

**APPENDIX B  
SAMPLE RUNS (SLOPE GIVEN)**

**B1. WIDE CHANNEL**

submerged coefficient of friction,	U = .760
lift-to-drag ratio,	B = .850
grain size: 90% finer; millimeters,	D90 = 80.0
grain size: 50% finer; millimeters,	D50 = 60.0
channel slope,	S = .00160
dimensionless critical shear stress,	TAUcr = .03000
bank water discharge; cumecs,	Qbank = 36.74076
bed water discharge; cumecs,	Qbed = 313.20107
channel water discharge; cumecs,	Q = 349.94183
sediment transport rate; cumecs,	Qs = .00179649
cross-sectional area; sq meters,	A = 139.50189
channel center depth; meters,	Dc = 2.069
bank width; meters,	Bs = 11.875
flat-bed width; meters,	Bf = 59.572
top channel width; meters,	Btop = 71.448

Y*	D*	D1*	D2*	D3*
0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.44E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.16E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.88E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
3.60E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
4.32E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
5.04E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
5.76E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
6.48E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
7.92E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
8.64E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
9.36E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.01E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.08E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.15E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.22E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.30E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00

1.37E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.44E+01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.44E+01	1.00E+00	-8.41E-11	-8.38E-04	-6.27E+03
1.44E+01	1.00E+00	-1.34E-09	-6.64E-03	-2.47E+04
1.44E+01	1.00E+00	-6.69E-09	-2.21E-02	-5.42E+04
1.44E+01	1.00E+00	-2.08E-08	-5.12E-02	-9.28E+04
1.44E+01	1.00E+00	-4.99E-08	-9.72E-02	-1.38E+05
1.44E+01	1.00E+00	-1.01E-07	-1.62E-01	-1.87E+05
1.44E+01	1.00E+00	-1.82E-07	-2.47E-01	-2.37E+05
1.44E+01	1.00E+00	-3.02E-07	-3.52E-01	-2.85E+05
1.44E+01	1.00E+00	-4.66E-07	-4.75E-01	-3.27E+05
1.44E+01	1.00E+00	-6.83E-07	-6.13E-01	-3.62E+05
1.44E+01	1.00E+00	-9.58E-07	-7.63E-01	-3.86E+05
1.44E+01	1.00E+00	-1.29E-06	-9.20E-01	-3.98E+05
1.44E+01	1.00E+00	-1.69E-06	-1.08E+00	-3.98E+05
1.44E+01	1.00E+00	-2.16E-06	-1.24E+00	-3.86E+05
1.44E+01	1.00E+00	-2.68E-06	-1.39E+00	-3.62E+05
1.44E+01	1.00E+00	-3.27E-06	-1.52E+00	-3.27E+05
1.44E+01	1.00E+00	-3.90E-06	-1.65E+00	-2.85E+05
1.44E+01	1.00E+00	-4.58E-06	-1.75E+00	-2.37E+05
1.44E+01	1.00E+00	-5.30E-06	-1.84E+00	-1.87E+05
1.44E+01	1.00E+00	-6.05E-06	-1.90E+00	-1.38E+05
1.44E+01	1.00E+00	-6.82E-06	-1.95E+00	-9.26E+04
1.44E+01	1.00E+00	-7.60E-06	-1.98E+00	-5.39E+04
1.44E+01	1.00E+00	-8.40E-06	-1.99E+00	-2.44E+04
1.44E+01	1.00E+00	-9.20E-06	-2.00E+00	-5.97E+03
1.44E+01	1.00E+00	-9.99E-06	-2.00E+00	3.21E+02
1.44E+01	1.00E+00	-6.20E-04	-1.91E+00	2.73E+02
1.44E+01	1.00E+00	-1.20E-03	-1.83E+00	2.35E+02
1.44E+01	1.00E+00	-1.76E-03	-1.76E+00	2.06E+02
1.44E+01	1.00E+00	-2.82E-03	-1.64E+00	1.64E+02
1.44E+01	1.00E+00	-3.82E-03	-1.55E+00	1.35E+02
1.44E+01	1.00E+00	-4.76E-03	-1.47E+00	1.15E+02
1.44E+01	1.00E+00	-6.52E-03	-1.35E+00	8.65E+01
1.44E+01	1.00E+00	-8.15E-03	-1.25E+00	6.87E+01
1.44E+01	1.00E+00	-9.66E-03	-1.17E+00	5.64E+01
1.44E+01	1.00E+00	-1.11E-02	-1.11E+00	4.75E+01
1.44E+01	1.00E+00	-1.24E-02	-1.05E+00	4.08E+01
1.44E+01	1.00E+00	-1.50E-02	-9.65E-01	3.15E+01
1.44E+01	1.00E+00	-1.73E-02	-8.94E-01	2.53E+01
1.44E+01	1.00E+00	-1.94E-02	-8.37E-01	2.09E+01
1.44E+01	1.00E+00	-2.15E-02	-7.89E-01	1.77E+01
1.44E+01	1.00E+00	-2.34E-02	-7.48E-01	1.52E+01

