0.771	0.760	0.776	0.766	0.770
0.449	0.464	0.523	0.624	0.692	0.751	0.756	0.772	0.766	0.762
0.426	0.464	0.523	0.624	0.698	0.746	0.750	0.772	0.761	0.750
0.403	0.472	0.523	0.624	0.698	0.747	0.742	0.771	0.749	0.751
0.380	0.481	0.538	0.629	0.690	0.748	0.751	0.769	0.730	0.751
0.357	0.481	0.541	0.613	0.688	0.739	0.752	0.767	0.739	0.756
0.333	0.481	0.558	0.618	0.682	0.749	0.739	0.767	0.743	0.754
0.310	0.488	0.567	0.618	0.693	0.755	0.729	0.760	0.743	0.743
0.287	0.491	0.567	0.615	0.690	0.747	0.723	0.751	0.733	0.743
0.264	0.495	0.569	0.618	0.680	0.756	0.717	0.745	0.726	0.736
0.241	0.497	0.572	0.628	0.684	0.744	0.713	0.741	0.723	0.726
0.218	0.497	0.574	0.625	0.690	0.719	0.708	0.724	0.711	0.717
0.195	0.502	0.572	0.627	0.684	0.698	0.704	0.724	0.676	0.690
0.171	0.507	0.569	0.631	0.674	0.695	0.708	0.711	0.666	0.680
0.148	0.533	0.574	0.631	0.664	0.693	0.668	0.692	0.658	0.676
0.125	0.531	0.585	0.638	0.661	0.653	0.653	0.686	0.653	0.666
0.102	0.527	0.593	0.647	0.643	0.700	0.664	0.654	0.645	0.646
0.079	0.527	0.593	0.647	0.640	0.647	0.668	0.636	0.627	0.613
0.056	0.527	0.602	0.643	0.640	0.652	0.638	0.632	0.583	0.574
0.032	0.527	0.613	0.638	0.640	0.617	0.613	0.507	0.539	0.536
0.009	0.527	0.620	0.636	0.626	0.596	0.556	0.505	0.428	0.491
-0.014	0.525	0.627	0.629	0.587	0.546	0.458	0.463	0.1798	0.487
-0.025						0.427			
-0.037	0.531	0.628	0.608	0.528	0.427				
-0.060	0.544	0.621	0.575	0.433	0.224				
-0.083	0.550	0.606	0.533	0.340	0.180				
-0.106	0.546	0.565	0.449	0.259					
-0.130	0.534	0.530	0.359	0.226					
-0.153	0.502	0.483	0.336	0.179					
-0.176	0.460	0.443	0.294	0.1637					
-0.199	0.408	0.388	0.219						
-0.222	0.359	0.304	0.187						
-0.245	0.288	0.310	0.127						
-0.268	0.225	0.287							
-0.291	0.172	0.254							
-0.315	0.1637	0.254							
-0.338	0.127								

TABLE A-5. (cont.)
Run 47

z \ r	0.45	0.5	0.6	0.7	0.8	1.0	1.2	1.5	2.0	3.0	5.0
0.350	0.428	0.528	0.691	0.735	0.786	0.848	0.825	0.842	0.817	0.842	0.800
0.327	0.434	0.534	0.691	0.736	0.792	0.850	0.830	0.842	0.828	0.860	0.796
0.303	0.454	0.542	0.691	0.743	0.797	0.850	0.831	0.842	0.833	0.858	0.796
0.280	0.463	0.545	0.691	0.745	0.804	0.836	0.836	0.838	0.833	0.857	0.798
0.257	0.463	0.547	0.691	0.747	0.806	0.828	0.831	0.830	0.826	0.855	0.798
0.234	0.472	0.546	0.691	0.735	0.803	0.812	0.822	0.824	0.811	0.845	0.802
0.211	0.475	0.535	0.691	0.723	0.793	0.802	0.810	0.815	0.795	0.847	0.802
0.188	0.481	0.544	0.691	0.717	0.783	0.786	0.804	0.805	0.770	0.847	0.796
0.164	0.489	0.552	0.691	0.719	0.774	0.765	0.784	0.796	0.756	0.828	0.784
0.141	0.492	0.557	0.691	0.715	0.763	0.754	0.774	0.775	0.750	0.820	0.788
0.118	0.507	0.559	0.691	0.712	0.754	0.744	0.754	0.757	0.733	0.807	0.742
0.095	0.518	0.573	0.674	0.672	0.738	0.724	0.735	0.738	0.724	0.791	0.715
0.072	0.523	0.563	0.646	0.616	0.693	0.690	0.713	0.698	0.688	0.770	0.682
0.049	0.507	0.538	0.616	0.533	0.553	0.620	0.670	0.631	0.648	0.746	0.660
0.025	0.484	0.485	0.571	0.471	0.480	0.470	0.581	0.537	0.578	0.682	0.641
0.002	0.463	0.421	0.508	0.404	0.374	0.266	0.295	0.254	0.452	0.587	0.635
-0.009							0.				
-0.0208										0.1637	
-0.021	0.412	0.333	0.527	0.347	0.269	0.					
-0.044	0.344	0.243	0.360	0.316	0.194						
-0.067	0.248	0.167	0.284	0.247	0.1637						
-0.090	0.137	0.	0.264	0.231							
-0.113	0.		0.264								

Run 48

z \ r	0.45	0.50	0.60	0.80	1.0	1.2	1.5	2.0	3.0	5.0
0.400	0.643	0.728	0.867							
0.377	0.643	0.728	0.867	1.005	1.042	1.091	1.093	1.011	1.097	1.066
0.354	0.643	0.728	0.867	1.005	1.042	1.086	1.092	1.011	1.092	1.066
0.331	0.638	0.728	0.872	1.005	1.042	1.083	1.086	1.011	1.088	1.066
0.308	0.638	0.728	0.877	1.005	1.042	1.077	1.084	1.006	1.081	1.064
0.285	0.638	0.728	0.878	1.005	1.035	1.055	1.082	1.005	1.076	1.059
0.262	0.643	0.733	0.877	1.005	1.031	1.055	1.072	1.005	1.068	1.055
0.238	0.655	0.733	0.878	1.005	1.021	1.043	1.066	0.992	1.058	1.051
0.215	0.663	0.733	0.878	1.005	1.014	1.033	1.058	0.979	1.050	1.047
0.192	0.670	0.752	0.878	1.005	1.009	1.023	1.045	0.958	1.032	1.030
0.169	0.676	0.763	0.878	1.005	0.995	1.013	1.024	0.947	1.021	1.020
0.146	0.688	0.772	0.878	1.003	0.980	1.003	1.005	0.926	1.001	1.003
0.123	0.705	0.777	0.878	0.999	0.962	0.987	0.978	0.895	0.986	0.986
0.100	0.721	0.788	0.878	0.985	0.946	0.970	0.947	0.881	0.966	0.956
0.076	0.726	0.788	0.875	0.974	0.920	0.950	0.905	0.847	0.939	0.920
0.053	0.736	0.795	0.864	0.947	0.882	0.913	0.852	0.808	0.909	0.878
0.030	0.743	0.795	0.850	0.898	0.844	0.856	0.783	0.757	0.867	0.822
0.007	0.747	0.799	0.825	0.812	0.768	0.791	0.682	0.693	0.801	0.756
-0.016	0.747	0.793	0.784	0.701	0.607	0.586	0.586	0.645	0.616	0.726
-0.028									0.631	0.715
-0.030								0.638		
-0.039	0.730	0.762	0.697	0.563	0.329					
-0.063	0.696	0.718	0.632	0.435	0.					
-0.086	0.637	0.658	0.535	0.299						
-0.109	0.577	0.575	0.416	0.219						
-0.132	0.518	0.482	0.320	0.1637						
-0.155	0.466	0.401	0.116							
-0.178	0.376	0.321	0.							
-0.201	0.343	0.242								
-0.204	0.280	0.127								
-0.248	0.205	0.								
-0.271	0.097	0.								
-0.294	0.									

TABLE A-5. (cont.)
Run 49

z \ r	0.45	0.50	0.60	0.80	1.0	1.5	2.0	3.0	5.0
0.301	0.964	1.120	1.120	1.481	1.586	1.660	1.643	1.651	1.680
0.278	0.982	1.130	1.120	1.481	1.586	1.649	1.638	1.643	1.678
0.254	0.996	1.137	1.118	1.480	1.583	1.633	1.637	1.636	1.672
0.231	1.012	1.150	1.118	1.478	1.573	1.619	1.620	1.622	1.665
0.208	1.026	1.165	1.119	1.473	1.559	1.605	1.601	1.610	1.650
0.185	1.045	1.178	1.122	1.465	1.549	1.592	1.578	1.590	1.635
0.162	1.055	1.192	1.128	1.460	1.526	1.571	1.547	1.576	1.620
0.139	1.067	1.200	1.128	1.461	1.498	1.554	1.522	1.548	1.598
0.116	1.082	1.208	1.136	1.452	1.476	1.528	1.487	1.511	1.578
0.092	1.095	1.212	1.142	1.440	1.462	1.495	1.466	1.475	1.542
0.069	1.113	1.209	1.162	1.411	1.412	1.461	1.415	1.440	1.499
0.046	1.124	1.205	1.164	1.372	1.379	1.413	1.378	1.379	1.432
0.023	1.131	1.196	1.165	1.311	1.333	1.365	1.332	1.333	1.363
0.	1.136	1.182	1.168	1.244	1.263	1.303	1.274	1.262	1.302
-0.023	1.135	1.158	1.162	1.147	1.070	1.150	1.179	1.170	1.240
-0.046	1.125	1.117	1.127	1.001	0.746	1.045	1.032	1.082	1.220
-0.069	1.098	1.061	1.062	0.834	0.511	1.006	0.927	1.037	1.214
-0.085						1.006		1.037	
-0.092	1.042	0.984	0.990	0.662	0.293		0.886		
-0.116	0.945	0.884	0.898	0.542	0.				
-0.139	0.857	0.775	0.775	0.424					
-0.162	0.738	0.674	0.688	0.333					
-0.185	0.652	0.572	0.605	0.312					
-0.208	0.577	0.478	0.503						
-0.231	0.500	0.398	0.400						
-0.254	0.443	0.324	0.363						
-0.278	0.384	0.236	0.307						
-0.301	0.327	0.189	0.264						
-0.324	0.283	0.174							
-0.347	0.224	0.1798							
-0.370	0.219								
-0.393	0.1637								
-0.417	0.1637								
-0.440	0.1637								

