

APPENDIX D

D.ROUGHNESS MEASUREMENTS FOR NERRIGUNDAH CATCHMENT

Table D.1: Summary of roughness data for the Nerrigundah catchment on Julian day 249 1997; root mean square roughness height σ and correlation length l with upper and lower confidence limits.

Moisture Profile	Direction	Segment	rms (cm)	lower l (cm)	l (cm)	upper l (cm)
2	N-S	1	0.664	10.08	15.65	22.41
		2	0.829	3.81	5.71	8.40
	E-W	1	0.918	4.22	8.31	14.95
		2	0.453	2.45	3.05	4.50
	NE-SW	1	0.539	3.20	5.36	8.65
		2	0.546	6.41	9.14	21.16
5	N-S	1	0.419	2.00	2.96	10.05
		2	0.464	2.51	3.91	5.86
	E-W	1	0.400	6.88	9.81	13.23
		2	0.341	7.29	9.95	13.53
	NE-SW	1	0.398	4.41	7.59	11.18
		2	0.327	4.05	7.01	10.53
7	N-S	1	0.399	2.69	4.26	8.58
		2	0.518	2.07	10.56	21.08
	E-W	1	0.649	1.71	2.71	15.14
		2	0.588	2.16	2.76	4.08
	NE-SW	1	0.451	4.36	8.55	14.46
		2	0.766	2.46	5.85	22.05
9	N-S	1	0.643	2.11	3.32	5.54
		2	0.806	7.28	15.81	23.72
	E-W	1	0.714	4.05	5.87	8.76
		2	1.082	1.29	3.31	5.55
	NE-SW	1	0.860	3.09	6.58	10.96
		2	0.699	2.25	3.29	8.83
8	N-S	1	1.312	0	3.11	8.79
		2	1.040	2.70	3.70	5.18
	E-W	1	1.398	2.11	4.24	7.78
		2	1.156	1.46	3.48	5.96
	NE-SW	1	1.289	1.31	1.78	7.04
		2	1.106	0	4.04	7.58

Table D.2: Summary of roughness data for the Nerrigundah catchment on Julian day 265 1997; root mean square roughness height σ and correlation length l with upper and lower confidence limits.

Moisture Profile	Direction	Segment	rms (cm)	lower l (cm)	l (cm)	upper l (cm)
2	N-S	1	0.702	3.84	6.00	8.79
		2	0.728	1.79	2.93	3.97
	E-W	1	0.579	2.59	3.69	4.69
		2	0.645	1.55	2.36	15.50
	NE-SW	1	0.421	3.43	4.86	6.71
		2	0.710	2.54	3.59	5.03
5	N-S	1	0.432	3.92	5.33	7.32
		2	0.464	5.14	7.94	11.65
	E-W	1	0.587	1.434	2.80	12.34
		2	0.328	7.18	11.77	17.98
	NE-SW	1	0.405	3.84	6.83	11.75
		2	0.422	10.39	16.57	23.26
7	N-S	1	0.540	11.47	17.36	24.50
		2	0.609	4.23	6.06	8.60
	E-W	1	0.646	2.54	4.02	5.81
		2	0.606	5.25	9.15	13.89
	NE-SW	1	0.818	1.41	2.36	6.93
		2	0.593	2.72	6.04	10.45
9	N-S	1	0.610	1.60	4.03	8.07
		2	0.597	2.42	3.46	4.45
	E-W	1	0.474	2.63	3.75	5.25
		2	0.454	5.18	15.00	23.25
	NE-SW	1	0.434	2.63	5.19	8.24
		2	0.567	1.39	2.48	5.00
8	N-S	1	0.899	4.50	6.55	9.14
		2	1.329	1.38	3.49	5.95
	E-W	1	0.792	4.88	7.40	12.96
		2	0.820	1.58	3.37	6.19
	NE-SW	1	1.022	3.28	7.29	12.66
		2	0.948	1.51	3.17	5.47