1.44E+01	1.00E+00	-2.70E-02	-6.81E-01	1.17E+01
1.44E+01	9.99E-01	-3.02E-02	-6.28E-01	9.40E+00
1.44E+01	9.99E-01	-3.33E-02	-5.86E-01	7.75E+00
1.44E+01	9.99E-01	-3.61E-02	-5.50E-01	6.53E+00
1.44E+01	9.99E-01	-3.88E-02	-5.20E-01	5.59E+00
1.45E+01	9.99E-01	-4.37E-02	-4.71E-01	4.26E+00
1.45E+01	9.98E-01	-4.82E-02	-4.33E-01	3.37E+00
1.45E+01	9.98E-01	-5.24E-02	-4.03E-01	2.75E+00
1.45E+01	9.97E-01	-5.63E-02	-3.78E-01	2.28E+00
1.45E+01	9.96E-01	-6.00E-02	-3.57E-01	1.93E+00
1.45E+01	9.95E-01	-6.68E-02	-3.24E-01	1.44E+00
1.45E+01	9.94E-01	-7.30E-02	-2.98E-01	1.11E+00
1.46E+01	9.92E-01	-7.87E-02	-2.79E-01	8.78E-01
1.46E+01	9.91E-01	-8.41E-02	-2.63E-01	7.10E-01
1.46E+01	9.89E-01	-8.93E-02	-2.50E-01	5.84E-01
1.46E+01	9.85E-01	-9.89E-02	-2.30E-01	4.10E-01
1.47E+01	9.81E-01	-1.08E-01	-2.16E-01	2.98E-01
1.47E+01	9.76E-01	-1.16E-01	-2.06E-01	2.22E-01
1.48E+01	9.72E-01	-1.24E-01	-1.98E-01	1.67E-01
1.48E+01	9.67E-01	-1.32E-01	-1.92E-01	1.28E-01
1.49E+01	9.55E-01	-1.47E-01	-1.85E-01	7.49E-02
1.50E+01	9.43E-01	-1.62E-01	-1.80E-01	4.24E-02
1.50E+01	9.30E-01	-1.76E-01	-1.78E-01	2.10E-02
1.52E+01	8.99E-01	-2.04E-01	-1.76E-01	-4.98E-03
1.54E+01	8.64E-01	-2.33E-01	-1.79E-01	-2.07E-02
1.55E+01	8.25E-01	-2.62E-01	-1.83E-01	-3.24E-02
1.57E+01	7.80E-01	-2.91E-01	-1.89E-01	-4.30E-02
1.58E+01	7.31E-01	-3.22E-01	-1.97E-01	-5.42E-02
1.60E+01	6.77E-01	-3.54E-01	-2.06E-01	-6.70E-02
1.62E+01	6.18E-01	-3.88E-01	-2.18E-01	-8.29E-02
1.65E+01	4.82E-01	-4.63E-01	-2.52E-01	-1.33E-01
1.68E+01	3.20E-01	-5.52E-01	-3.09E-01	-2.44E-01
1.70E+01	2.28E-01	-6.05E-01	-3.57E-01	-3.73E-01
1.70E+01	1.78E-01	-6.35E-01	-3.91E-01	-4.92E-01
1.71E+01	1.26E-01	-6.68E-01	-4.39E-01	-7.13E-01
1.72E+01	9.90E-02	-6.86E-01	-4.71E-01	-9.41E-01
1.72E+01	8.52E-02	-6.96E-01	-4.92E-01	-1.15E+00
1.72E+01	7.11E-02	-7.06E-01	-5.19E-01	-1.57E+00
1.72E+01	5.69E-02	-7.16E-01	-5.59E-01	-2.63E+00
1.72E+01	4.97E-02	-7.22E-01	-5.90E-01	-3.89E+00
1.72E+01	4.25E-02	-7.28E-01	-6.41E-01	-6.53E+00
1.72E+01	3.52E-02	-7.35E-01	-7.31E-01	-1.23E+01
1.72E+01	3.15E-02	-7.39E-01	-8.05E-01	-1.72E+01

1.73E+01	2.78E-02	-7.43E-01	-9.04E-01	-2.22E+01
1.73E+01	2.59E-02	-7.46E-01	-9.60E-01	-2.22E+01
1.73E+01	2.40E-02	-7.48E-01	-1.01E+00	-1.58E+01
1.73E+01	2.31E-02	-7.49E-01	-1.02E+00	-7.04E+00
1.73E+01	2.22E-02	-7.51E-01	-1.02E+00	8.62E+00
1.73E+01	2.12E-02	-7.52E-01	-9.99E-01	3.58E+01
1.73E+01	2.03E-02	-7.53E-01	-9.27E-01	8.22E+01
1.73E+01	1.94E-02	-7.54E-01	-7.79E-01	1.62E+02
1.73E+01	1.84E-02	-7.55E-01	-4.99E-01	2.99E+02
1.73E+01	1.82E-02	-7.55E-01	-3.98E-01	3.48E+02