TABLE A-5. (cont.)
Run 50

z \ r	0.45	0.50	0.60	0.80	1.0	1.5	2.0	3.0
0.882	0.534							
0.870	0.536	0.546	0.590	0.678	0.720	0.771	0.774	
0.847	0.546	0.558	0.593	0.682	0.720	0.771	0.774	
0.824	0.558	0.562	0.604	0.688	0.720	0.775	0.774	
0.801	0.570	0.575	0.608	0.688	0.724	0.775	0.774	
0.777	0.582	0.579	0.620	0.688	0.724	0.775	0.775	1.017
0.755	0.586	0.579	0.624	0.692	0.728	0.775	0.777	1.017
0.732	0.586	0.579	0.624	0.693	0.728	0.775	0.777	1.017
0.708	0.598	0.595	0.624	0.693	0.728	0.778	0.777	0.867
0.685	0.604	0.595	0.624	0.695	0.733	0.778	0.777	0.861
0.662	0.604	0.595	0.624	0.697	0.733	0.781	0.781	0.861
0.639	0.608	0.595	0.640	0.697	0.733	0.781	0.783	0.855
0.616	0.604	0.599	0.640	0.697	0.733	0.787	0.783	0.845
0.593	0.608	0.599	0.640	0.701	0.733	0.787	0.783	0.845
0.569	0.608	0.599	0.640	0.701	0.733	0.787	0.775	0.842
0.546	0.613	0.599	0.643	0.707	0.733	0.783	0.775	0.842
0.523	0.613	0.599	0.643	0.711	0.733	0.783	0.772	0.842
0.500	0.613	0.599	0.641	0.711	0.720	0.778	0.772	0.845
0.477	0.613	0.602	0.629	0.707	0.711	0.773	0.772	0.836
0.454	0.604	0.598	0.625	0.698	0.705	0.756	0.772	0.825
0.431	0.602	0.594	0.625	0.698	0.704	0.746	0.769	0.825
0.407	0.591	0.594	0.625	0.698	0.704	0.743	0.756	0.820
0.384	0.588	0.592	0.629	0.698	0.702	0.743	0.756	0.820
0.361	0.587	0.586	0.630	0.688	0.702	0.743	0.747	0.817
0.338	0.587	0.586	0.630	0.676	0.700	0.741	0.738	0.815
0.315	0.587	0.592	0.618	0.676	0.686	0.741	0.732	0.803
0.292	0.587	0.588	0.602	0.672	0.680	0.734	0.725	0.793
0.269	0.587	0.586	0.602	0.666	0.680	0.730	0.720	0.783
0.245	0.577	0.586	0.602	0.664	0.678	0.720	0.713	0.770
0.222	0.579	0.586	0.602	0.653	0.676	0.713	0.708	0.760
0.199	0.579	0.586	0.592	0.650	0.668	0.701	0.701	0.755
0.176	0.579	0.584	0.586	0.650	0.662	0.692	0.697	0.752
0.153	0.581	0.579	0.581	0.636	0.662	0.680	0.686	0.762
0.130	0.577	0.567	0.579	0.628	0.622	0.670	0.678	0.733
0.106	0.569	0.567	0.574	0.622	0.641	0.668	0.671	0.721
0.083	0.569	0.563	0.574	0.613	0.628	0.647	0.653	0.710
0.060	0.569	0.557	0.572	0.610	0.620	0.635	0.627	0.696
0.037	0.567	0.544	0.563	0.598	0.594	0.607	0.588	0.680
0.014	0.563	0.539	0.550	0.572	0.541	0.570	0.555	0.650
-0.009	0.534	0.518	0.531	0.518	0.450	0.510	0.510	0.596
-0.015							0.592	
-0.032	0.542	0.523	0.474	0.573	0.328	0.422	0.434	
-0.055	0.538	0.508	0.397	0.185	0.328	0.402	0.402	
-0.079	0.493	0.461	0.313	0.				
-0.101	0.466	0.385	0.235	0.				
-0.125	0.360	0.284	0.103					
-0.148	0.278	0.082	0.063					
-0.171	0.231	0.	0.					
-0.194	0.213							
-0.218	0.222							
-0.241	0.195							
-0.264	0.179							
-0.287	0.164							

TABLE A-5. (cont.)
Run 51

z \ r	0.45	0.50	0.60	0.8	1.0	1.5	2.0	3.0	5.0
0.812							0.893	0.895	0.917
0.801	0.523		0.639	0.774	0.841	0.875			
0.789	0.523	0.575	0.639	0.774	0.841	0.875	0.892	0.895	0.919
0.766	0.507	0.580	0.639	0.774	0.841	0.875	0.892	0.893	0.925
0.743	0.510	0.585	0.639	0.770	0.841	0.875	0.889	0.898	0.924
0.720	0.518	0.585	0.639	0.768	0.841	0.875	0.888	0.898	0.924
0.697	0.518	0.587	0.639	0.768	0.841	0.875	0.888	0.898	0.924
0.674	0.518	0.587	0.639	0.766	0.341	0.875	0.888	0.896	0.925
0.651	0.518	0.587	0.639	0.766	0.841	0.875	0.888	0.904	0.926
0.627	0.518	0.587	0.639	0.766	0.838	0.875	0.885	0.902	0.926
0.604	0.518	0.587	0.639	0.766	0.838	0.868	0.885	0.899	0.926
0.581	0.518	0.581	0.639	0.766	0.838	0.868	0.883	0.895	0.925
0.558	0.518	0.581	0.639	0.761	0.838	0.868	0.883	0.890	0.921
0.535	0.518	0.581	0.639	0.761	0.838	0.868	0.883	0.890	0.915
0.512	0.508	0.581	0.639	0.758	0.838	0.862	0.873	0.890	0.913
0.488	0.508	0.581	0.635	0.758	0.835	0.857	0.859	0.890	0.903
0.465	0.508	0.581	0.635	0.758	0.835	0.851	0.859	0.880	0.895
0.442	0.508	0.581	0.635	0.758	0.827	0.845	0.859	0.872	0.895
0.419	0.508	0.581	0.627	0.758	0.817	0.842	0.855	0.863	0.890
0.396	0.508	0.581	0.620	0.758	0.806	0.837	0.852	0.853	0.883
0.373	0.508	0.581	0.616	0.754	0.800	0.836	0.845	0.852	0.881
0.350	0.510	0.581	0.613	0.754	0.796	0.827	0.836	0.830	0.874
0.326	0.510	0.581	0.613	0.754	0.794	0.819	0.822	0.819	0.857
0.303	0.510	0.580	0.613	0.752	0.790	0.812	0.819	0.811	0.850
0.280	0.513	0.580	0.613	0.740	0.783	0.798	0.806	0.802	0.841
0.257	0.513	0.580	0.602	0.733	0.778	0.785	0.795	0.784	0.820
0.234	0.513	0.574	0.602	0.730	0.774	0.774	0.781	0.772	0.795
0.211	0.508	0.574	0.602	0.723	0.764	0.763	0.768	0.768	0.774
0.188	0.500	0.567	0.596	0.715	0.761	0.762	0.756	0.754	0.751
0.164	0.503	0.560	0.582	0.704	0.756	0.741	0.740	0.745	0.733
0.141	0.508	0.556	0.567	0.686	0.745	0.723	0.720	0.733	0.724
0.118	0.513	0.556	0.562	0.674	0.733	0.705	0.698	0.721	0.702
0.095	0.513	0.556	0.560	0.662	0.710	0.680	0.670	0.707	0.672
0.072	0.513	0.556	0.548	0.650	0.686	0.645	0.636	0.682	0.637
0.049	0.513	0.553	0.544	0.631	0.647	0.606	0.578	0.650	0.591
0.025	0.503	0.541	0.536	0.609	0.575	0.544	0.543	0.586	0.526
0.002	0.503	0.538	0.527	0.544	0.463	0.572	0.480	0.448	0.467
-0.011									0.452
-0.021	0.503	0.536	0.499	0.424	0.389		0.422	0.381	
-0.044	0.491	0.518	0.498	0.219					
-0.067	0.467	0.478	0.340	0.					
-0.090	0.412	0.412	0.198						
-0.113	0.340	0.284	0.103						
-0.136	0.193		0.127						
-0.160	0.		0.284						