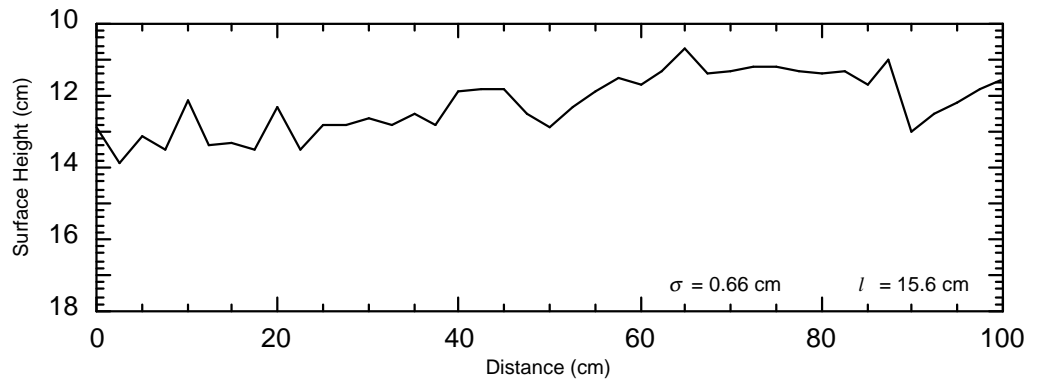


Figure D.1: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

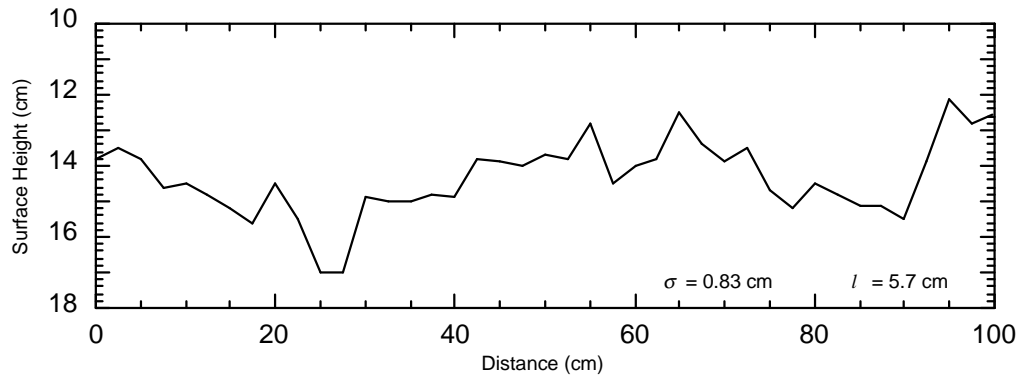


Figure D.2: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

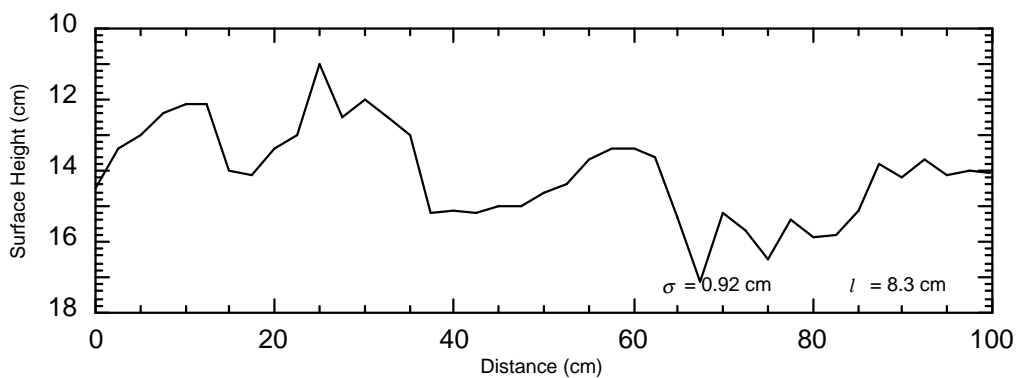


Figure D.3: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

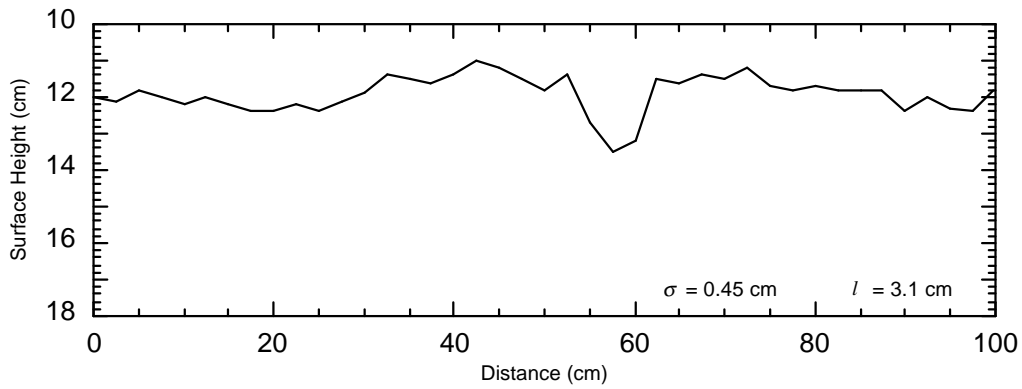


Figure D.4: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

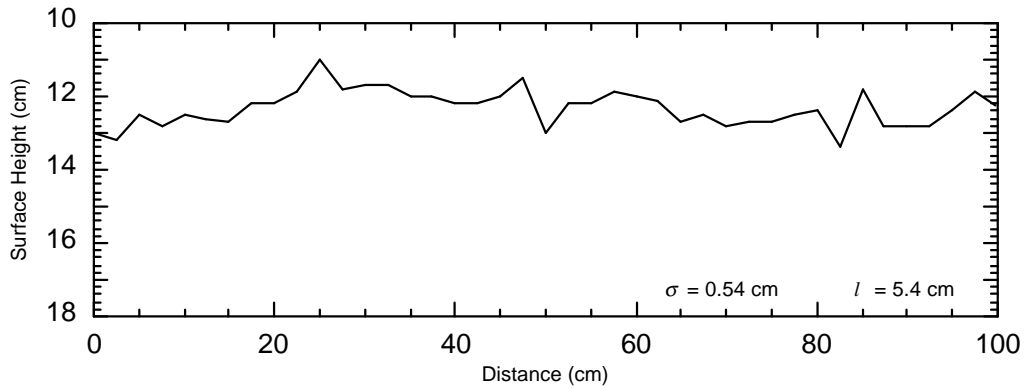


Figure D.5: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

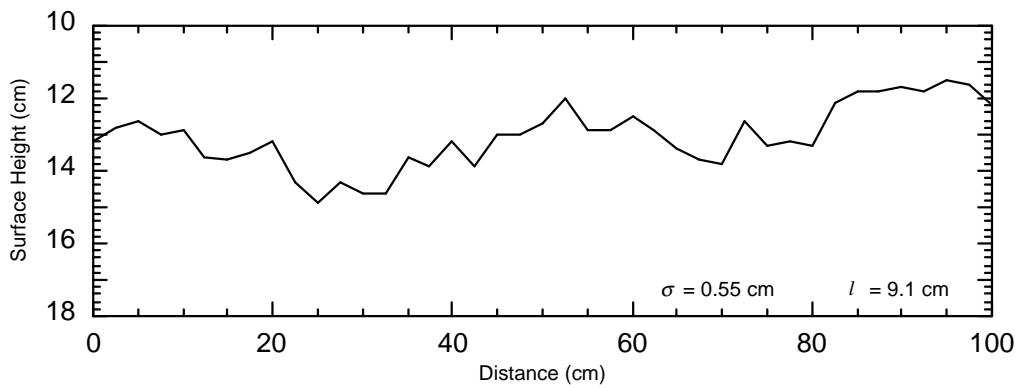


Figure D.6: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 2 on Julian day 249 1997 with rms roughness height σ and correlation length l .