Y*	DEL*	DEL1cr*	DEL1*	DEL2cr*
0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
7.20E-01	1.00E+00	0.00E+00	-1.13E-09	0.00E+00
1.44E+00	1.00E+00	0.00E+00	-3.42E-09	0.00E+00
2.16E+00	1.00E+00	0.00E+00	-9.20E-09	0.00E+00
2.88E+00	1.00E+00	0.00E+00	-2.44E-08	0.00E+00
3.60E+00	1.00E+00	0.00E+00	-6.44E-08	0.00E+00
4.32E+00	1.00E+00	0.00E+00	-1.70E-07	0.00E+00
5.04E+00	1.00E+00	0.00E+00	-4.50E-07	0.00E+00
5.76E+00	1.00E+00	0.00E+00	-1.19E-06	0.00E+00
6.48E+00	1.00E+00	0.00E+00	-3.14E-06	0.00E+00
7.20E+00	1.00E+00	0.00E+00	-8.30E-06	0.00E+00
7.92E+00	1.00E+00	0.00E+00	-2.19E-05	0.00E+00
8.64E+00	1.00E+00	0.00E+00	-5.80E-05	0.00E+00
9.36E+00	1.00E+00	0.00E+00	-1.53E-04	0.00E+00
1.01E+01	1.00E+00	0.00E+00	-4.05E-04	0.00E+00
1.08E+01	9.99E-01	0.00E+00	-1.07E-03	0.00E+00
1.15E+01	9.98E-01	0.00E+00	-2.83E-03	0.00E+00
1.22E+01	9.94E-01	0.00E+00	-7.47E-03	0.00E+00
1.30E+01	9.85E-01	0.00E+00	-1.97E-02	0.00E+00
1.37E+01	9.61E-01	0.00E+00	-5.22E-02	0.00E+00
1.44E+01	8.98E-01	0.00E+00	-1.38E-01	0.00E+00
1.44E+01	8.98E-01	-2.43E-13	-1.38E-01	-4.25E-06
1.44E+01	8.98E-01	-3.06E-11	-1.37E-01	-2.66E-04
1.44E+01	8.98E-01	-5.10E-10	-1.35E-01	-2.93E-03
1.44E+01	8.98E-01	-3.68E-09	-1.32E-01	-1.57E-02
1.44E+01	8.98E-01	-1.68E-08	-1.28E-01	-5.64E-02
1.44E+01	8.98E-01	-5.67E-08	-1.21E-01	-1.56E-01
1.44E+01	8.98E-01	-1.56E-07	-1.13E-01	-3.61E-01
1.44E+01	8.98E-01	-3.66E-07	-1.03E-01	-7.24E-01

1.44E+01	8.98E-01	-7.64E-07	-9.25E-02	-1.30E+00
1.44E+01	8.98E-01	-1.45E-06	-8.13E-02	-2.15E+00
1.44E+01	8.98E-01	-2.52E-06	-7.00E-02	-3.28E+00
1.44E+01	8.98E-01	-4.11E-06	-5.89E-02	-4.70E+00
1.44E+01	8.98E-01	-6.32E-06	-4.84E-02	-6.35E+00
1.44E+01	8.98E-01	-9.21E-06	-3.88E-02	-8.16E+00
1.44E+01	8.98E-01	-1.28E-05	-3.02E-02	-9.99E+00
1.44E+01	8.98E-01	-1.72E-05	-2.27E-02	-1.17E+01
1.44E+01	8.98E-01	-2.22E-05	-1.64E-02	-1.32E+01
1.44E+01	8.98E-01	-2.77E-05	-1.13E-02	-1.44E+01
1.44E+01	8.98E-01	-3.36E-05	-7.26E-03	-1.51E+01
1.44E+01	8.98E-01	-3.97E-05	-4.29E-03	-1.54E+01
1.44E+01	8.98E-01	-4.59E-05	-2.25E-03	-1.53E+01
1.44E+01	8.98E-01	-5.19E-05	-9.79E-04	-1.49E+01
1.44E+01	8.98E-01	-5.78E-05	-3.25E-04	-1.44E+01
1.44E+01	8.98E-01	-6.34E-05	-9.05E-05	-1.40E+01
1.44E+01	8.98E-01	-6.90E-05	-6.23E-05	-1.38E+01
1.44E+01	8.98E-01	-4.08E-03	-4.01E-03	-1.20E+01
1.44E+01	8.98E-01	-7.59E-03	-7.51E-03	-1.05E+01
1.44E+01	8.98E-01	-1.07E-02	-1.06E-02	-9.42E+00
1.44E+01	8.98E-01	-1.60E-02	-1.60E-02	-7.72E+00
1.44E+01	8.98E-01	-2.04E-02	-2.05E-02	-6.51E+00
1.44E+01	8.98E-01	-2.42E-02	-2.42E-02	-5.60E+00
1.44E+01	8.98E-01	-3.04E-02	-3.05E-02	-4.32E+00
1.44E+01	8.98E-01	-3.52E-02	-3.54E-02	-3.48E+00
1.44E+01	8.98E-01	-3.92E-02	-3.95E-02	-2.88E+00
1.44E+01	8.98E-01	-4.25E-02	-4.28E-02	-2.43E+00
1.44E+01	8.98E-01	-4.53E-02	-4.57E-02	-2.08E+00
1.44E+01	8.98E-01	-4.98E-02	-5.03E-02	-1.59E+00
1.44E+01	8.97E-01	-5.33E-02	-5.39E-02	-1.25E+00
1.44E+01	8.97E-01	-5.61E-02	-5.68E-02	-1.01E+00
1.44E+01	8.97E-01	-5.84E-02	-5.91E-02	-8.35E-01
1.44E+01	8.97E-01	-6.04E-02	-6.11E-02	-6.99E-01
1.44E+01	8.97E-01	-6.33E-02	-6.41E-02	-5.07E-01
1.44E+01	8.96E-01	-6.55E-02	-6.64E-02	-3.81E-01
1.44E+01	8.96E-01	-6.72E-02	-6.81E-02	-2.93E-01
1.44E+01	8.96E-01	-6.85E-02	-6.94E-02	-2.30E-01
1.44E+01	8.95E-01	-6.95E-02	-7.05E-02	-1.83E-01
1.45E+01	8.95E-01	-7.10E-02	-7.21E-02	-1.22E-01
1.45E+01	8.94E-01	-7.20E-02	-7.31E-02	-8.43E-02
1.45E+01	8.93E-01	-7.28E-02	-7.39E-02	-6.12E-02
1.45E+01	8.92E-01	-7.33E-02	-7.44E-02	-4.65E-02
1.45E+01	8.92E-01	-7.37E-02	-7.48E-02	-3.73E-02