TABLE A-5. (cont.)
Run 52

r / z	0.45	0.5	0.5	0.8	1.0	1.2	1.50	2.0	3.0	5.0
0.789										0.707
0.766										0.713
0.743										0.715
0.720	0.461	0.462	0.538	0.613	0.641	0.662	0.674	0.684	0.679	0.715
0.697	0.461	0.470	0.533	0.608	0.641	0.668	0.674	0.682	0.683	0.715
0.674	0.449	0.476	0.533	0.624	0.641	0.668	0.670	0.680	0.686	0.715
0.651	0.443	0.483	0.526	0.624	0.641	0.670	0.668	0.676	0.682	0.718
0.627	0.424	0.483	0.526	0.608	0.641	0.670	0.666	0.676	0.678	0.718
0.604	0.413	0.483	0.526	0.608	0.641	0.660	0.662	0.666	0.672	0.718
0.581	0.413	0.483	0.523	0.604	0.628	0.654	0.657	0.662	0.670	0.718
0.558	0.413	0.481	0.518	0.598	0.625	0.650	0.655	0.662	0.666	0.713
0.535	0.413	0.480	0.518	0.596	0.621	0.647	0.655	0.662	0.660	0.705
0.512	0.403	0.469	0.518	0.596	0.621	0.641	0.651	0.662	0.652	0.696
0.488	0.403	0.478	0.518	0.589	0.619	0.639	0.645	0.658	0.647	0.692
0.465	0.403	0.475	0.518	0.584	0.619	0.639	0.642	0.650	0.643	0.692
0.442	0.403	0.475	0.518	0.581	0.619	0.628	0.636	0.635	0.631	0.690
0.419	0.403	0.472	0.518	0.565	0.619	0.620	0.635	0.629	0.618	0.688
0.396	0.403	0.469	0.518	0.565	0.619	0.615	0.625	0.626	0.604	0.678
0.373	0.403	0.458	0.510	0.555	0.615	0.608	0.620	0.624	0.596	0.666
0.350	0.400	0.448	0.510	0.535	0.597	0.598	0.608	0.617	0.574	0.652
0.326	0.400	0.442	0.507	0.521	0.590	0.588	0.602	0.600	0.561	0.637
0.303	0.400	0.437	0.507	0.515	0.683	0.586	0.596	0.584	0.541	0.610
0.280	0.400	0.437	0.497	0.500	0.683	0.584	0.583	0.569	0.538	0.593
0.257	0.385	0.430	0.497	0.507	0.683	0.581	0.574	0.556	0.538	0.579
0.234	0.378	0.420	0.497	0.526	0.680	0.574	0.561	0.550	0.538	0.565
0.211	0.378	0.424	0.497	0.533	0.670	0.570	0.548	0.545	0.533	0.548
0.188	0.378	0.427	0.497	0.510	0.665	0.553	0.534	0.538	0.526	0.529
0.164	0.378	0.418	0.497	0.507	0.549	0.539	0.518	0.526	0.513	0.507
0.141	0.378	0.408	0.482	0.507	0.528	0.520	0.513	0.513	0.495	0.495
0.118	0.378	0.408	0.475	0.492	0.513	0.505	0.495	0.490	0.484	0.481
0.095	0.378	0.405	0.467	0.478	0.475	0.497	0.475	0.478	0.463	0.466
0.072	0.378	0.405	0.461	0.478	0.443	0.466	0.452	0.457	0.433	0.452
0.049	0.378	0.385	0.434	0.438	0.412	0.446	0.400	0.397	0.397	0.297
0.032								0.332		
0.030							0.363			
0.025	0.362	0.381	0.405	0.412	0.370	0.424			0.385	0.
0.014									0.389	
0.005						0.402				
0.002	0.350	0.367	0.360	0.323	0.351					
-0.021	0.347	0.350	0.318							
-0.044	0.320	0.327	0.347							
-0.067	0.312	0.274	0.200							
-0.090	0.245	0.259	0.194							
-0.113	0.035	0.222	0.1798							
-0.137	0.254	0.137								

TABLE A-5. (Cont.)
Run 53

z \ r	0.45	0.50	0.60	0.80	1.0	1.2	1.5	2.0	3.0	5.0
0.776	0.985	1.060	1.275	1.479	1.572	1.623	1.654	1.677	1.710	1.701
0.753	0.976	1.062	1.275	1.479	1.571	1.620	1.654	1.670	1.710	1.702
0.730	0.980	1.069	1.276	1.479	1.571	1.620	1.654	1.670	1.710	1.705
0.706	0.976	1.069	1.276	1.480	1.569	1.620	1.654	1.668	1.710	1.708
0.683	0.996	1.069	1.280	1.480	1.570	1.623	1.654	1.667	1.710	1.708
0.660	1.005	1.071	1.282	1.480	1.570	1.625	1.654	1.667	1.710	1.708
0.637	1.012	1.081	1.282	1.480	1.577	1.633	1.654	1.661	1.710	1.708
0.614	1.012	1.081	1.283	1.480	1.577	1.623	1.654	1.659	1.710	1.711
0.591	1.012	1.081	1.283	1.474	1.574	1.615	1.649	1.652	1.710	1.711
0.568	1.019	1.089	1.287	1.468	1.572	1.608	1.642	1.648	1.710	1.704
0.544	1.019	1.089	1.288	1.468	1.565	1.605	1.632	1.643	1.710	1.700
0.521	1.019	1.090	1.288	1.468	1.565	1.602	1.632	1.640	1.710	1.695
0.498	1.019	1.098	1.288	1.468	1.558	1.602	1.622	1.637	1.709	1.694
0.475	1.019	1.098	1.283	1.468	1.555	1.599	1.615	1.636	1.702	1.688
0.452	1.019	1.101	1.282	1.468	1.555	1.592	1.615	1.633	1.690	1.685
0.429	1.019	1.101	1.279	1.468	1.551	1.587	1.613	1.624	1.686	1.677
0.406	1.019	1.110	1.279	1.468	1.547	1.587	1.609	1.623	1.677	1.668
0.382	1.022	1.118	1.279	1.468	1.541	1.577	1.609	1.616	1.667	1.656
0.359	1.010	1.129	1.279	1.460	1.534	1.572	1.601	1.606	1.658	1.649
0.336	1.030	1.126	1.280	1.451	1.523	1.565	1.594	1.595	1.647	1.637
0.313	1.030	1.126	1.282	1.440	1.519	1.548	1.569	1.588	1.632	1.623
0.289	1.015	1.126	1.282	1.432	1.503	1.521	1.529	1.577	1.619	1.603
0.266	1.009	1.126	1.280	1.431	1.482	1.507	1.500	1.554	1.604	1.588
0.243	0.997	1.129	1.280	1.427	1.472	1.486	1.495	1.533	1.588	1.577
0.220	0.996	1.129	1.270	1.416	1.452	1.482	1.489	1.510	1.568	1.547
0.197	0.990	1.130	1.241	1.414	1.438	1.476	1.469	1.482	1.542	1.517
0.174	0.989	1.136	1.219	1.401	1.413	1.452	1.449	1.458	1.516	1.485
0.150	0.966	1.136	1.200	1.382	1.399	1.415	1.420	1.424	1.483	1.449
0.127	0.952	1.130	1.191	1.369	1.373	1.383	1.383	1.398	1.452	1.398
0.104	0.966	1.130	1.190	1.328	1.342	1.319	1.326	1.357	1.405	1.348
0.081	0.982	1.139	1.200	1.290	1.305	1.209	1.217	1.299	1.360	1.244
0.058	0.879	1.138	1.220	1.240	1.268	1.072	1.097	1.212	1.289	1.182
0.035	1.039	1.132	1.214	1.190	1.200	1.048	0.983	1.111	1.205	1.150
0.023										
0.012	1.024	1.125	1.159	1.131	1.100	1.027	0.882	0.977		
-0.012		1.080	1.030	1.040						
-0.035		1.059	0.745	0.228						
-0.058		0.980	0.453							
-0.081		0.850	0.232							
-0.104		0.693	0.							
-0.127		0.461								
-0.150		0.327								

TABLE A-5. (cont.)
Run 57

z \ r	0.6	0.8	1.0	1.5	2.0	3.0	5.0
0.920							1.055
0.897	0.904	0.898					
0.874	0.904	0.898	0.918	0.959	1.000	1.032	1.055
0.851	0.904	0.898	0.931	0.961	1.000	1.032	1.055
0.828	0.904	0.898	0.932	0.959	1.000	1.032	1.055
0.805	0.904	0.898	0.934	0.956	1.000	1.032	1.055
0.782	0.904	0.898	0.934	0.961	1.000	1.028	1.056
0.759	0.904	0.895	0.932	0.961	1.005	1.027	1.058
0.736	0.904	0.895	0.934	0.961	1.013	1.033	1.059
0.713	0.904	0.898	0.937	0.965	1.013	1.037	1.062
0.690	0.900	0.895	0.938	0.965	1.013	1.035	1.060
0.667	0.901	0.893	0.940	0.970	1.015	1.040	1.062
0.644	0.901	0.892	0.932	0.967	1.015	1.037	1.055
0.621	0.899	0.890	0.942	0.967	1.014	1.040	1.052
0.598	0.898	0.889	0.942	0.967	1.016	1.039	1.047
0.575	0.890	0.889	0.939	0.961	1.019	1.035	1.044
0.552	0.913	0.877	0.933	0.965	1.021	1.034	1.037
0.529	0.901	0.877	0.922	0.955	1.005	1.032	1.030
0.506	0.895	0.871	0.910	0.956	0.997	1.019	1.015
0.483	0.890	0.869	0.897	0.948	0.990	1.002	1.012
0.460	0.874	0.861	0.883	0.948	0.983	1.006	0.992
0.437	0.864	0.849	0.883	0.942	0.970	0.997	0.992
0.414	0.864	0.830	0.868	0.929	0.961	0.962	0.995
0.391	0.861	0.827	0.864	0.916	0.954	0.963	0.992
0.368	0.854	0.820	0.849	0.907	0.944	0.961	0.984
0.345	0.841	0.789	0.836	0.898	0.939	0.953	0.976
0.322	0.827	0.779	0.819	0.881	0.936	0.940	0.970
0.299	0.820	0.765	0.809	0.867	0.914	0.937	0.962
0.276	0.810	0.742	0.796	0.858	0.915	0.917	0.956
0.253	0.811	0.733	0.784	0.845	0.901	0.910	0.939
0.230	0.782	0.719	0.746	0.831	0.901	0.895	0.922
0.207	0.788	0.706	0.748	0.816	0.884	0.877	0.895
0.194	0.754	0.680	0.743	0.793	0.876	0.858	0.863
0.171	0.741	0.650	0.766	0.774	0.864	0.819	0.823
0.148	0.713	0.626	0.726	0.754	0.835	0.803	0.778
0.125	0.672	0.586	0.672	0.715	0.806	0.769	0.705
0.102	0.666	0.509	0.622	0.656	0.768	0.733	0.618
0.079	0.484	0.434	0.434	0.577	0.695	0.684	0.452
0.056					0.534	0.583	
0.006	0.	0.	0.	0.	0.	0.	0.