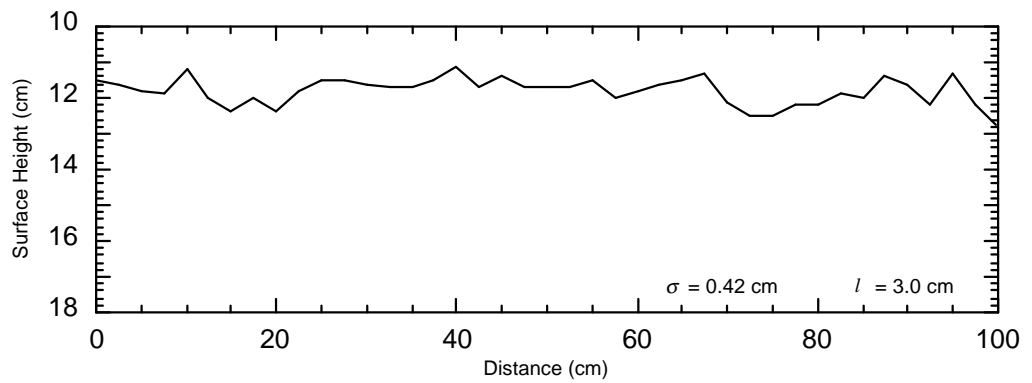


Figure D.7: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

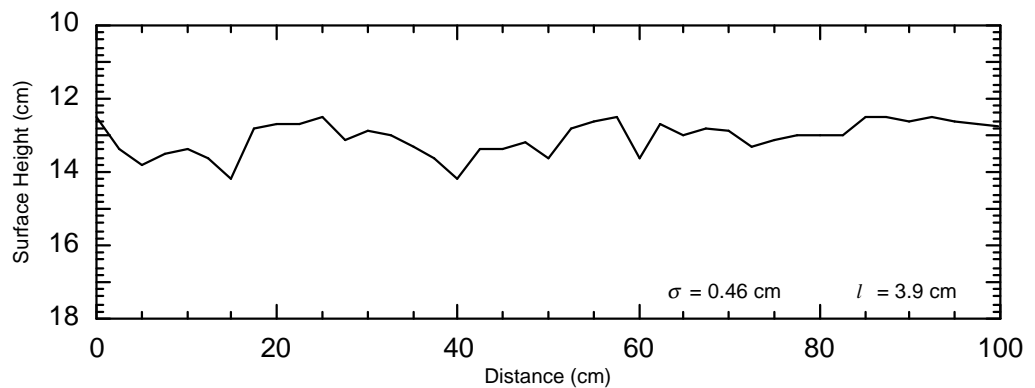


Figure D.8: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

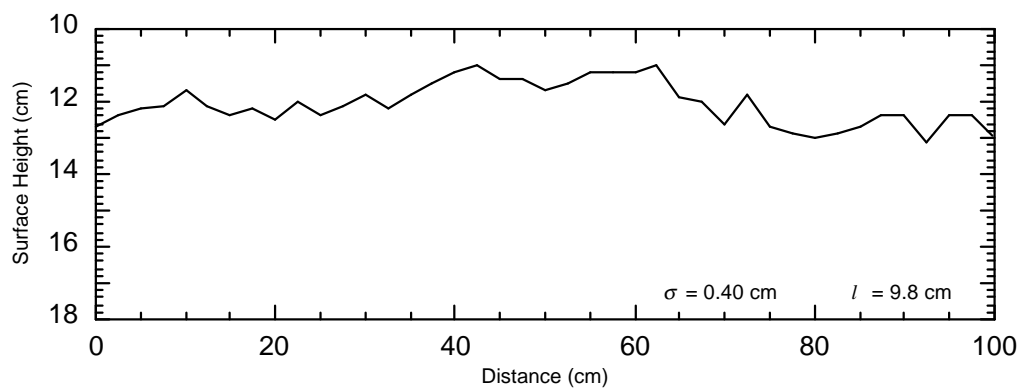


Figure D.9: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

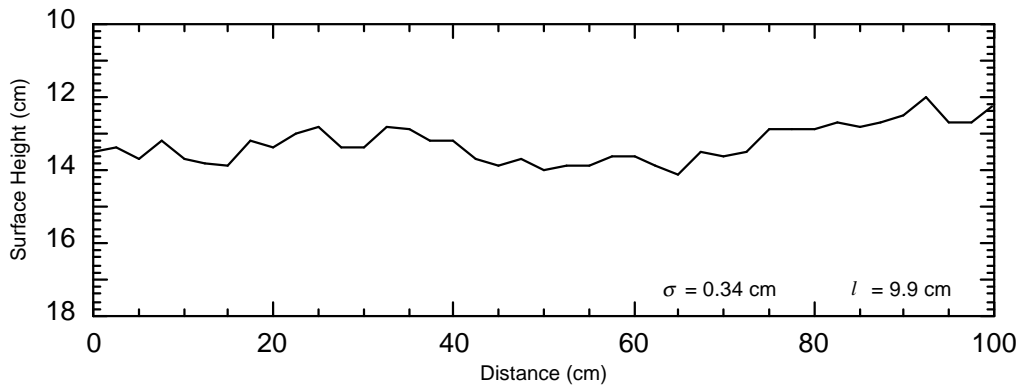


Figure D.10: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

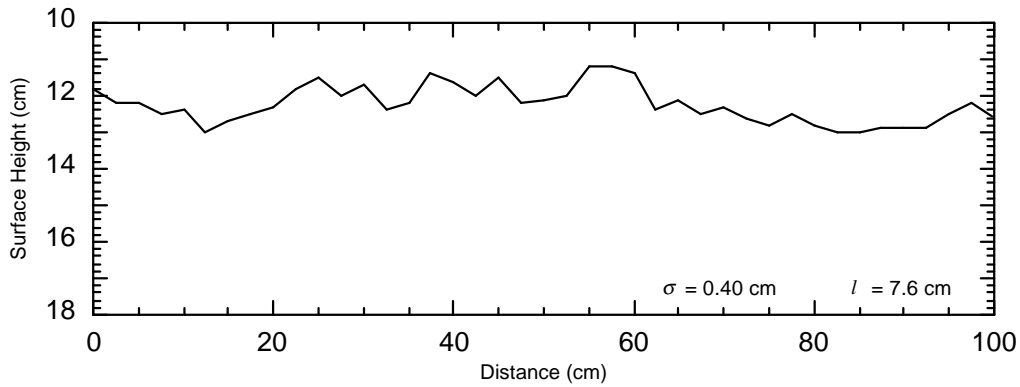


Figure D.11: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

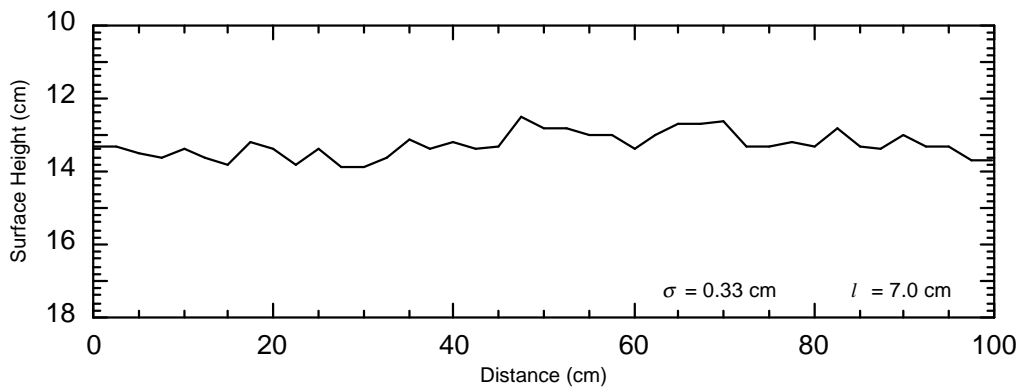


Figure D.12: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 5 on Julian day 249 1997 with rms roughness height σ and correlation length l .

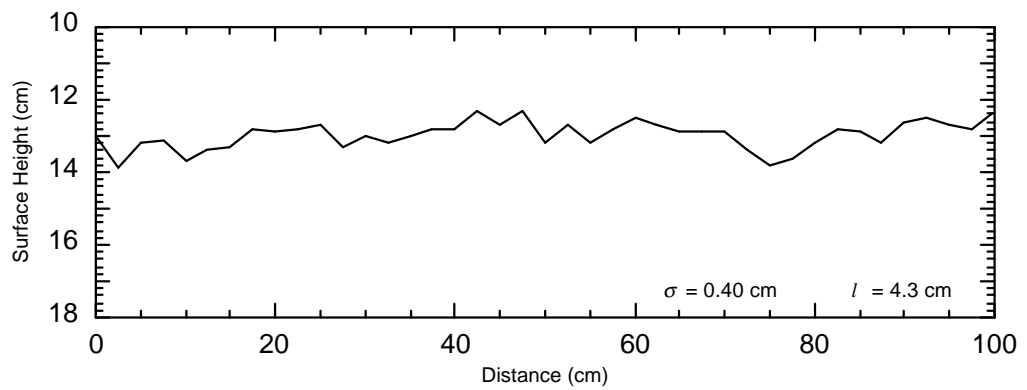


Figure D.13: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

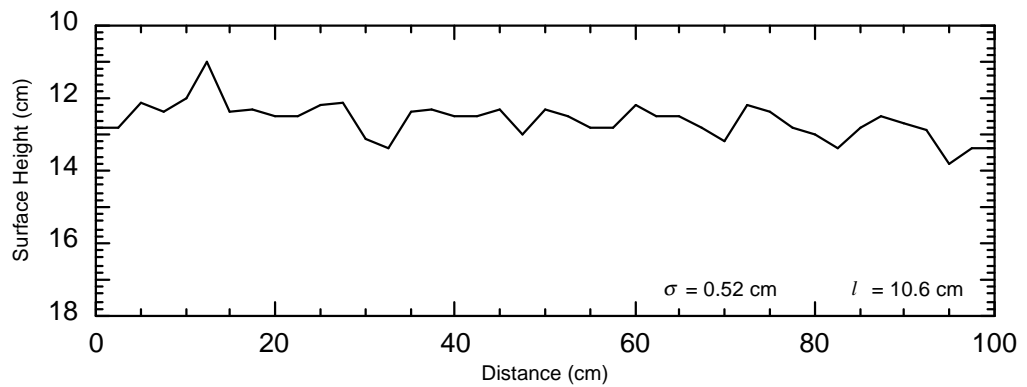


Figure D.14: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

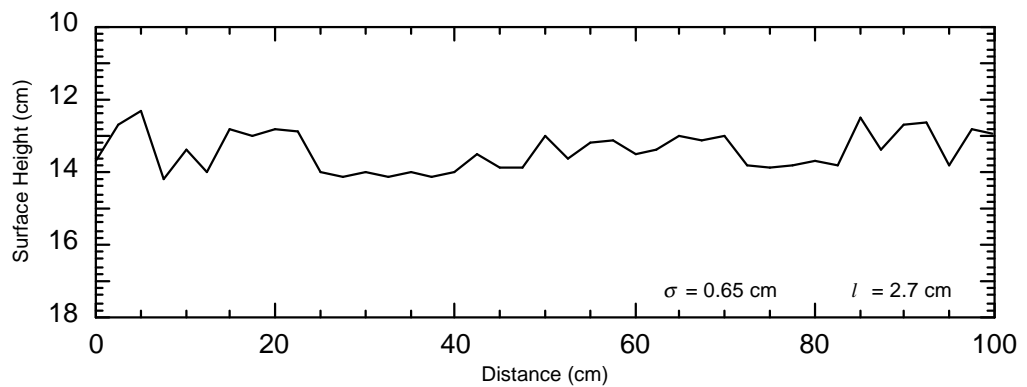


Figure D.15: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

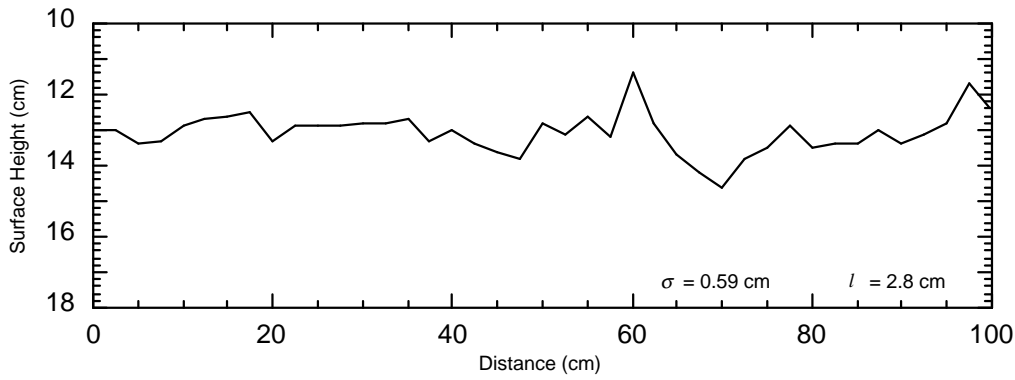


Figure D.16: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

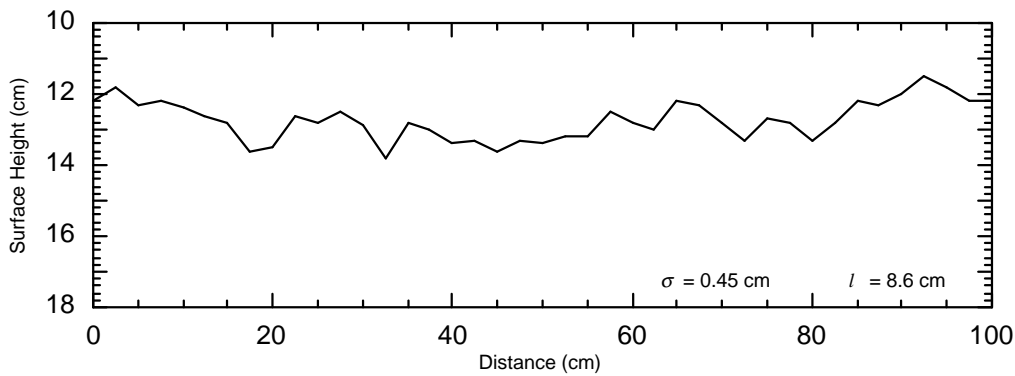


Figure D.17: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

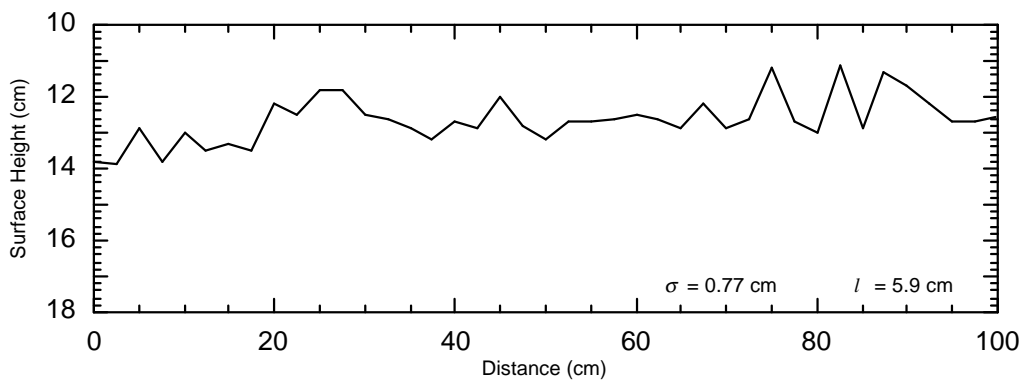


Figure D.18: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 7 on Julian day 249 1997 with rms roughness height σ and correlation length l .