1.45E+01	8.90E-01	-7.44E-02	-7.55E-02	-2.83E-02
1.45E+01	8.89E-01	-7.49E-02	-7.61E-02	-2.60E-02
1.46E+01	8.87E-01	-7.54E-02	-7.66E-02	-2.70E-02
1.46E+01	8.86E-01	-7.60E-02	-7.71E-02	-2.96E-02
1.46E+01	8.84E-01	-7.66E-02	-7.78E-02	-3.30E-02
1.46E+01	8.81E-01	-7.81E-02	-7.92E-02	-4.04E-02
1.47E+01	8.78E-01	-7.98E-02	-8.10E-02	-4.77E-02
1.47E+01	8.74E-01	-8.19E-02	-8.30E-02	-5.43E-02
1.48E+01	8.71E-01	-8.42E-02	-8.53E-02	-6.03E-02
1.48E+01	8.68E-01	-8.67E-02	-8.78E-02	-6.56E-02
1.49E+01	8.60E-01	-9.23E-02	-9.33E-02	-7.48E-02
1.50E+01	8.53E-01	-9.86E-02	-9.96E-02	-8.25E-02
1.50E+01	8.44E-01	-1.05E-01	-1.06E-01	-8.94E-02
1.52E+01	8.26E-01	-1.21E-01	-1.22E-01	-1.02E-01
1.54E+01	8.05E-01	-1.38E-01	-1.39E-01	-1.15E-01
1.55E+01	7.82E-01	-1.58E-01	-1.58E-01	-1.29E-01
1.57E+01	7.55E-01	-1.79E-01	-1.80E-01	-1.46E-01
1.58E+01	7.24E-01	-2.04E-01	-2.05E-01	-1.67E-01
1.60E+01	6.89E-01	-2.33E-01	-2.34E-01	-1.94E-01
1.62E+01	6.48E-01	-2.67E-01	-2.69E-01	-2.31E-01
1.65E+01	5.49E-01	-3.58E-01	-3.60E-01	-3.56E-01
1.68E+01	4.12E-01	-5.13E-01	-5.11E-01	-6.65E-01
1.70E+01	3.21E-01	-6.46E-01	-6.43E-01	-1.05E+00
1.70E+01	2.66E-01	-7.43E-01	-7.41E-01	-1.41E+00
1.71E+01	2.01E-01	-8.80E-01	-8.79E-01	-2.09E+00
1.72E+01	1.64E-01	-9.76E-01	-9.78E-01	-2.77E+00
1.72E+01	1.44E-01	-1.04E+00	-1.04E+00	-3.36E+00
1.72E+01	1.22E-01	-1.11E+00	-1.13E+00	-4.43E+00
1.72E+01	9.85E-02	-1.22E+00	-1.26E+00	-7.06E+00
1.72E+01	8.54E-02	-1.31E+00	-1.37E+00	-1.01E+01
1.72E+01	7.08E-02	-1.44E+00	-1.55E+00	-1.65E+01
1.72E+01	5.38E-02	-1.66E+00	-1.90E+00	-3.05E+01
1.72E+01	4.36E-02	-1.84E+00	-2.19E+00	-4.25E+01
1.73E+01	3.17E-02	-2.09E+00	-2.60E+00	-5.52E+01
1.73E+01	2.49E-02	-2.23E+00	-2.85E+00	-5.61E+01
1.73E+01	1.74E-02	-2.36E+00	-3.10E+00	-4.18E+01
1.73E+01	1.35E-02	-2.40E+00	-3.20E+00	-2.17E+01
1.73E+01	9.47E-03	-2.40E+00	-3.25E+00	1.50E+01
1.73E+01	5.40E-03	-2.35E+00	-3.23E+00	7.92E+01
1.73E+01	1.46E-03	-2.19E+00	-3.05E+00	1.90E+02
1.73E+01	-2.11E-03	-1.84E+00	-2.60E+00	3.79E+02
1.73E+01	-4.86E-03	-1.18E+00	-1.70E+00	7.08E+02
1.73E+01	-5.34E-03	-9.44E-01	-1.36E+00	8.23E+02

## B2. NARROW CHANNEL

submerged coefficient of friction,	U = .760
lift-to-drag ratio,	B = .850
grain size: 90% finer; millimeters,	D90 = 80.0
grain size: 50% finer; millimeters,	D50 = 60.0
channel slope,	S = .00160
dimensionless critical shear stress,	TAUcr = .03000
bank water discharge; cumecs,	Qbank = 40.22332
bed water discharge; cumecs,	Qbed = 9.73459
channel water discharge; cumecs,	Q = 49.95792
sediment transport rate; cumecs,	Qs = .00000102
cross-sectional area; sq meters,	A = 21.66586
channel center depth; meters,	Dc = 2.104
bank width; meters,	Bs = 12.554
flat-bed width; meters,	Bf = 1.899
top channel width; meters,	Btop = 14.453