TABLE A-5. (cont.)
Run 58

z \ r	0.45	0.50	0.60	0.80	1.00	1.5	2.0	3.00	5.0
0.972			0.606	0.710	0.758	0.832	0.837	0.838	0.841
0.949	0.466	0.542	0.606	0.710	0.756	0.834	0.832	0.832	0.841
0.926	0.463	0.542	0.608	0.710	0.756	0.839	0.828	0.832	0.841
0.903	0.463	0.542	0.608	0.710	0.756	0.839	0.828	0.828	0.841
0.880	0.460	0.542	0.608	0.710	0.756	0.839	0.832	0.830	0.841
0.857	0.460	0.542	0.610	0.710	0.756	0.841	0.836	0.836	0.841
0.833	0.460	0.542	0.610	0.710	0.756	0.841	0.837	0.836	0.844
0.810	0.460	0.539	0.613	0.710	0.756	0.841	0.836	0.837	0.849
0.787	0.460	0.536	0.615	0.710	0.756	0.841	0.838	0.844	0.833
0.764	0.460	0.536	0.615	0.710	0.756	0.841	0.839	0.846	0.825
0.741	0.463	0.536	0.613	0.710	0.756	0.841	0.842	0.859	0.828
0.718	0.469	0.536	0.613	0.718	0.756	0.831	0.846	0.852	0.824
0.695	0.472	0.534	0.616	0.726	0.756	0.825	0.846	0.854	0.823
0.671	0.474	0.534	0.617	0.728	0.756	0.821	0.844	0.854	0.825
0.648	0.477	0.534	0.617	0.728	0.761	0.816	0.844	0.840	0.825
0.625	0.480	0.536	0.617	0.716	0.752	0.821	0.844	0.836	0.825
0.602	0.480	0.536	0.615	0.717	0.755	0.820	0.846	0.833	0.824
0.579	0.477	0.536	0.613	0.705	0.738	0.815	0.850	0.833	0.821
0.556	0.472	0.536	0.611	0.703	0.733	0.816	0.852	0.817	0.815
0.532	0.470	0.536	0.609	0.708	0.728	0.810	0.855	0.813	0.820
0.509	0.462	0.534	0.602	0.705	0.723	0.801	0.853	0.804	0.822
0.486	0.463	0.531	0.596	0.707	0.713	0.796	0.845	0.804	0.820
0.463	0.457	0.526	0.591	0.709	0.703	0.791	0.832	0.804	0.804
0.440	0.457	0.523	0.589	0.709	0.699	0.789	0.823	0.810	0.802
0.417	0.458	0.520	0.580	0.693	0.680	0.791	0.812	0.803	0.800
0.394	0.450	0.520	0.572	0.686	0.676	0.794	0.808	0.800	0.793
0.370	0.448	0.515	0.568	0.676	0.662	0.792	0.803	0.796	0.778
0.347	0.444	0.515	0.560	0.662	0.640	0.786	0.806	0.792	0.752
0.324	0.443	0.510	0.548	0.636	0.630	0.776	0.800	0.785	0.713
0.301	0.440	0.503	0.542	0.624	0.620	0.772	0.792	0.774	0.700
0.278	0.437	0.497	0.528	0.613	0.602	0.758	0.782	0.760	0.686
0.255	0.430	0.486	0.515	0.601	0.596	0.753	0.772	0.754	0.660
0.232	0.425	0.480	0.510	0.597	0.590	0.751	0.762	0.733	0.657
0.208	0.411	0.470	0.490	0.597	0.581	0.742	0.755	0.718	0.655
0.185	0.398	0.454	0.475	0.588	0.573	0.735		0.721	0.655
0.165							0.728		
0.162	0.385	0.448	0.455	0.583	0.573	0.719	0.701	0.712	0.655
0.139	0.363	0.432	0.424	0.578	0.573	0.683	0.681	0.714	0.655
0.116	0.336	0.403	0.381	0.555	0.573	0.632	0.650	0.708	0.599
0.093	0.301	0.358	0.293	0.497	0.494	0.548	0.559	0.632	0.432
0.069	0.262	0.288	0.	0.251	0.	0.348	0.	0.267	0.367
0.046	0.127	0.							

TABLE A-5. (cont.)
Run 59

z \ r	0.45	0.50	0.60	0.80	1.0	1.5	2.00	3.00	5.00
0.800	0.799	0.926	1.001	1.214	1.322	1.399	1.420	1.426	
0.789	0.795	0.925	1.011	1.214	1.321	1.400	1.417	1.426	1.419
0.766	0.793	0.920	1.024	1.214	1.320	1.400	1.417	1.426	1.418
0.743	0.801	0.920	1.022	1.214	1.320	1.399	1.417	1.426	1.417
0.720	0.807	0.922	1.022	1.214	1.320	1.396	1.414	1.425	1.410
0.697	0.810	0.923	1.018	1.214	1.316	1.393	1.414	1.422	1.407
0.674	0.802	0.921	1.012	1.214	1.315	1.392	1.413	1.421	1.400
0.651	0.803	0.926	1.006	1.214	1.315	1.389	1.412	1.419	1.400
0.627	0.805	0.937	1.006	1.214	1.317	1.388	1.406	1.416	1.398
0.604	0.811	0.942	1.020	1.214	1.310	1.384	1.403	1.412	1.398
0.581	0.814	0.940	1.025	1.214	1.308	1.380	1.402	1.405	1.394
0.558	0.825	0.941	1.027	1.214	1.310	1.377	1.400	1.402	1.389
0.535	0.818	0.946	1.032	1.214	1.308	1.373	1.395	1.395	1.382
0.512	0.842	0.958	1.039	1.214	1.305	1.371	1.396	1.392	1.380
0.488	0.846	0.963	1.044	1.215	1.299	1.369	1.389	1.383	1.379
0.465	0.855	0.963	1.052	1.214	1.295	1.366	1.383	1.381	1.378
0.442	0.863	0.964	1.051	1.212	1.296	1.364	1.378	1.379	1.378
0.419	0.866	0.965	1.052	1.207	1.291	1.355	1.374	1.375	1.372
0.396	0.877	0.959	1.052	1.207	1.285	1.346	1.370	1.368	1.363
0.373	0.870	0.965	1.053	1.207	1.276	1.339	1.367	1.370	1.357
0.350	0.867	0.968	1.053	1.199	1.266	1.333	1.361	1.354	1.349
0.326	0.861	0.972	1.053	1.194	1.254	1.324	1.355	1.343	1.339
0.303	0.863	0.964	1.056	1.173	1.242	1.312	1.343	1.329	1.335
0.280	0.863	0.966	1.053	1.150	1.223	1.292	1.330	1.313	1.321
0.257	0.848	0.962	1.049	1.133	1.198	1.270	1.313	1.297	1.305
0.234	0.842	0.956	1.031	1.118	1.170	1.252	1.290	1.276	1.289
0.211	0.823	0.928	1.012	1.091	1.143	1.240	1.258	1.251	1.265
0.188	0.796	0.898	0.970	1.058	1.099	1.215	1.223	1.217	1.242
0.164	0.751	0.835	0.927	1.018	1.046	1.175	1.184	1.177	1.214
0.141	0.754	0.765	0.841	0.960	0.967	1.122	1.140	1.126	1.193
0.118	0.340	0.668	0.713	0.873	0.832	1.031	1.066	1.063	1.160
0.095	0.	0.485	0.433	0.754	0.441	0.831	0.909	1.073	1.099
0.083					0.				
0.072		0.		0.		0.132	0.	0.838	1.007
0.058								0.	
0.049									0.768
0.037									0.

TABLE A-5. (cont.)
Run 60

z \ r	0.45	0.5	0.6	0.8	1.0	1.5	2.0	3.00	5.00
0.685	0.556	0.518	0.607	0.690	0.718	0.744	0.744	0.784	0.754
0.662	0.561	0.531	0.613	0.697	0.726	0.749	0.744	0.784	0.756
0.639	0.546	0.536	0.608	0.697	0.730	0.744	0.751	0.784	0.760
0.616	0.548	0.531	0.604	0.692	0.732	0.744	0.751	0.785	0.775
0.593	0.543	0.526	0.613	0.688	0.733	0.748	0.744	0.770	0.770
0.569	0.538	0.523	0.604	0.686	0.730	0.748	0.752	0.775	0.767
0.546	0.538	0.522	0.608	0.686	0.725	0.748	0.756	0.775	0.763
0.523	0.536	0.520	0.610	0.694	0.725	0.755	0.763	0.770	0.754
0.500	0.527	0.515	0.600	0.694	0.708	0.749	0.762	0.767	0.753
0.477	0.527	0.515	0.597	0.692	0.705	0.736	0.755	0.758	0.747
0.454	0.516	0.520	0.597	0.686	0.703	0.727	0.750	0.743	0.742
0.431	0.505	0.510	0.591	0.672	0.701	0.729	0.741	0.742	0.742
0.407	0.515	0.508	0.592	0.662	0.695	0.727	0.733	0.742	0.738
0.384	0.518	0.515	0.600	0.658	0.695	0.725	0.731	0.742	0.735
0.361	0.518	0.525	0.604	0.654	0.694	0.722	0.723	0.733	0.735
0.338	0.507	0.517	0.596	0.651	0.684	0.720	0.717	0.728	0.721
0.315	0.507	0.510	0.588	0.645	0.678	0.717	0.715	0.725	0.730
0.292	0.513	0.510	0.584	0.651	0.666	0.711	0.718	0.717	0.713
0.269	0.516	0.505	0.598	0.650	0.664	0.706	0.715	0.713	0.711
0.245	0.510	0.491	0.590	0.647	0.662	0.692	0.720	0.702	0.715
0.222	0.513	0.476	0.581	0.637	0.650	0.682	0.723	0.698	0.710
0.199	0.504	0.476	0.577	0.639	0.645	0.653	0.715	0.696	0.704
0.176	0.490	0.487	0.577	0.635	0.637	0.670	0.699	0.792	0.686
0.153	0.474	0.495	0.560	0.627	0.613	0.656	0.686	0.684	0.680
0.130	0.457	0.487	0.548	0.613	0.591	0.639	0.674	0.680	0.672
0.106	0.456	0.470	0.542	0.606	0.565	0.624	0.662	0.651	0.661
0.083	0.452	0.468	0.530	0.591	0.549	0.606	0.641	0.618	0.644
0.060	0.439	0.443	0.510	0.568	0.535	0.596	0.635	0.624	0.619
0.037	0.361	0.431	0.500	0.556	0.523	0.578	0.620	0.626	0.602
0.014	0.284	0.299	0.490	0.515	0.497	0.525	0.606	0.610	0.559
-0.009			0.418	0.421	0.326	0.349	0.559	0.559	0.563
-0.032			0.367	0.287	0.298		0.184	0.474	0.535
-0.049								0.	
-0.056									0.447