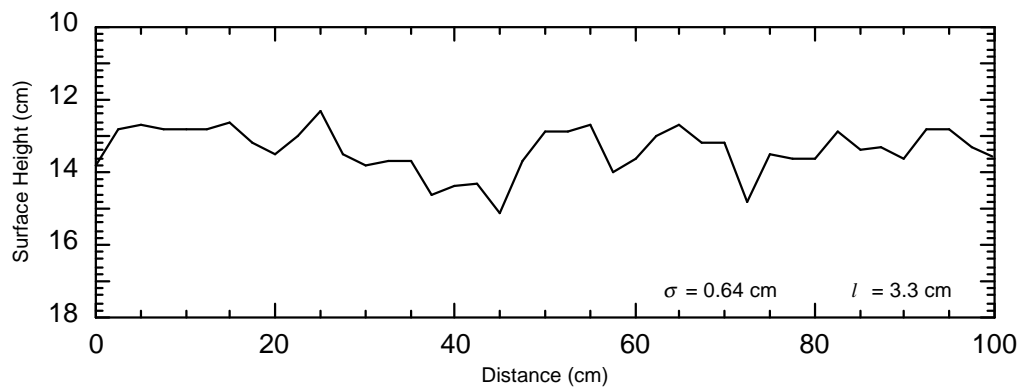


Figure D.19: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

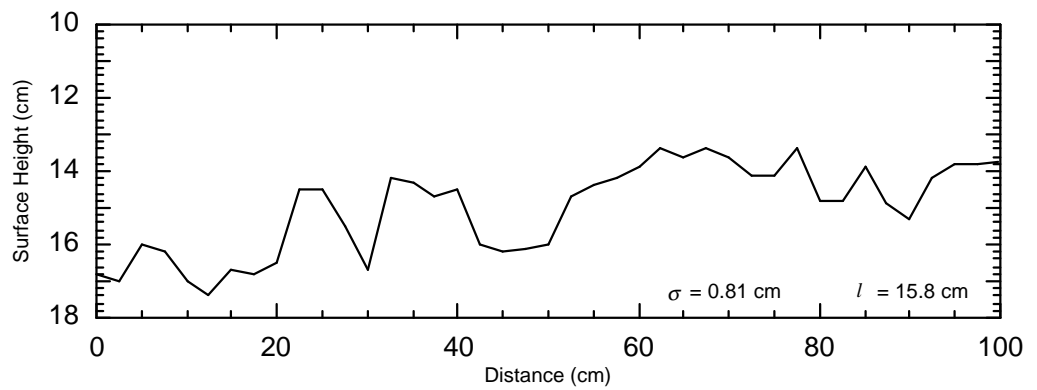


Figure D.20: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

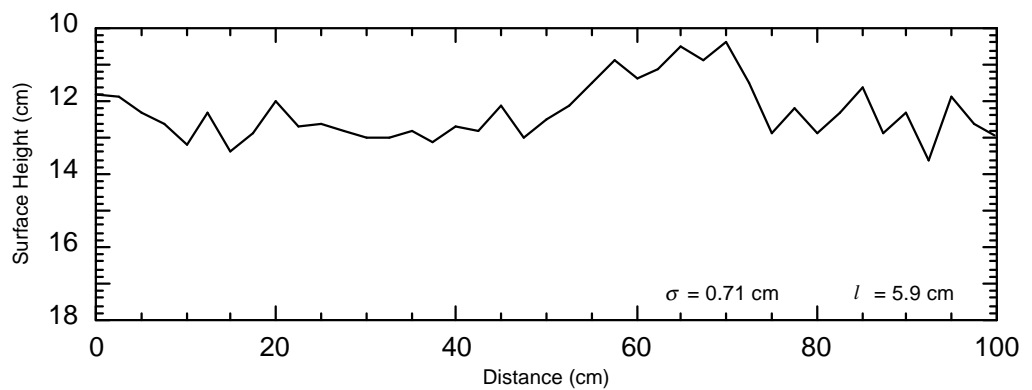


Figure D.21: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

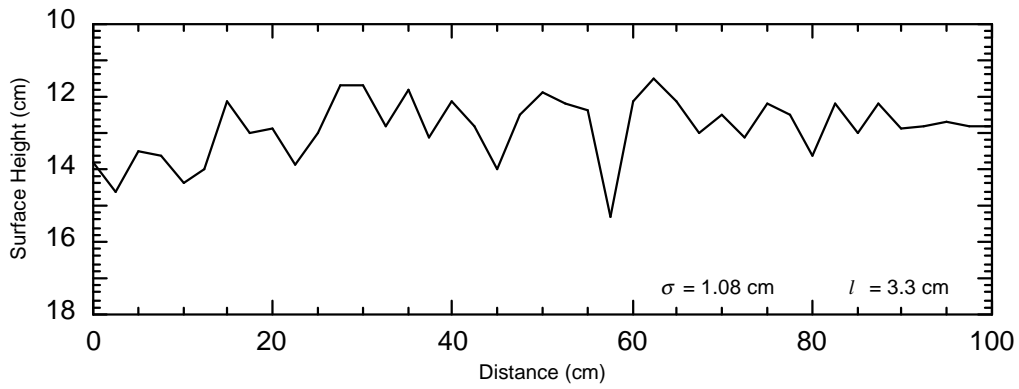


Figure D.22: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

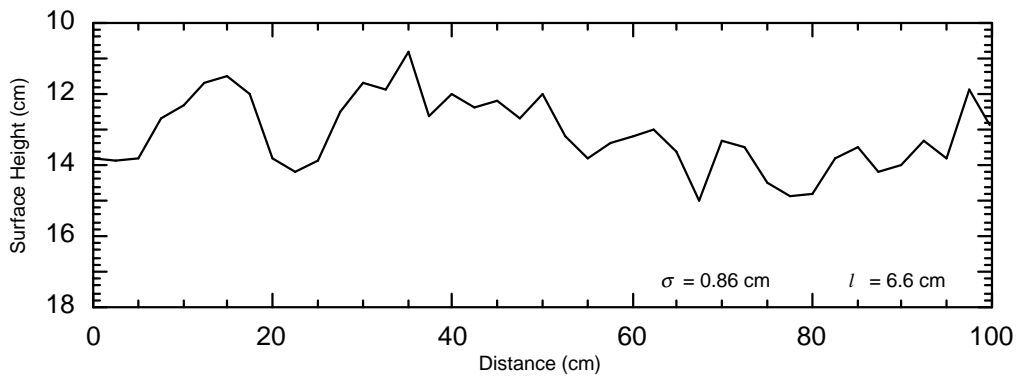


Figure D.23: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

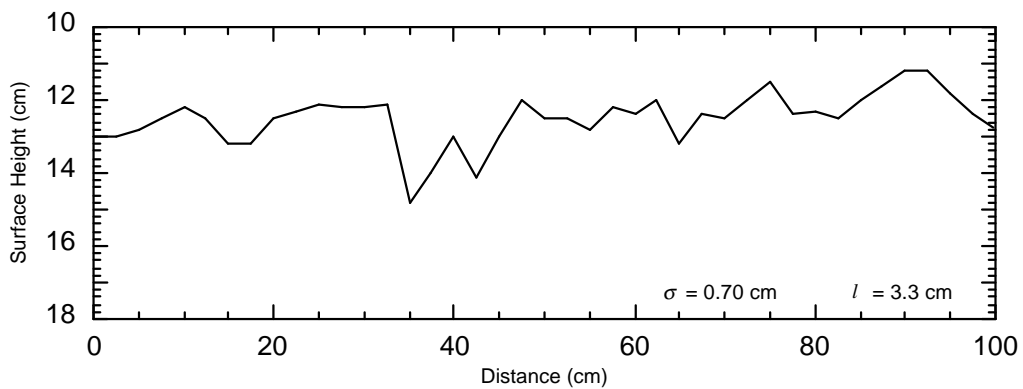


Figure D.24: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 9 on Julian day 249 1997 with rms roughness height σ and correlation length l .