Y*	D*	D1*	D2*	D3*
0.00E+00	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E-02	1.00E+00	0.00E+00	0.00E+00	0.00E+00
4.51E-02	1.00E+00	0.00E+00	0.00E+00	0.00E+00
6.77E-02	1.00E+00	0.00E+00	0.00E+00	0.00E+00
9.03E-02	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.13E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.35E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.58E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
1.81E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.03E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.26E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.48E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.71E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
2.93E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
3.16E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
3.39E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
3.61E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
3.84E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
4.06E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
4.29E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00
4.51E-01	1.00E+00	0.00E+00	0.00E+00	0.00E+00

4.51E-01	1.00E+00	-8.39E-11	-8.37E-04	-6.26E+03
4.51E-01	1.00E+00	-1.33E-09	-6.64E-03	-2.47E+04
4.51E-01	1.00E+00	-6.68E-09	-2.21E-02	-5.41E+04
4.51E-01	1.00E+00	-2.08E-08	-5.12E-02	-9.28E+04
4.51E-01	1.00E+00	-4.99E-08	-9.72E-02	-1.38E+05
4.51E-01	1.00E+00	-1.01E-07	-1.62E-01	-1.87E+05
4.51E-01	1.00E+00	-1.82E-07	-2.47E-01	-2.37E+05
4.51E-01	1.00E+00	-3.01E-07	-3.52E-01	-2.85E+05
4.51E-01	1.00E+00	-4.66E-07	-4.74E-01	-3.27E+05
4.51E-01	1.00E+00	-6.83E-07	-6.13E-01	-3.62E+05
4.51E-01	1.00E+00	-9.58E-07	-7.62E-01	-3.86E+05
4.51E-01	1.00E+00	-1.29E-06	-9.20E-01	-3.98E+05
4.51E-01	1.00E+00	-1.69E-06	-1.08E+00	-3.98E+05
4.51E-01	1.00E+00	-2.16E-06	-1.24E+00	-3.86E+05
4.51E-01	1.00E+00	-2.68E-06	-1.39E+00	-3.62E+05
4.51E-01	1.00E+00	-3.26E-06	-1.52E+00	-3.27E+05
4.51E-01	1.00E+00	-3.90E-06	-1.65E+00	-2.85E+05
4.51E-01	1.00E+00	-4.58E-06	-1.75E+00	-2.37E+05
4.51E-01	1.00E+00	-5.30E-06	-1.84E+00	-1.87E+05
4.51E-01	1.00E+00	-6.05E-06	-1.90E+00	-1.38E+05
4.51E-01	1.00E+00	-6.82E-06	-1.95E+00	-9.24E+04
4.51E-01	1.00E+00	-7.60E-06	-1.98E+00	-5.38E+04
4.51E-01	1.00E+00	-8.39E-06	-1.99E+00	-2.43E+04
4.51E-01	1.00E+00	-9.19E-06	-2.00E+00	-5.81E+03
4.51E-01	1.00E+00	-9.99E-06	-2.00E+00	4.93E+02
4.52E-01	1.00E+00	-3.16E-04	-1.93E+00	4.33E+02
4.52E-01	1.00E+00	-6.12E-04	-1.86E+00	3.85E+02
4.52E-01	1.00E+00	-8.98E-04	-1.80E+00	3.46E+02
4.52E-01	1.00E+00	-1.45E-03	-1.71E+00	2.86E+02
4.52E-01	1.00E+00	-1.97E-03	-1.62E+00	2.42E+02
4.53E-01	1.00E+00	-2.46E-03	-1.55E+00	2.09E+02
4.53E-01	1.00E+00	-3.40E-03	-1.44E+00	1.63E+02
4.54E-01	1.00E+00	-4.27E-03	-1.35E+00	1.32E+02
4.55E-01	1.00E+00	-5.08E-03	-1.27E+00	1.10E+02
4.55E-01	1.00E+00	-5.86E-03	-1.21E+00	9.42E+01
4.57E-01	1.00E+00	-7.30E-03	-1.10E+00	7.20E+01
4.58E-01	1.00E+00	-8.63E-03	-1.02E+00	5.75E+01
4.59E-01	1.00E+00	-9.87E-03	-9.59E-01	4.74E+01
4.60E-01	1.00E+00	-1.10E-02	-9.05E-01	4.00E+01
4.62E-01	1.00E+00	-1.21E-02	-8.59E-01	3.44E+01
4.64E-01	1.00E+00	-1.42E-02	-7.83E-01	2.65E+01
4.67E-01	1.00E+00	-1.61E-02	-7.24E-01	2.12E+01
4.69E-01	1.00E+00	-1.78E-02	-6.76E-01	1.75E+01