Run 61

z \ r	0.45	0.50	0.60	0.80	1.0	1.5	2.0	3.0	5.0
0.403	1.072	1.275	1.442	1.663					
0.380	1.138	1.275	1.443	1.613	1.691	1.808	1.715	1.726	1.749
0.357	1.085	1.271	1.438	1.613	1.683	1.799	1.679	1.718	1.748
0.333	1.087	1.277	1.432	1.597	1.680	1.791	1.679	1.713	1.743
0.310	1.095	1.280	1.425	1.581	1.664	1.779	1.674	1.707	1.733
0.287	1.105	1.279	1.421	1.536	1.650	1.769	1.665	1.704	1.726
0.264	1.107	1.273	1.400	1.542	1.632	1.757	1.651	1.697	1.720
0.241	1.108	1.259	1.379	1.529	1.616	1.750	1.634	1.684	1.714
0.218	1.112	1.248	1.352	1.501	1.595	1.735	1.617	1.663	1.697
0.194	1.105	1.232	1.318	1.466	1.565	1.706	1.581	1.637	1.673
0.171	1.099	1.196	1.275	1.420	1.527	1.676	1.548	1.605	1.633
0.148	1.076	1.152	1.217	1.362	1.492	1.636	1.500	1.578	1.598
0.125	1.002	1.107	1.147	1.289	1.404	1.609	1.450	1.537	1.565
0.102	0.872	1.047	1.041	1.200	1.326	1.567	1.405	1.494	1.528
0.079	0.679	0.901	0.873	1.069	1.204	1.461	1.341	1.446	1.450
0.056	0.298	0.380	0.638	0.852	1.031	1.382	1.253	1.371	1.361
0.032		0.	0.191	0.621	0.726	1.148	1.155	1.356	1.129
0.009				0.389	0.387	0.763	0.976	1.145	1.119
0.002						0.577			
-0.014							0.747	0.934	0.960
-0.019									0.915
-0.032								0.797	

TOTAL A-5. (cont.)
Run 62

z \ r	0.45	0.50	0.6	0.80	1.0	1.5	2.0	3.0	5.00
0.380	1.003	1.146	1.308	1.453	1.517	1.551	1.475	1.470	1.475
0.357	0.998	1.155	1.304	1.442	1.505	1.557	1.479	1.480	1.477
0.333	0.989	1.147	1.291	1.440	1.508	1.559	1.464	1.484	1.472
0.310	0.984	1.132	1.282	1.430	1.495	1.543	1.456	1.486	1.464
0.287	0.982	1.117	1.271	1.402	1.488	1.526	1.439	1.075	1.455
0.264	0.977	1.087	1.236	1.388	1.470	1.517	1.421	1.061	1.431
0.241	0.969	1.069	1.211	1.353	1.449	1.484	1.402	1.440	1.418
0.218	0.948	1.044	1.184	1.321	1.421	1.460	1.473	1.418	1.407
0.194	0.925	1.013	1.145	1.299	1.382	1.421	1.446	1.397	1.391
0.171	0.906	0.975	1.088	1.260	1.331	1.380	1.315	1.370	1.370
0.148	0.884	0.912	1.034	1.225	1.275	1.350			
0.146							1.282	1.336	1.358
0.125	0.835	0.822	0.949	1.145	1.219	1.295	1.232	1.302	1.337
0.102	0.783	0.703	0.852	1.033	1.130	1.223	1.263	1.249	1.302
0.079	0.539	0.553	0.713	0.933	1.025	1.115	1.083	1.199	1.243
0.056	0.116	0.443	0.533	0.813	0.851	0.973	0.981	1.162	1.150
0.049		0.328							
0.032			0.389	0.688	0.633	0.835	0.863	1.020	1.024
0.014				0.527		0.816			
0.009					0.521		0.713	0.845	0.859
-0.014							0.201	0.553	0.645

Run 63

z \ r	0.45	0.50	0.60	0.80	1.0	1.5	2.0	3.0	5.0
0.361	0.569	0.663	0.716	0.807	0.830	0.860	0.830	0.822	0.846
0.338	0.572	0.656	0.722	0.805	0.823	0.861	0.815	0.823	0.846
0.315	0.573	0.657	0.720	0.805	0.814	0.860	0.806	0.825	0.837
0.292	0.567	0.650	0.712	0.805	0.808	0.858	0.799	0.828	0.834
0.269	0.565	0.644	0.699	0.803	0.794	0.864	0.784	0.815	0.831
0.245	0.555	0.637	0.698	0.784	0.790	0.862	0.775	0.813	0.831
0.222	0.548	0.615	0.682	0.763	0.783	0.850	0.770	0.798	0.823
0.199	0.530	0.608	0.661	0.747	0.765	0.834	0.763	0.780	0.813
0.176	0.524	0.603	0.643	0.720	0.755	0.810	0.750	0.759	0.786
0.153	0.496	0.581	0.622	0.696	0.722	0.805	0.736	0.739	0.746
0.130	0.467	0.522	0.526	0.645	0.689	0.774	0.698	0.715	0.724
0.106	0.398	0.407	0.480	0.599	0.664	0.731	0.680	0.686	0.713
0.083	0.207	0.353	0.434	0.561	0.612	0.687	0.646	0.648	0.707
0.060		0.370	0.268	0.468	0.464	0.614	0.614	0.609	0.681
0.044						0.434			
0.037		0.076		0.183			0.578	0.572	0.621
0.014							0.518	0.518	0.518
-0.009							0.243	0.356	0.147
-0.019							0.022		

TABLE A-6. SUMMARY OF VERTICAL FLOW VELOCITY DISTRIBUTIONS*
Run 37-1

r \ z	0.050	-0.100	-0.250	-0.350
0.250		0.898	0.970	
0.255	0.836	0.943	0.970	0.836
0.260	0.833	0.913	0.928	0.880
0.265	0.827	0.870	0.913	
0.270	0.820			0.855
0.275	0.790	0.830	0.830	
0.280	0.800			0.824
0.285	0.803	0.928		
0.295	0.544	0.892	0.733	
0.300	0.769			0.704
0.305	0.762			
0.310	0.672			
0.315	0.688	0.870		
0.320	0.688			0.664
0.325	0.672		0.638	
0.345	0.668	0.824		
0.350				0.558
0.375			0.381	
0.380				0.463
0.395	0.618	0.743		
0.420		0.627		
0.445	0.586	0.660		
0.495	0.319	0.475		
0.545	0.328	0.402		
0.595		0.284		
0.695		0.127		

Run 37-2

r \ z	0.730	0.630	0.530	0.430	0.330	0.230	0.180
0.250	0.127	0.194	0.220	0.352	0.381	0.481	0.548
0.255	0.194	0.207	0.293	0.336	0.434	0.481	0.553
0.260	0.164	0.207	0.293	0.357	0.414	0.475	0.558
0.265	0.104	0.149	0.264	0.343	0.427	0.446	0.523
0.270	0.074	0.	0.207	0.367	0.414	0.487	0.497
0.280	0.		0.127	0.373	0.408	0.457	0.481
0.290			0.	0.110	0.264	0.308	0.367
0.300					0.164	0.262	0.284
0.310					0.110	0.262	0.262
0.320						0.	0.120
0.330						0.164	0.120
0.340							0.

Run 37-3

r \ z	0.650	0.550	0.450	0.350	0.250	0.150	0.050	-0.05	-0.15
0.255	0.127	0.194	0.481	0.502	0.518	0.553	0.553	0.684	0.754
0.260	0.1467	0.194	0.481	0.475	0.497	0.558	0.548	0.664	0.754
0.265	0.127	0.194	0.457	0.446	0.502	0.548	0.553	0.672	0.736
0.270	0.127	0.220	0.452	0.414	0.492	0.544	0.497	0.618	0.719
0.280	0.1037	0.293	0.422	0.395	0.452	0.553	0.492	0.627	0.707
0.290		0.207	0.408	0.408	0.446	0.528	0.446	0.608	0.723
0.300		0.1467	0.408	0.389	0.452	0.534	0.446	0.608	0.733
0.310		0.127	0.389	0.389	0.446	0.523	0.427	0.660	0.719
0.330			0.312	0.359	0.395	0.475	0.389	0.573	0.715
0.350			0.220	0.259	0.343	0.440	0.352	0.528	0.692
0.370				0.1637	0.259	0.352	0.	0.440	0.600
0.390					0.0733	0.264		0.408	0.514

*See Figure VIII-11 for definition sketch

TABLE A-6. (cont.)
Run 38

r \ z	0.306	0.256	0.206	0.156	0.106	0.056	0.006	-0.044	-0.094	-0.144
0.26	0.381	0.475	0.539	0.618	0.696	0.704	0.855	0.948	0.950	0.928
0.265	0.395									
0.27	0.395	0.481	0.534	0.604	0.700	0.707	0.839	0.934	0.945	0.934
0.275	0.422									
0.280	0.389	0.457	0.539	0.586	0.700		0.830	0.931	0.928	0.910
0.290	0.381		0.518		0.688	0.707				
0.30	0.373	0.452		0.578	0.676		0.824	0.925	0.910	0.870
0.31	0.293		0.408		0.660	0.700				
0.32		0.414		0.539			0.810	0.901	0.877	0.836
0.33	0.127		0.352		0.635	0.704				
0.34							0.793	0.901	0.839	0.754
0.35		0.259	0.194	0.395	0.581	0.656				
0.36							0.750	0.861	0.758	0.664
0.37		0.	0.		0.492	0.623				
0.38				0.264			0.707	0.830	0.668	
0.39					0.414	0.539				
0.40				0.			0.647	0.719	0.596	
0.41					0.259	0.457				
0.42							0.553	0.638	0.492	
0.43						0.312				
0.44							0.434	0.604	0.367	
0.45						0.264				
0.46						0.147	0.352	0.508	0.312	
0.47						0.				
0.48							0.147	0.408	0.243	
0.50								0.389		
0.52								0.319		
0.54								0.319		
0.56								0.264		