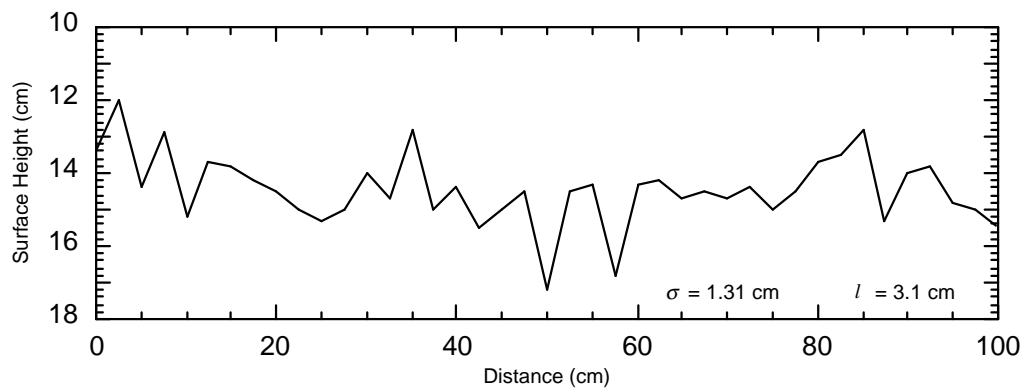


Figure D.25: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

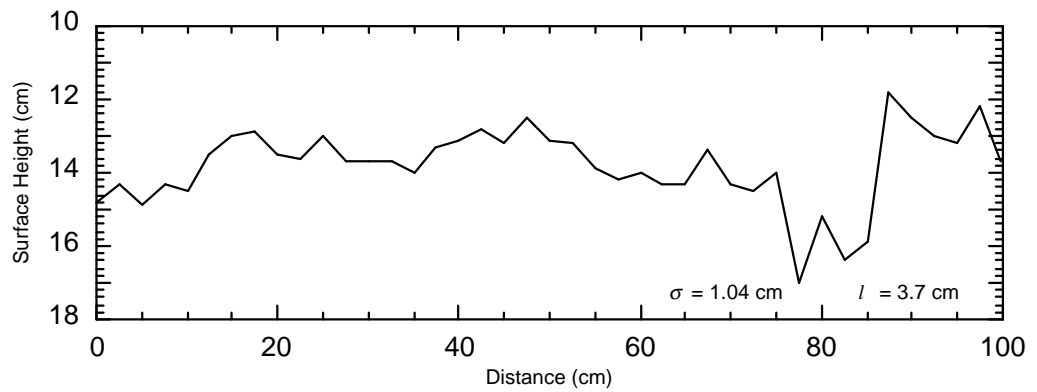


Figure D.26: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

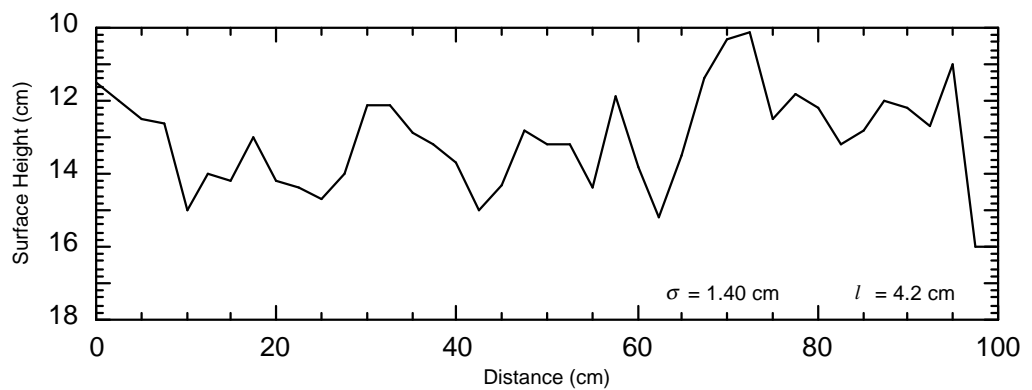


Figure D.27: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

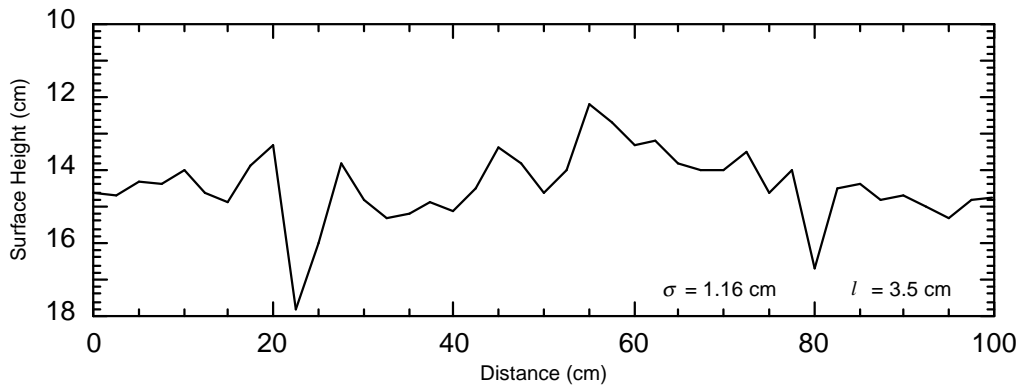


Figure D.28: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

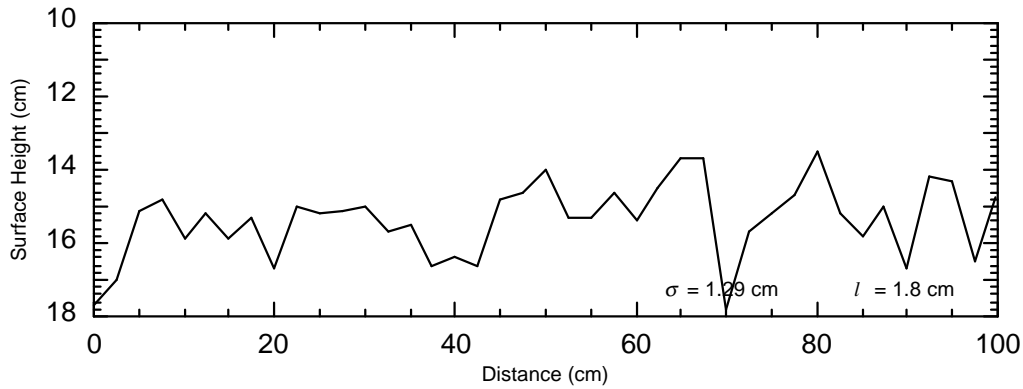


Figure D.29: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

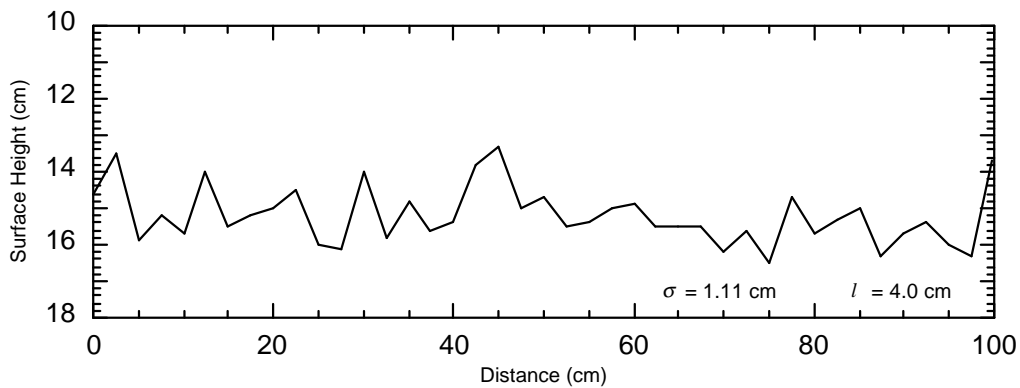


Figure D.30: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 8 on Julian day 249 1997 with rms roughness height σ and correlation length l .