4.72E-01	1.00E+00	-1.94E-02	-6.36E-01	1.48E+01
4.74E-01	1.00E+00	-2.10E-02	-6.02E-01	1.27E+01
4.79E-01	1.00E+00	-2.39E-02	-5.46E-01	9.69E+00
4.84E-01	9.99E-01	-2.65E-02	-5.03E-01	7.71E+00
4.89E-01	9.99E-01	-2.89E-02	-4.68E-01	6.31E+00
4.94E-01	9.99E-01	-3.12E-02	-4.39E-01	5.28E+00
4.99E-01	9.99E-01	-3.33E-02	-4.15E-01	4.49E+00
5.09E-01	9.99E-01	-3.72E-02	-3.76E-01	3.37E+00
5.19E-01	9.98E-01	-4.09E-02	-3.46E-01	2.63E+00
5.29E-01	9.98E-01	-4.42E-02	-3.23E-01	2.11E+00
5.39E-01	9.97E-01	-4.73E-02	-3.04E-01	1.74E+00
5.49E-01	9.97E-01	-5.03E-02	-2.88E-01	1.45E+00
5.69E-01	9.96E-01	-5.58E-02	-2.63E-01	1.05E+00
5.89E-01	9.95E-01	-6.08E-02	-2.45E-01	7.89E-01
6.09E-01	9.93E-01	-6.56E-02	-2.31E-01	6.11E-01
6.29E-01	9.92E-01	-7.01E-02	-2.20E-01	4.83E-01
6.49E-01	9.91E-01	-7.44E-02	-2.11E-01	3.88E-01
6.89E-01	9.87E-01	-8.26E-02	-1.99E-01	2.60E-01
7.29E-01	9.84E-01	-9.03E-02	-1.90E-01	1.81E-01
7.69E-01	9.80E-01	-9.78E-02	-1.84E-01	1.28E-01
8.09E-01	9.76E-01	-1.05E-01	-1.79E-01	9.21E-02
8.89E-01	9.67E-01	-1.19E-01	-1.74E-01	4.75E-02
9.69E-01	9.57E-01	-1.33E-01	-1.71E-01	2.23E-02
1.05E+00	9.46E-01	-1.47E-01	-1.70E-01	6.81E-03
1.21E+00	9.20E-01	-1.74E-01	-1.71E-01	-1.11E-02
1.37E+00	8.90E-01	-2.01E-01	-1.73E-01	-2.19E-02
1.53E+00	8.56E-01	-2.29E-01	-1.78E-01	-3.03E-02
1.69E+00	8.17E-01	-2.58E-01	-1.83E-01	-3.83E-02
1.85E+00	7.73E-01	-2.88E-01	-1.90E-01	-4.70E-02
2.01E+00	7.25E-01	-3.19E-01	-1.98E-01	-5.71E-02
2.17E+00	6.71E-01	-3.52E-01	-2.08E-01	-6.95E-02
2.33E+00	6.12E-01	-3.86E-01	-2.21E-01	-8.54E-02
2.65E+00	4.77E-01	-4.62E-01	-2.55E-01	-1.36E-01
2.97E+00	3.15E-01	-5.52E-01	-3.14E-01	-2.52E-01
3.13E+00	2.23E-01	-6.06E-01	-3.64E-01	-3.88E-01
3.21E+00	1.73E-01	-6.36E-01	-4.00E-01	-5.16E-01
3.29E+00	1.21E-01	-6.70E-01	-4.50E-01	-7.59E-01
3.33E+00	9.35E-02	-6.89E-01	-4.85E-01	-1.02E+00
3.35E+00	7.96E-02	-6.99E-01	-5.07E-01	-1.29E+00
3.37E+00	6.55E-02	-7.09E-01	-5.38E-01	-1.84E+00
3.38E+00	5.84E-02	-7.15E-01	-5.59E-01	-2.41E+00
3.39E+00	5.12E-02	-7.20E-01	-5.88E-01	-3.47E+00
3.40E+00	4.40E-02	-7.26E-01	-6.32E-01	-5.61E+00

3.41E+00	3.67E-02	-7.33E-01	-7.08E-01	-1.04E+01
3.41E+00	3.30E-02	-7.37E-01	-7.70E-01	-1.46E+01
3.42E+00	2.94E-02	-7.41E-01	-8.56E-01	-2.00E+01
3.42E+00	2.75E-02	-7.43E-01	-9.10E-01	-2.24E+01
3.42E+00	2.56E-02	-7.45E-01	-9.67E-01	-2.28E+01
3.43E+00	2.38E-02	-7.48E-01	-1.02E+00	-1.67E+01
3.43E+00	2.28E-02	-7.49E-01	-1.03E+00	-8.23E+00
3.43E+00	2.19E-02	-7.50E-01	-1.04E+00	7.20E+00
3.43E+00	2.10E-02	-7.52E-01	-1.01E+00	3.42E+01
3.43E+00	2.00E-02	-7.53E-01	-9.42E-01	8.09E+01
3.43E+00	1.91E-02	-7.54E-01	-7.96E-01	1.61E+02
3.43E+00	1.81E-02	-7.55E-01	-5.14E-01	3.02E+02
3.43E+00	1.79E-02	-7.55E-01	-4.13E-01	3.51E+02
3.43E+00	1.77E-02	-7.55E-01	-2.94E-01	4.08E+02