Run 39

r \ z	0.306	0.256	0.206	0.156	0.106	0.056	0.006	-0.044	-0.094	-0.144
0.26	0.381	0.475	0.539	0.618	0.696	0.704	0.855	0.948	0.950	0.928
0.265	0.395									
0.270	0.395	0.481	0.534	0.604	0.700	0.707	0.839	0.934	0.945	0.934
0.275	0.422									
0.280	0.389	0.457	0.539	0.586	0.700	0.707	0.830	0.931	0.928	0.910
0.290	0.381		0.518		0.688	0.707				
0.30	0.373	0.452		0.578	0.676		0.824	0.925	0.910	0.870
0.31	0.293		0.408		0.660	0.707				
0.32		0.414		0.539			0.810	0.901	0.877	0.836
0.33	0.127		0.352		0.635	0.704				
0.34							0.793	0.901	0.839	0.754
0.35		0.259	0.194	0.395	0.581	0.656				
0.36							0.750	0.861	0.758	0.664
0.37		0.	0.		0.492	0.623				
0.38				0.264			0.707	0.830	0.668	
0.39					0.414	0.539				
0.40				0.			0.647	0.719	0.596	
0.41					0.259	0.457				
0.42							0.553	0.638	0.492	
0.43						0.312				
0.44							0.434	0.604	0.367	
0.46						0.147	0.352	0.508	0.312	
0.47						0.				
0.48							0.147	0.408	0.243	
0.50								0.389		
0.52								0.319		
0.54								0.319		
0.56								0.264		

TABLE A-6. (cont.)
Run 40

r \ z	0.306	0.256	0.206	0.156	0.106	0.056	0.006	-0.044	-0.094	-0.144	-0.194
0.26	0.144	0.359	0.475	0.544	0.688	0.772	0.836	0.987	1.006	1.084	0.981
0.28	0.127	0.343	0.463	0.548	0.652	0.750	0.807	0.948	1.006	1.027	0.978
0.30	0.	0.312	0.452	0.523	0.656	0.747	0.833	0.943	0.970	0.978	0.937
0.32		0.144	0.367	0.502	0.631	0.740	0.824	0.931	0.940	0.892	0.754
0.34			0.264	0.452	0.581	0.736	0.803	0.874	0.861	0.743	
0.36			0.	0.359	0.534	0.700	0.750	0.800	0.736	0.613	
0.38				0.207	0.427	0.672	0.652	0.700	0.613	0.523	
0.40					0.312	0.596	0.581	0.623	0.534	0.446	
0.42						0.508	0.513	0.518	0.481	0.408	
0.44						0.369	0.343	0.422	0.408		
0.46								0.302	0.336		
0.48								0.264	0.312		
0.50									0.		

Run 41

r \ z	0.406	0.356	0.306	0.256	0.206	0.106	0.056
0.26	0.194	0.254	0.312	0.367	0.381	0.528	0.664
0.27	0.1798	0.207	0.264	0.328	0.367	0.513	0.647
0.28		0.207	0.264	0.312	0.373	0.492	0.627
0.30		0.1467	0.231	0.312	0.359	0.502	0.638
0.32			0.1798	0.367	0.352	0.475	0.647
0.34			0.1037	0.1798	0.302	0.456	0.623
0.36				0.	0.144	0.408	0.581
0.38					0.1037	0.373	0.553
0.40						0.254	0.497
0.42						0.194	0.434
0.44						0.	0.427

Run 42

r \ z	0.306	0.256	0.206	0.156	0.106	0.006	-0.094	-0.144
0.26	0.418	0.578	0.715		1.024	1.321	1.493	1.563
0.27	0.418	0.544		0.836	1.030	1.296	1.502	1.546
0.28	0.418	0.544	0.635	0.829	0.990	1.279	1.493	1.528
0.30	0.367	0.531	0.696	0.794	0.949	1.269	1.438	1.438
0.32	0.200	0.478	0.715	0.777	0.935	1.269	1.400	1.341
0.34					0.867	1.204	1.290	1.182
0.35			0.518	0.592				
0.36				0.544	0.742	1.158	1.158	1.037
0.38				0.284	0.544	1.068	1.037	0.883
0.40					0.402	0.970	0.898	0.803
0.42						0.414	0.820	0.769
0.44							0.715	0.676
0.46							0.613	
0.48							0.463	
0.50							0.402	

TABLE A-6. (cont.)
Run 43

r \ z	0.306	0.206	0.106	0.006	-0.094	-0.194	-0.294	-0.344
0.26	0.231	0.359	0.475	0.502	0.578	0.643	0.647	0.578
0.27	0.254	0.381	0.481	0.463	0.553	0.647	0.638	0.608
0.28		0.389	0.481	0.446	0.528	0.635	0.668	0.600
0.30		0.373	0.481	0.463	0.558	0.604	0.581	0.578
0.32		0.381	0.481	0.414	0.544	0.608	0.518	0.492
0.34		0.352	0.446	0.452	0.534	0.544	0.481	0.408
0.36		0.319	0.446	0.434	0.492	0.497	0.402	0.312
0.38		0.264	0.389	0.408	0.481	0.446	0.312	0.231
0.40		0.207	0.373	0.381	0.469	0.402	0.243	0.1637
0.42		0.142	0.336	0.373	0.395	0.367	0.207	
0.44			0.254	0.302	0.352	0.275	0.	
0.46			0.1798	0.231	0.302	0.254		
0.48			0.127	0.194	0.284	0.1637		
0.50				0.	0.1798			
0.52					0.			

Run 44

r \ z	0.806	0.706	0.606	0.506	0.406	0.306	0.206	0.106	0.006	-0.094	-0.194	-0.294	-0.344
0.26	0.207	0.243	0.254	0.284	0.312	0.373	0.446	0.518	0.704	0.723	0.810	0.880	0.883
0.27	0.1637	0.207	0.231	0.284	0.264	0.367	0.446	0.523	0.600	0.715	0.817	0.883	0.886
0.28	0.207	0.231	0.207	0.264	0.284	0.367	0.446	0.523	0.596	0.715	0.814	0.919	0.889
0.30	0.1637	0.194	0.220	0.264	0.264	0.352	0.463	0.534	0.604	0.736	0.793	0.855	0.845
0.32	0.127	0.1637	0.1637	0.207	0.194	0.328	0.446	0.523	0.631	0.711	0.775	0.810	0.719
0.34		0.	0.	0.194		0.264	0.402	0.481	0.604	0.715	0.743	0.807	0.635
0.36				0.		0.127	0.367	0.446	0.600	0.707	0.736	0.736	0.544
0.38							0.264	0.395	0.581	0.707	0.664	0.676	0.463
0.40							0.1798	0.352	0.558	0.680	0.623	0.581	0.389
0.42								0.264	0.558	0.635	0.553	0.518	0.312
0.44								0.1637	0.578	0.596	0.508	0.446	0.254
0.46								0.	0.030	0.523	0.475	0.328	
0.48									0.352	0.475	0.402	0.302	
0.50									0.264	0.414	0.367	0.254	
0.52									0.	0.367	0.293		
0.54										0.293	0.231		
0.56										0.243	0.1798		
0.58										0.1637	0.127		

Run 45

r \ z	0.706	0.606	0.506	0.406	0.306	0.206	0.106	0.006	-0.094	-0.194	-0.294	-0.394
0.26	0.194	0.254	0.254	0.1798	0.284	0.343	0.434	0.539	0.581	0.635	0.596	0.469
0.27	0.194	0.207	0.194	0.254	0.264	0.359	0.422	0.523	0.623	0.638	0.581	0.434
0.28	0.194	0.207	0.220	0.194	0.302	0.359	0.427	0.544	0.604	0.618	0.581	0.440
0.30	0.1467	0.1798	0.194	0.207	0.312	0.352	0.440	0.544	0.638	0.604	0.523	0.367
0.32	0.	0.1798	0.1467	0.254	0.302	0.381	0.452	0.558	0.608	0.558	0.452	0.302
0.34		0.	0.	0.207	0.302	0.373	0.452	0.544	0.604	0.487	0.381	0.231
0.36				0.127	0.284	0.359	0.427	0.548	0.573	0.452	0.336	0.
0.38					0.231	0.352	0.408	0.558	0.553	0.402	0.264	
0.40					0.1637	0.319	0.414	0.539	0.534	0.367	0.243	
0.42					0.127	0.293	0.452	0.513	0.518	0.319	0.1798	
0.44						0.264	0.402	0.518	0.481	0.284		
0.46						0.231	0.373	0.475	0.434	0.231		
0.48						0.207	0.343	0.481	0.414	0.207		
0.50						0.1037	0.319	0.414	0.352	0.1637		
0.52							0.264	0.373	0.319			
0.54							0.254	0.302	0.254			
0.56							0.194	0.243	0.264			
0.58							0.1037	0.194	0.231			
0.60								0.1637	0.1637			