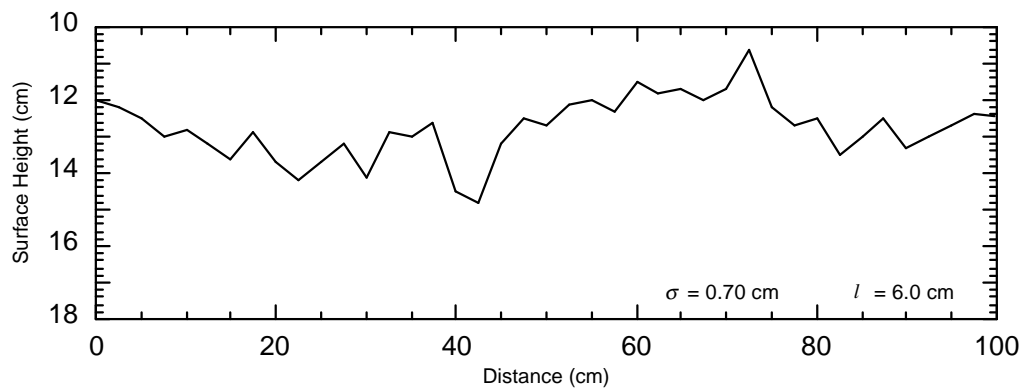


Figure D.31: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

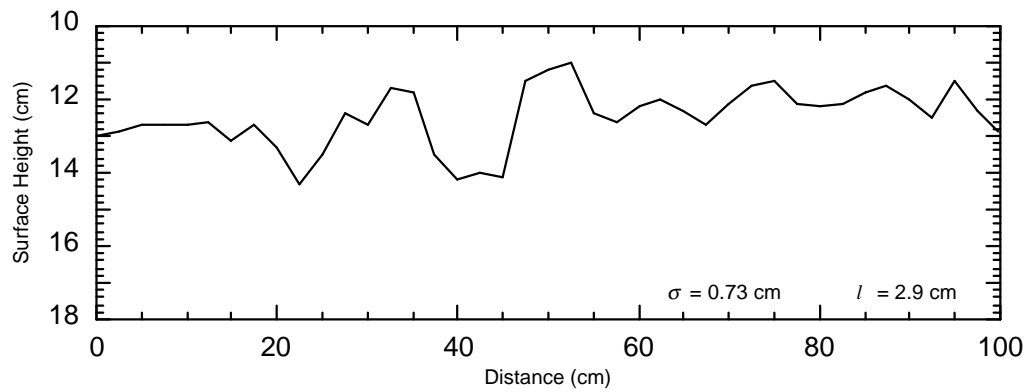


Figure D.32: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

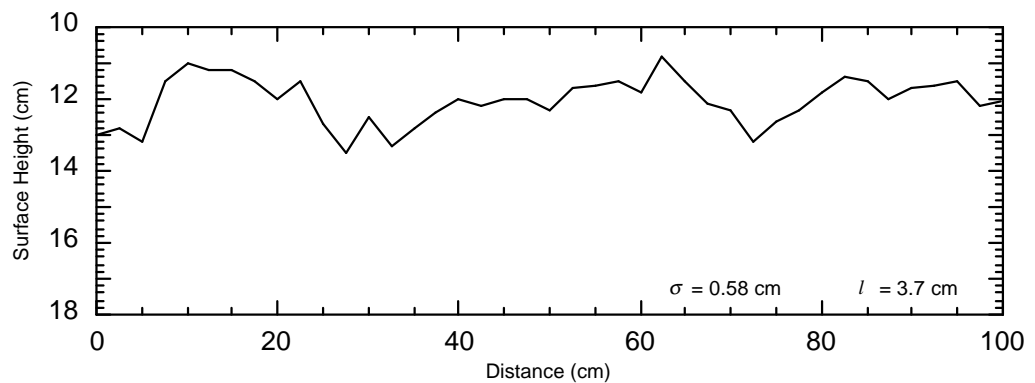


Figure D.33: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

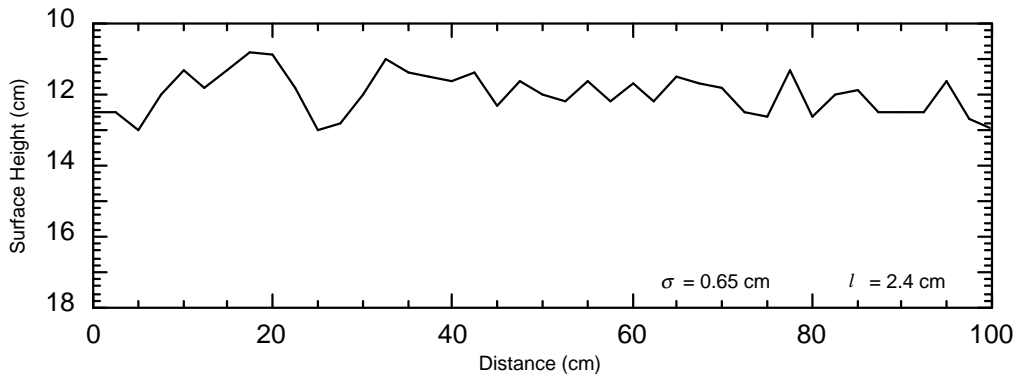


Figure D.34: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

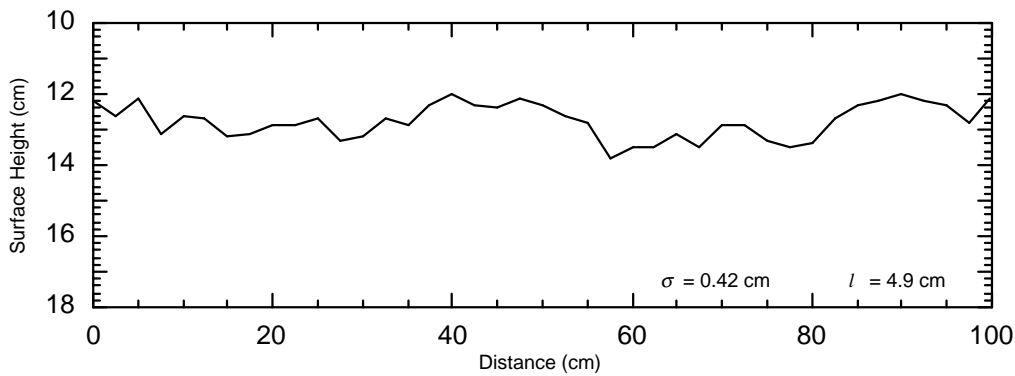


Figure D.35: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

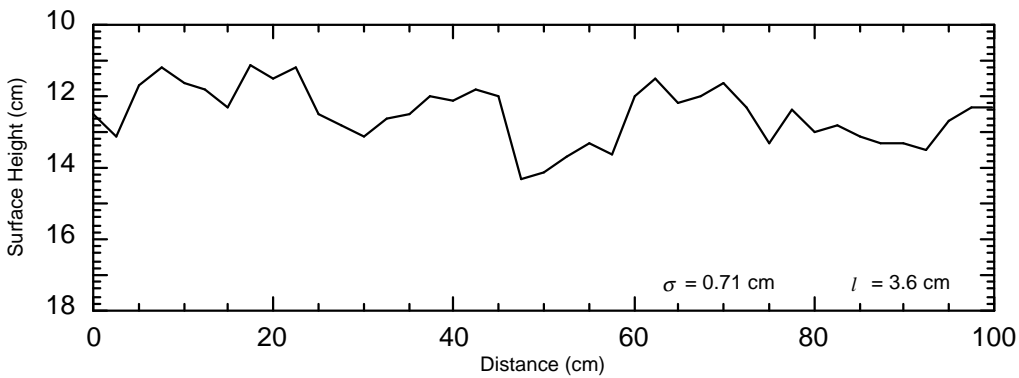


Figure D.36: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 2 on Julian day 265 1997 with rms roughness height σ and correlation length l .