Y*	DEL*	DEL1cr*	DEL1*	DEL2cr*
0.00E+00	9.00E-01	0.00E+00	0.00E+00	0.00E+00
2.26E-02	9.00E-01	0.00E+00	-4.09E-03	0.00E+00
4.51E-02	9.00E-01	0.00E+00	-8.18E-03	0.00E+00
6.77E-02	9.00E-01	0.00E+00	-1.23E-02	0.00E+00
9.03E-02	9.00E-01	0.00E+00	-1.64E-02	0.00E+00
1.13E-01	8.99E-01	0.00E+00	-2.05E-02	0.00E+00
1.35E-01	8.99E-01	0.00E+00	-2.47E-02	0.00E+00
1.58E-01	8.98E-01	0.00E+00	-2.88E-02	0.00E+00
1.81E-01	8.97E-01	0.00E+00	-3.30E-02	0.00E+00
2.03E-01	8.97E-01	0.00E+00	-3.73E-02	0.00E+00
2.26E-01	8.96E-01	0.00E+00	-4.15E-02	0.00E+00
2.48E-01	8.95E-01	0.00E+00	-4.58E-02	0.00E+00
2.71E-01	8.94E-01	0.00E+00	-5.02E-02	0.00E+00
2.93E-01	8.92E-01	0.00E+00	-5.45E-02	0.00E+00
3.16E-01	8.91E-01	0.00E+00	-5.90E-02	0.00E+00
3.39E-01	8.90E-01	0.00E+00	-6.35E-02	0.00E+00
3.61E-01	8.88E-01	0.00E+00	-6.80E-02	0.00E+00
3.84E-01	8.87E-01	0.00E+00	-7.26E-02	0.00E+00
4.06E-01	8.85E-01	0.00E+00	-7.73E-02	0.00E+00
4.29E-01	8.83E-01	0.00E+00	-8.21E-02	0.00E+00
4.51E-01	8.81E-01	0.00E+00	-8.69E-02	0.00E+00
4.51E-01	8.81E-01	-2.39E-13	-8.69E-02	-4.16E-06
4.51E-01	8.81E-01	-3.01E-11	-8.65E-02	-2.62E-04
4.51E-01	8.81E-01	-5.01E-10	-8.54E-02	-2.88E-03
4.51E-01	8.81E-01	-3.62E-09	-8.35E-02	-1.55E-02

4.51E-01	8.81E-01	-1.65E-08	-8.05E-02	-5.55E-02
4.51E-01	8.81E-01	-5.57E-08	-7.63E-02	-1.54E-01
4.51E-01	8.81E-01	-1.53E-07	-7.11E-02	-3.54E-01
4.51E-01	8.81E-01	-3.60E-07	-6.51E-02	-7.12E-01
4.51E-01	8.81E-01	-7.51E-07	-5.84E-02	-1.28E+00
4.51E-01	8.81E-01	-1.42E-06	-5.13E-02	-2.11E+00
4.51E-01	8.81E-01	-2.48E-06	-4.41E-02	-3.23E+00
4.51E-01	8.81E-01	-4.04E-06	-3.71E-02	-4.62E+00
4.51E-01	8.81E-01	-6.21E-06	-3.05E-02	-6.25E+00
4.51E-01	8.81E-01	-9.06E-06	-2.45E-02	-8.02E+00
*4.51E-01	8.81E-01	-1.26E-05	-1.90E-02	-9.82E+00
4.51E-01	8.81E-01	-1.69E-05	-1.43E-02	-1.15E+01
4.51E-01	8.81E-01	-2.18E-05	-1.04E-02	-1.30E+01
4.51E-01	8.81E-01	-2.72E-05	-7.12E-03	-1.41E+01
4.51E-01	8.81E-01	-3.30E-05	-4.60E-03	-1.48E+01
4.51E-01	8.81E-01	-3.90E-05	-2.72E-03	-1.51E+01
4.51E-01	8.81E-01	-4.51E-05	-1.43E-03	-1.50E+01
4.51E-01	8.81E-01	-5.10E-05	-6.36E-04	-1.46E+01
4.51E-01	8.81E-01	-5.68E-05	-2.25E-04	-1.42E+01
4.51E-01	8.81E-01	-6.23E-05	-7.79E-05	-1.37E+01
4.51E-01	8.81E-01	-6.78E-05	-6.15E-05	-1.35E+01
4.52E-01	8.81E-01	-2.07E-03	-1.99E-03	-1.21E+01
4.52E-01	8.81E-01	-3.87E-03	-3.75E-03	-1.10E+01
4.52E-01	8.81E-01	-5.51E-03	-5.34E-03	-1.00E+01
4.52E-01	8.81E-01	-8.38E-03	-8.17E-03	-8.48E+00
4.52E-01	8.81E-01	-1.08E-02	-1.06E-02	-7.34E+00
4.53E-01	8.81E-01	-1.30E-02	-1.27E-02	-6.45E+00
4.53E-01	8.81E-01	-1.66E-02	-1.63E-02	-5.15E+00
4.54E-01	8.81E-01	-1.95E-02	-1.91E-02	-4.24E+00
4.55E-01	8.81E-01	-2.19E-02	-2.16E-02	-3.58E+00
4.55E-01	8.81E-01	-2.40E-02	-2.36E-02	-3.08E+00
4.57E-01	8.81E-01	-2.74E-02	-2.69E-02	-2.36E+00
4.58E-01	8.81E-01	-3.00E-02	-2.96E-02	-1.88E+00
4.59E-01	8.81E-01	-3.21E-02	-3.17E-02	-1.54E+00
4.60E-01	8.81E-01	-3.39E-02	-3.34E-02	-1.28E+00
4.62E-01	8.81E-01	-3.54E-02	-3.49E-02	-1.09E+00
4.64E-01	8.81E-01	-3.77E-02	-3.72E-02	-8.08E-01
4.67E-01	8.81E-01	-3.95E-02	-3.89E-02	-6.22E-01
4.69E-01	8.81E-01	-4.09E-02	-4.03E-02	-4.92E-01
4.72E-01	8.81E-01	-4.20E-02	-4.14E-02	-3.97E-01
4.74E-01	8.81E-01	-4.29E-02	-4.23E-02	-3.25E-01
4.79E-01	8.80E-01	-4.42E-02	-4.36E-02	-2.27E-01
4.84E-01	8.80E-01	-4.52E-02	-4.46E-02	-1.65E-01