TABLE A-6. (cont.)
Run 46

r \ z	0.706	0.606	0.506	0.406	0.306	0.206	0.106	0.006	-0.098	-0.198	-0.298	-0.398
0.26	0.352			0.343	0.328	0.319	0.402	0.508	0.567	0.613	0.627	0.534
0.27	0.254			0.359	0.343	0.328	0.408	0.492	0.567	0.604	0.627	0.548
0.28	0.254		0.328	0.367	0.336	0.302	0.402	0.487	0.553	0.618	0.623	0.558
0.30	0.254	0.275	0.343	0.367	0.343	0.319	0.402	0.492	0.553	0.600	0.608	0.502
0.32	0.207	0.264	0.319	0.359	0.328	0.328	0.402	0.481	0.548	0.596	0.567	0.502
0.34		0.243	0.284	0.352	0.352	0.319	0.408	0.469	0.548	0.596	0.544	
0.36		0.254	0.381	0.343	0.302	0.293	0.414	0.489	0.544	0.581	0.534	
0.38		0.1637	0.194	0.264	0.264	0.243	0.373	0.463	0.558	0.553	0.469	
0.40		0.	0.	0.1637	0.243	0.231	0.369	0.452	0.548	0.553	0.422	
0.42				0.1037	0.1798	0.1798	0.352	0.434	0.528	0.523	0.389	
0.44					0.127	0.	0.336	0.414	0.518	0.492	0.367	
0.46					0.		0.284	0.312	0.481	0.446	0.319	
0.48							0.207	0.293	0.475	0.440		
0.50							0.1637	0.254	0.398	0.414		
0.52							0.	0.231	0.414	0.367		
0.54								0.1637	0.389	0.328		
0.56									0.367	0.312		
0.58									0.284	0.284		
0.60									0.293	0.243		
0.62									0.231	0.231		
0.64									0.220	0.243		
0.66									0.127	0.207		
0.68										0.207		
0.70										0.1637		
0.72										0.1637		

Run 47

r \ z	0.306	0.206	0.106	0.006	-0.094	-0.194	-0.294	-0.394
0.26	0.1637	0.302	0.381	0.508	0.664	0.754	0.766	0.707
0.27	0.194	0.302	0.389	0.518	0.643	0.733	0.743	0.707
0.28	0.1637	0.312	0.402	0.508	0.672	0.730	0.730	0.700
0.30	0.	0.312	0.381	0.518	0.652	0.711	0.704	0.596
0.32		0.302	0.381	0.528	0.635	0.668	0.613	0.508
0.34		0.243	0.389	0.534	0.604	0.604	0.544	0.422
0.36		0.	0.352	0.502	0.581	0.539	0.452	0.343
0.38			0.243	0.469	0.553	0.440	0.528	
0.40			0.243	0.427	0.481	0.402	0.312	
0.42			0.	0.328	0.422	0.328	0.220	
0.44				0.293	0.367	0.254	0.1637	
0.46				0.	0.254	0.194	0.127	
0.48					0.1798	0.1637	0.	
0.50					0.	0.1637		
0.52						0.		

Run 48

r \ z	0.306	0.206	0.106	0.006	-0.094	-0.194	-0.294
0.26	0.302	0.414	0.492	0.664	0.762	0.867	0.889
0.27	0.312	0.389	0.518	0.643	0.758	0.861	0.907
0.28	0.302	0.389	0.513	0.638	0.754	0.855	0.901
0.30	0.254	0.402	0.502	0.613	0.726	0.814	0.800
0.32	0.1637	0.352	0.497	0.623	0.723	0.766	0.726
0.34		0.328	0.475	0.623	0.715	0.736	0.618
0.36		0.207	0.414	0.596	0.672	0.660	0.539
0.38		0.	0.319	0.534	0.623	0.613	0.452
0.40			0.254	0.492	0.578	0.544	0.389
0.42			0.	0.422	0.481	0.481	0.302
0.44				0.359	0.497	0.434	0.264
0.46				0.302	0.367	0.381	
0.48				0.	0.284	0.319	
0.50					0.254	0.254	
0.52					0.	0.	
0.54						0.	

TABLE A-6. (cont.)
Run 49

r \ z	0.206	0.106	0.006	-0.098	-0.194	-0.294	-0.394
0.26	0.548	0.886	0.928	1.095	0.984	1.019	0.978
0.27	0.553	0.880	0.965	1.095	0.984	1.032	0.973
0.28	0.548	0.839	0.953	1.103	0.950	1.027	0.978
0.30	0.553	0.758	0.956	1.045	0.892	0.904	0.824
0.32	0.553	0.730	0.919	1.037	0.845	0.830	0.723
0.34	0.422	0.668	0.870	0.992	0.743	0.743	0.581
0.36	0.	0.578	0.807	0.987	0.660	0.668	0.422
0.38		0.408	0.684	0.892	0.578	0.558	0.389
0.40			0.558	0.855	0.469	0.469	0.414
0.42			0.487	0.733	0.367	0.367	0.367
0.44			0.220	0.680	0.312	0.312	
0.46				0.578	0.264	0.207	
0.48				0.481	0.127	0.1798	
0.50				0.402			
0.52				0.264			

Run 50

r \ z	0.406	0.306	0.206	0.106	0.006	-0.094
0.26	0.1637	0.293	0.254	0.475	0.481	0.452
0.27	0.127	0.302	0.254	0.446	0.475	0.481
0.28	0.1637	0.254	0.264	0.440	0.427	0.452
0.30	0.1637	0.275	0.284	0.414	0.422	0.446
0.32		0.302	0.275	0.422	0.414	0.446
0.34		0.284	0.264	0.422	0.389	0.446
0.36		0.254	0.264	0.422	0.367	0.452
0.38		0.254	0.207	0.408	0.343	0.463
0.40		0.231	0.194	0.414	0.336	0.440
0.42		0.194	0.1637	0.414	0.328	0.414
0.44		0.194	0.	0.408	0.264	0.408
0.46				0.352	0.207	0.389
0.48				0.343	0.1637	0.336
0.50				0.231	0.	0.293
0.52				0.127		0.381
0.54						0.264
0.58						0.302

Run 51

r \ z	0.606	0.506	0.406	0.306	0.206	0.106	0.006
0.26	0.319	0.367	0.463	0.604	0.711	0.877	1.022
0.27	0.194	0.302	0.463	0.544	0.688	0.824	0.953
0.28	0.1637	0.293	0.422	0.481	0.656	0.758	0.913
0.30			0.275	0.381	0.518	0.688	0.790
0.32				0.1637	0.402	0.533	0.762
0.34						0.422	0.558
0.36						0.	0.427
0.38							0.127

TABLE A-6. (cont.)
Run 52

r \ z	0.706	0.606	0.506	0.406	0.306	0.206	0.106	0.006	-0.094
0.26	0.220	0.127	0.1637	0.194	0.275	0.293	0.352	0.402	0.427
0.27	0.231	0.1467	0.1037	0.231	0.264	0.275	0.343	0.359	0.402
0.28	0.220	0.	0.127	0.207	0.264	0.284	0.336	0.352	0.408
0.30	0.207			0.207	0.231	0.284	0.328	0.312	0.408
0.32	0.1637			0.1467	0.231	0.243	0.302	0.336	0.402
0.34				0.1637	0.207	0.231	0.328	0.343	0.414
0.36					0.127	0.207	0.312	0.352	0.414
0.38						0.194	0.319	0.352	0.402
0.40						0.1798	0.302	0.382	0.402
0.42						0.127	0.293	0.352	0.389
0.44							0.254	0.343	0.343
0.46							0.231	0.312	
0.48							0.127	0.328	
0.50							0.1637	0.275	
0.52							0.1467	0.264	
0.54								0.207	
0.56								0.1798	
0.58								0.1637	
0.60								0.1637	
0.62								0.1037	
0.64								0.1798	

Run 53

r \ z	0.306	0.206	0.106	0.006	-0.094
0.26	0.492	0.539	0.664	0.956	0.950
0.27	0.402	0.497	0.733	0.898	0.916
0.28	0.373	0.567	0.733	0.907	0.984
0.30	0.264	0.502	0.635	0.790	0.907
0.32		0.434	0.581	0.668	0.820
0.34		0.373	0.422	0.618	0.668
0.36		0.1798	0.207	0.502	0.581
0.38				0.414	0.513
0.40				0.1467	0.328
0.42					0.194
0.44					0.

Run 54

r \ z	0.306	0.206	0.106	0.006	-0.098
0.26	0.243	0.284	0.352	0.469	0.534
0.27	0.231	0.264	0.343	0.446	0.508
0.28	0.243	0.293	0.312	0.402	0.492
0.30	0.254	0.231	0.302	0.359	0.481
0.32	0.254	0.207	0.284	0.343	0.469
0.34	0.194	0.254	0.284	0.328	0.481
0.36	0.1637	0.1637	0.264	0.312	0.463
0.38		0.194	0.203	0.284	0.452
0.40		0.207	0.127	0.243	0.422
0.42		0.207	0.1798	0.254	0.328
0.44		0.264	0.	0.231	
0.46		0.1637		0.127	
0.48				0.	

TABLE A-6. (cont.)
Run 58

r \ z	0.806	0.706	0.606	0.506	0.406	0.306	0.206
0.26	0.422		0.408	0.359	0.578	0.807	0.867
0.27	0.463		0.434	0.440	0.573	0.827	0.845
0.28	0.434	0.452	0.481		0.434	0.864	0.889
0.30	0.336	0.343	0.481	0.563	0.452	0.836	0.803
0.32	0.264	0.343	0.381	0.548	0.434	0.803	0.796
0.34		0.	0.231		0.367	0.707	0.715
0.36			0.231	0.389	0.293	0.668	0.623
0.38					0.	0.627	0.578
0.40						0.492	0.434
0.42						0.402	0.402
0.44						0.328	
0.46						0.284	
0.48						0.231	
0.50						0.1798	

Run 59

r \ z	0.706	0.606	0.506	0.406	0.306	0.206
0.26	0.402	0.264	0.402	0.389	0.487	0.528
0.27	0.293	0.254	0.389	0.367	0.481	0.497
0.28	0.	0.264	0.328	0.367	0.381	0.434
0.30		0.	0.	0.373	0.328	0.440
0.32				0.254	0.	0.328
0.34						0.1637
0.36						

Run 60

r \ z	0.606	0.506	0.406	0.356	0.306
0.26	0.194		0.231	0.264	0.264
0.27	0.1798		0.207	0.207	0.293
0.28	0.231	0.1637	0.1637	0.207	0.243
0.30	0.194	0.1798	0.1637	0.1798	0.1637
0.32	0.	0.1798	0.127	0.207	0.207
0.34		0.	0.1037	0.194	0.231
0.36		0.	0.	0.1637	0.207
0.38				0.1037	0.127
0.40					0.
0.42					