4.89E-01	8.80E-01	-4.59E-02	-4.53E-02	-1.24E-01
4.94E-01	8.80E-01	-4.65E-02	-4.58E-02	-9.58E-02
4.99E-01	8.80E-01	-4.69E-02	-4.63E-02	-7.63E-02
5.09E-01	8.79E-01	-4.75E-02	-4.69E-02	-5.27E-02
5.19E-01	8.79E-01	-4.80E-02	-4.74E-02	-4.08E-02
5.29E-01	8.78E-01	-4.84E-02	-4.77E-02	-3.51E-02
5.39E-01	8.78E-01	-4.87E-02	-4.81E-02	-3.28E-02
5.49E-01	8.77E-01	-4.90E-02	-4.84E-02	-3.26E-02
5.69E-01	8.76E-01	-4.97E-02	-4.91E-02	-3.51E-02
5.89E-01	8.75E-01	-5.04E-02	-4.99E-02	-3.92E-02
6.09E-01	8.74E-01	-5.13E-02	-5.07E-02	-4.37E-02
6.29E-01	8.73E-01	-5.22E-02	-5.16E-02	-4.81E-02
6.49E-01	8.72E-01	-5.32E-02	-5.27E-02	-5.22E-02
6.89E-01	8.70E-01	-5.54E-02	-5.49E-02	-5.93E-02
7.29E-01	8.68E-01	-5.79E-02	-5.75E-02	-6.52E-02
7.69E-01	8.65E-01	-6.06E-02	-6.02E-02	-7.01E-02
8.09E-01	8.63E-01	-6.35E-02	-6.31E-02	-7.41E-02
8.89E-01	8.58E-01	-6.97E-02	-6.94E-02	-8.07E-02
9.69E-01	8.52E-01	-7.64E-02	-7.61E-02	-8.59E-02
1.05E+00	8.45E-01	-8.34E-02	-8.33E-02	-9.06E-02
1.21E+00	8.31E-01	-9.86E-02	-9.85E-02	-9.92E-02
1.37E+00	8.14E-01	-1.15E-01	-1.15E-01	-1.08E-01
1.53E+00	7.94E-01	-1.33E-01	-1.33E-01	-1.19E-01
1.69E+00	7.71E-01	-1.53E-01	-1.54E-01	-1.32E-01
1.85E+00	7.45E-01	-1.76E-01	-1.76E-01	-1.48E-01
2.01E+00	7.14E-01	-2.01E-01	-2.02E-01	-1.69E-01
2.17E+00	6.80E-01	-2.30E-01	-2.31E-01	-1.96E-01
2.33E+00	6.40E-01	-2.64E-01	-2.66E-01	-2.33E-01
2.65E+00	5.42E-01	-3.56E-01	-3.57E-01	-3.59E-01
2.97E+00	4.06E-01	-5.13E-01	-5.10E-01	-6.76E-01
3.13E+00	3.14E-01	-6.48E-01	-6.46E-01	-1.08E+00
3.21E+00	2.58E-01	-7.49E-01	-7.46E-01	-1.46E+00
3.29E+00	1.93E-01	-8.91E-01	-8.89E-01	-2.19E+00
3.33E+00	1.56E-01	-9.92E-01	-9.92E-01	-2.95E+00
3.35E+00	1.35E-01	-1.06E+00	-1.06E+00	-3.66E+00
3.37E+00	1.13E-01	-1.14E+00	-1.15E+00	-5.07E+00
3.38E+00	1.02E-01	-1.20E+00	-1.22E+00	-6.45E+00
3.39E+00	8.89E-02	-1.28E+00	-1.31E+00	-8.97E+00
3.40E+00	7.52E-02	-1.39E+00	-1.44E+00	-1.40E+01
3.41E+00	5.97E-02	-1.58E+00	-1.69E+00	-2.53E+01
3.41E+00	5.07E-02	-1.73E+00	-1.89E+00	-3.53E+01
3.42E+00	4.06E-02	-1.94E+00	-2.18E+00	-4.87E+01
3.42E+00	3.49E-02	-2.07E+00	-2.37E+00	-5.49E+01

3.42E+00	2.87E-02	-2.21E+00	-2.57E+00	-5.64E+01
3.43E+00	2.20E-02	-2.34E+00	-2.78E+00	-4.33E+01
3.43E+00	1.85E-02	-2.38E+00	-2.86E+00	-2.41E+01
3.43E+00	1.49E-02	-2.39E+00	-2.90E+00	1.14E+01
3.43E+00	1.13E-02	-2.34E+00	-2.87E+00	7.42E+01
3.43E+00	7.80E-03	-2.19E+00	-2.71E+00	1.83E+02
3.43E+00	4.64E-03	-1.85E+00	-2.31E+00	3.72E+02
3.43E+00	2.19E-03	-1.20E+00	-1.51E+00	7.01E+02
3.43E+00	1.76E-03	-9.61E-01	-1.22E+00	8.17E+02
3.43E+00	1.43E-03	-6.85E-01	-8.70E-01	9.51E+02