TABLE A-7. DEPTH OF SCOUR MEASURED WITH TIME

Run 1		Run 2		Run 3		Run 4		Run 5		Run 6	
Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet
1	0.13	1	C.162	0	0.	0	0.	0	0.020	0	0.
2	0.154	5	C.192	5	0.003	1	0.063	1	0.162	1	0.273
3	0.178	10	C.246	10	0.043	5	0.086	2	0.236	2	0.356
4	0.203	15	C.289	15	0.083	10	0.120	4	0.344	5	0.393
5	0.219	20	0.306	20	0.113	15	0.155	6	0.353	10	0.393
6	0.228	25	0.330	25	0.133	20	0.195	7	0.366	15	0.405
10	0.252	30	0.340	30	0.129	25	0.211	10	0.394	20	0.446
15	0.288	35	0.357	35	0.129	30	0.228	15	0.395	25	0.459
20	0.294	40	0.381	40	0.132	35	0.250	20	0.412	30	0.454
25	0.288	45	0.400	45	0.135	40	0.258	25	0.420	40	
30	0.313	50	0.414	50	0.141	45	0.265	30	0.421	45	0.446
35	0.313	55	0.429	55	0.145	50	0.267	35	0.436	50	0.438
40	0.318	60	0.434	60	0.150	55	0.278	40	0.416	60	0.459
45	0.324	65	0.437	65	0.154	60	0.287	45	0.428	70	0.480
55	0.329	70	0.448	70	0.161	65	0.287	50	0.445	80	
60	0.334	75	0.453	75	0.166	70	0.299	55	0.454	90	
65	0.334	80	0.457	80	0.171	80	0.296	60	0.441	100	0.479
70	0.330	85	0.460	85	0.177	90	0.299	65	0.453	105	0.504
75	0.334	90		90	0.180	100	0.311	70	0.463	110	0.507
80	0.343	95	0.478	95	0.185	110	0.324	75	0.453	120	0.510
90	0.347	100	0.489	100	0.200	120	0.336	80	0.453		
100	0.355	105	0.494	105	0.206	130	0.354	85	0.474		
105	0.359	110	0.500	110	0.208	140	0.374	90	0.470		
120	0.374	115	0.514	115	0.213	150	0.372	95	0.461		
130	0.388	120	0.527	120	0.215	160	0.399	100	0.478		
150	0.404	125	0.535	125	0.217	170	0.399	105	0.492		
170	0.422	130	0.544	130	0.225	180	0.399	110	0.478		
180	0.422	135	0.549	140	0.229	195	0.404	115			
190	0.433	140	0.555	150	0.239	210	0.404	120			
200	0.443	145	0.555	160	0.245	220	0.416	125	0.504		
210	0.413	150	0.559	170	0.252	230	0.420	130	0.520		
235	0.413	155	0.556	180	0.256	240	0.421	140	0.508		
245	0.415	160	0.555	190	0.258			150	0.498		
260	0.421	165	0.555	200	0.267			160	0.520		
265	0.418	170	0.555	220	0.279			170	0.512		
270	0.427	175	0.557	260	0.304						
275	0.427	180	0.562	270	0.308						
280	0.438	185	0.557	280	0.309						
285	0.434	190	0.557	290	0.312						
		195	0.561	300	0.315						
		200	0.564	310	0.315						
		205	0.566	330	0.333						
		210	0.568	360	0.337						
		215	0.569	400	0.341						
		220	0.566								
		225	0.568								
		230	0.569								
		235	0.575								
		240	0.576								
		245	0.578								
		250	0.582								
		255	0.582								
		260	0.584								
		265	0.586								
		270	0.589								
		275	0.594								
		280	0.598								
		285	0.599								
		290	0.606								
		295	0.606								
		300	0.606								
		305	0.606								
		310	0.608								
		315	0.606								
		330	0.608								
		340	0.607								
		360	0.608								

TABLE A-7. (cont.)

Run 7		Run 8		Run 9		Run 10		Run 11		Run 12	
Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet
0	0.	0	0.	0	0.	0	0.	0	0.	0	0.
1	0.400	1	0.192	1	0.175	1	0.105	1	0.090	1	0.102
2	0.452	3	0.275	2	0.236	3	0.175	5	0.105	10	0.102
5	0.495	5	0.351	5	0.320	5	0.235	10	0.142	20	0.126
10	0.584	10	0.418	10	0.376	10	0.302	15	0.180	30	0.142
15	0.521	15	0.434	15	0.420	15	0.317	20	0.196	40	0.176
20	0.520	20	0.432	20	0.430	20	0.362	25	0.215	50	0.205
25	0.505	25	0.428	25	0.430	25	0.396	30	0.228	60	0.225
30	0.516	30	0.454	30	0.435	30	0.401	35	0.255	70	0.246
35	0.511	35	0.478	35	0.439	35	0.401	40	0.260	80	0.258
40	0.504	40	0.454	40	0.442	40	0.404	45	0.266	90	0.272
45	0.496	45	0.465	45	0.446	45	0.412	50	0.275	100	0.282
50	0.508	50	0.475	50	0.446	50	0.415	55	0.282	110	0.292
55	0.512	55	0.432	55	0.455	55	0.428	60	0.292	120	0.302
60	0.512	60	0.404	60	0.468	60	0.442	65	0.300	130	0.312
65	0.480	65	0.400	65	0.495	65	0.454	70	0.316	140	0.322
70	0.518	70	0.440	70	0.505	70	0.445	75	0.318	150	0.328
75	0.455	75	0.465	75	0.520	75	0.446	80	0.325	160	0.332
80	0.446	80	0.506	80	0.514	80	0.450	85	0.325	170	0.336
90	0.495	85	0.525	85	0.520	85	0.457	90	0.332	180	0.336
100	0.504	90	0.530	90	0.555	90	0.445	95	0.338	190	0.342
105	0.548	95	0.575	95	0.555	95	0.442	100	0.342	200	0.346
110	0.505	100	0.575	100	0.550	100	0.442	105	0.346	210	0.350
115	0.436	105	0.554	105	0.530	105	0.432	110	0.355	220	0.350
120	0.466	110	0.590	110	0.520	110	0.425	115	0.358	230	0.358
130	0.516	115	0.587	115	0.505	115	0.430	120	0.360	240	0.358
140	0.516	120	0.582	120	0.488	120	0.436	130	0.366	250	0.358
150	0.496	130	0.550	125	0.481	125	0.436	140	0.378	260	0.358
160	0.500	140	0.666	130	0.472	130	0.425	150	0.382	270	0.362
170	0.505	150	0.605	135	0.435	135	0.408	160	0.385		
180	0.508	160	0.578	140	0.405	140	0.400	170	0.390		
		170	0.566	145	0.414	145	0.386	180	0.396		
		180	0.650	150	0.420	150	0.390	190	0.406		
		188	0.680	155	0.406	155	0.375	200	0.409		
		190	0.650	160	0.381	160	0.408	210	0.404		
		200	0.650	165	0.411	165	0.422	220	0.408		
		210	0.650	170	0.420	170	0.437	230	0.408		
		220	0.650	175	0.430	175	0.440				
				180	0.438	180	0.458				
				185	0.439	185	0.462				
				190	0.442	190	0.462				
				200	0.455	200	0.465				
				210	0.464	210	0.470				
				220	0.472	220	0.476				
				230	0.484	230	0.490				
				240	0.484	240	0.490				
				250	0.484	250	0.490				
				260	0.484						
				270	0.480						
				280	0.472						
				290	0.448						
				300	0.435						
				310	0.458						
				320	0.465						
				330	0.412						
				340	0.362						
				350	0.382						
				360	0.382						
				370	0.430						
				380	0.455						
				390	0.414						
				400	0.421						

TABLE A-7. (cont.)

Run 15		Run 16		Run 17		Run 18		Run 19		Run 20		Run 21	
Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet	Time Min.	Scour Depth Feet
0	0.	0	0.	0	0.	0	0.	0	0.	0	0.	0	0.
3	0.05	1	0.058	1	0.094	1	0.179	1	0.117	1	0.167	2	0.100
10	0.065	2	0.085	3	0.134	3	0.208	2	0.133	3	0.175	5	0.108
15	0.108	5	0.115	5	0.158	5	0.234	5	0.221	5	0.192	10	0.112
25	0.136	7	0.142	10	0.208	10	0.295	10	0.314	10	0.234	15	0.126
60	0.167	10	0.167	15	0.254	15	0.342	15	0.358	15	0.266	20	0.145
95	0.221	15	0.200	20	0.285	20	0.374	20	0.388	20	0.296	25	0.170
130	0.248	20	0.225	25	0.322	40	0.434	25	0.426	25	0.317	30	0.182
190	0.284	30	0.264	30	0.347	60	0.454	30	0.421	30	0.334	40	0.210
320	0.326	50	0.308	35	0.364	80	0.483	35	0.434	35	0.346	55	0.246
		80	0.346	40	0.375	100	0.510	40	0.450	40	0.358	60	0.261
		120	0.396	45	0.388	150	0.521	50	0.466	50	0.379	70	0.270
		150	0.413	50	0.398			70	0.475	60	0.396	80	0.282
		250	0.454	55	0.408			80	0.479	70	0.408	110	0.312
		270	0.460	60	0.417			90	0.479	80	0.417	130	0.325
		345	0.475	70	0.425			100	0.479	90	0.438	180	0.356
				80	0.429			110	0.496	100	0.450	195	0.356
				90	0.442			140	0.479	110	0.450	205	0.356
				100	0.458					120	0.458	215	0.366
				110	0.462					130	0.458	225	0.370
										140	0.467		
				120	0.475					150	0.467	235	0.372
				130	0.483					160	0.472	245	0.375
				140	0.488								
				150	0.491								
				160	0.491								
				170	0.496								
				180	0.500								
				190	0.496								
				200	0.496								
				210	0.496								
				220	0.496								
				230	0.496								
				240	0.496								
				250	0.496								
				260	0.496								