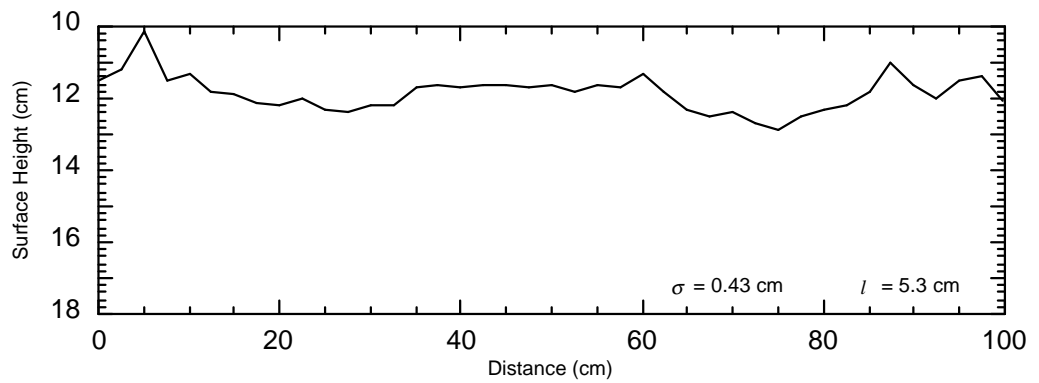


Figure D.37: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

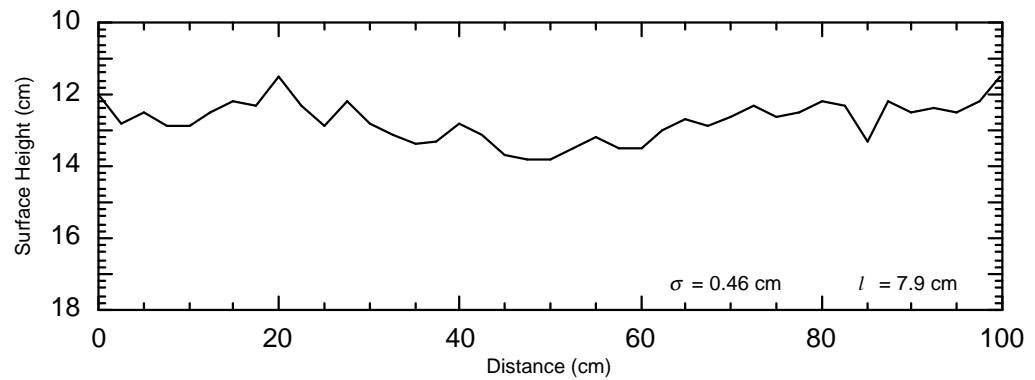


Figure D.38: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

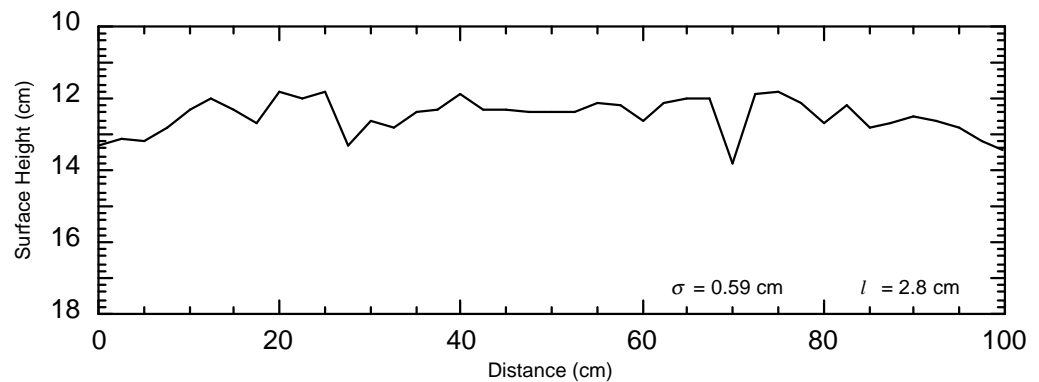


Figure D.39: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

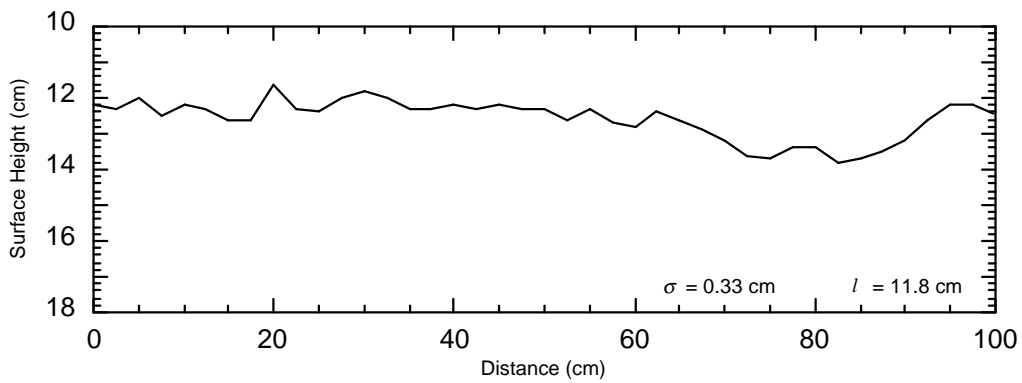


Figure D.40: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

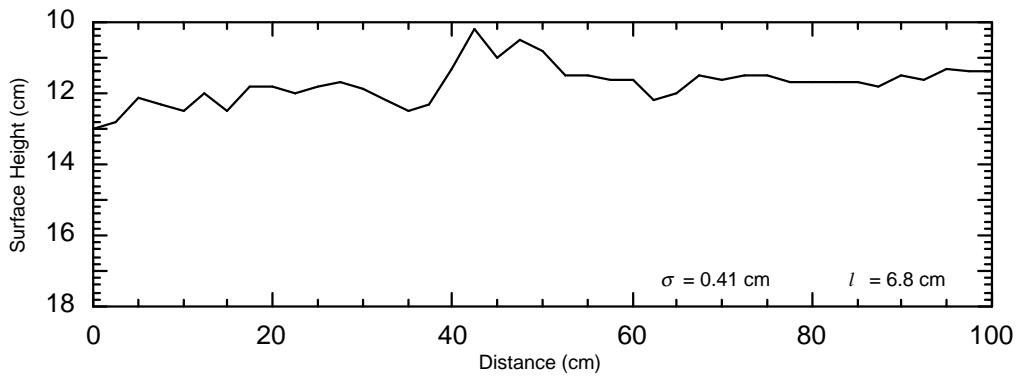


Figure D.41: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

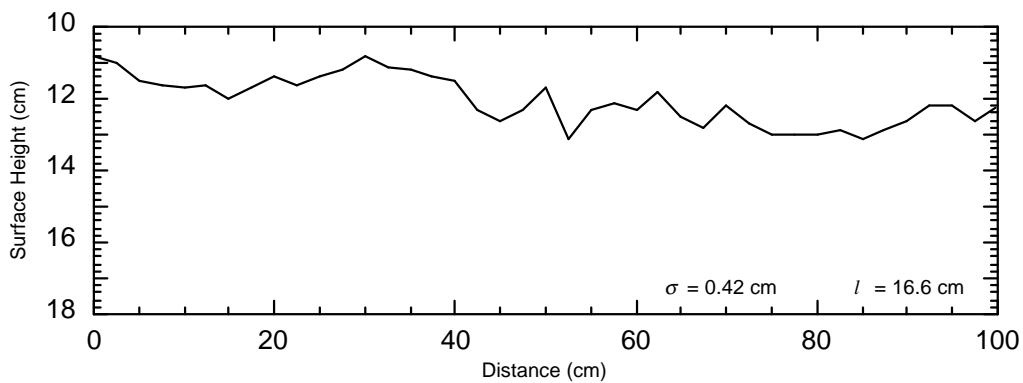


Figure D.42: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 5 on Julian day 265 1997 with rms roughness height σ and correlation length l .

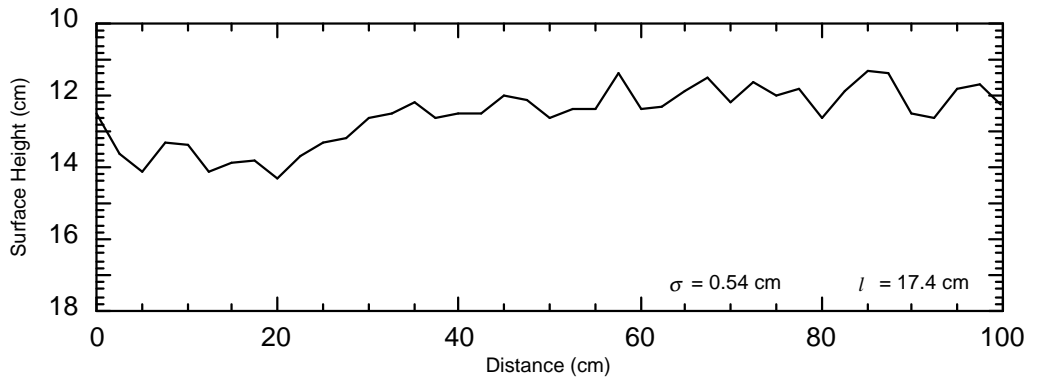
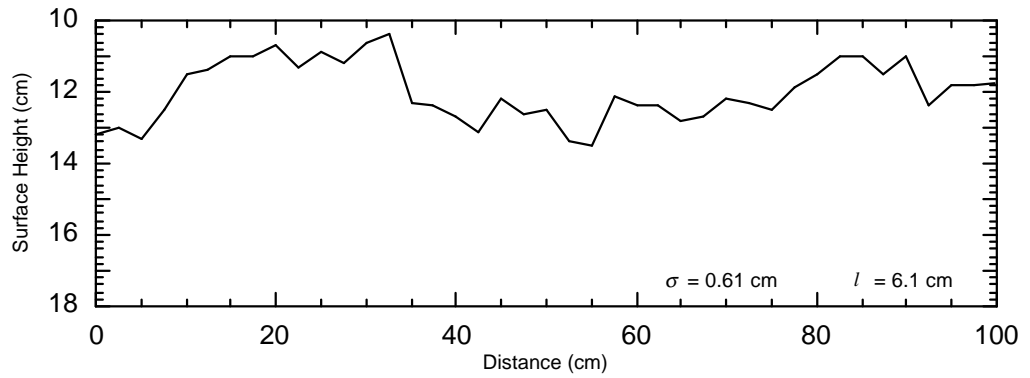


Figure D.43: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .



44: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .

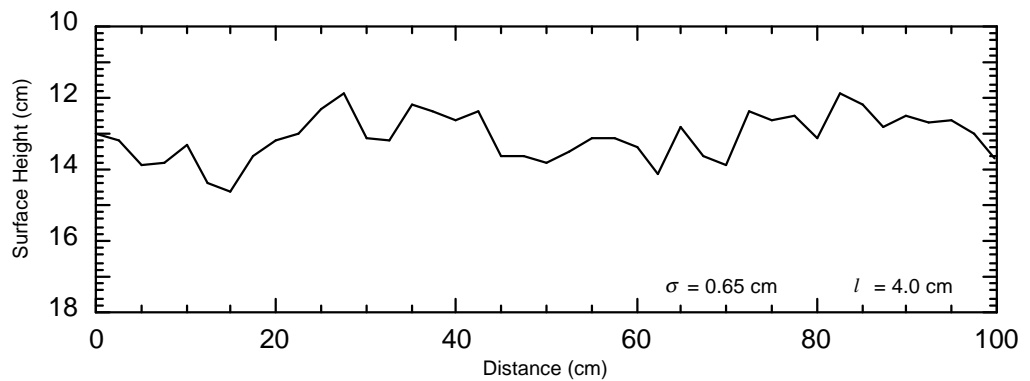


Figure D.45: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .

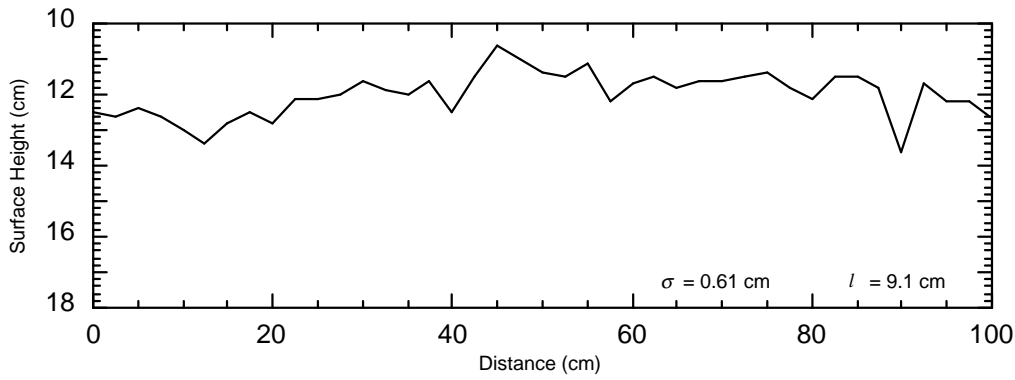


Figure D.46: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .

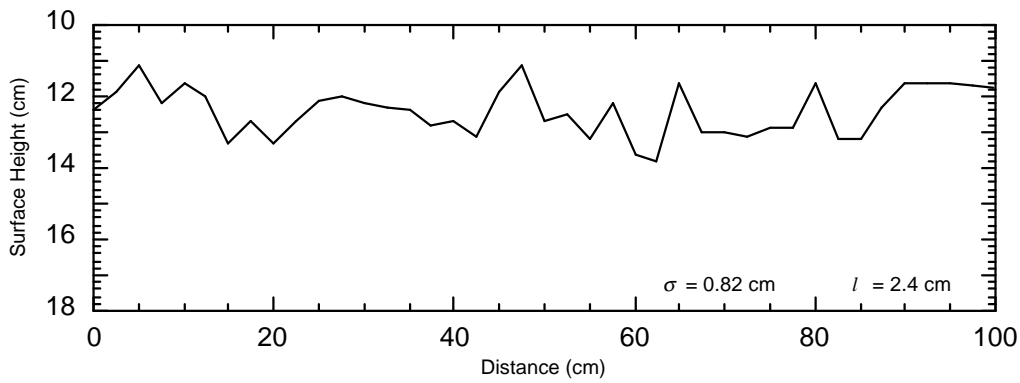


Figure D.47: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .

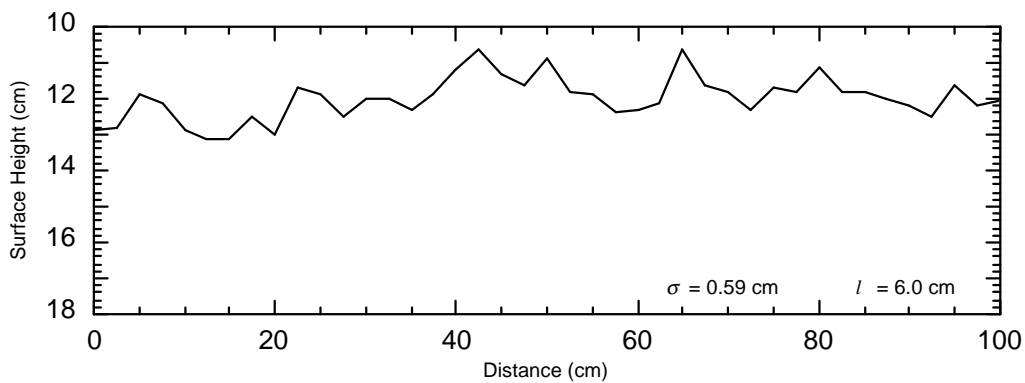


Figure D.48: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 7 on Julian day 265 1997 with rms roughness height σ and correlation length l .

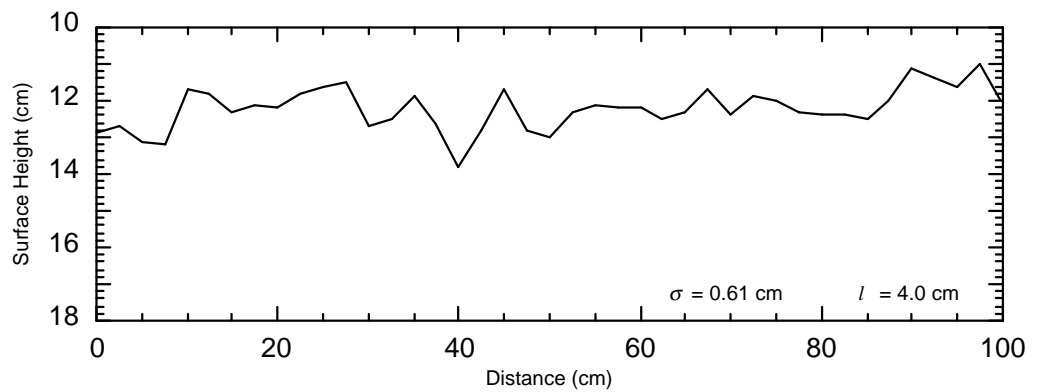


Figure D.49: Roughness data for first 1 m profile segment in a north-south direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

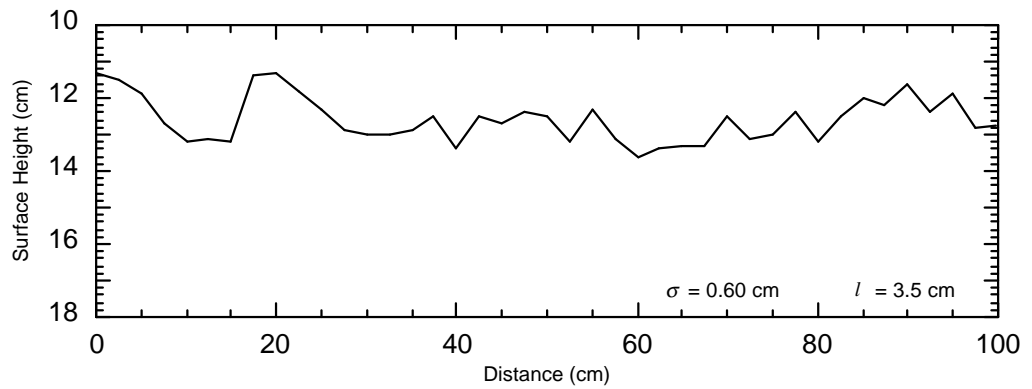


Figure D.50: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

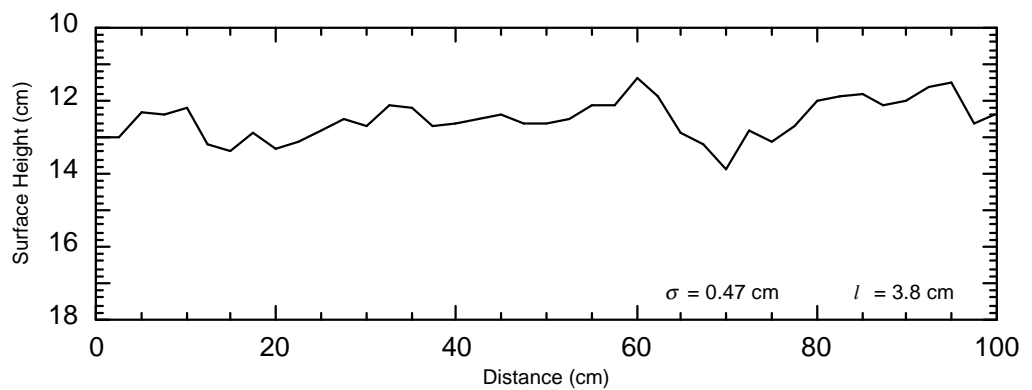


Figure D.51: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

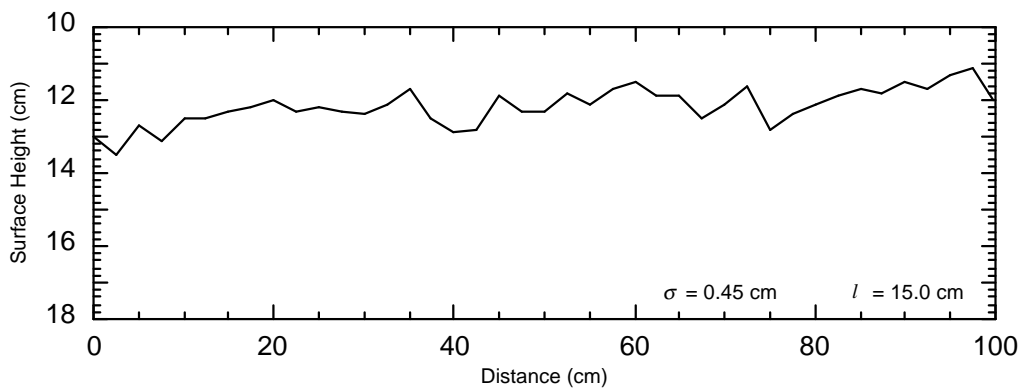


Figure D.52: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

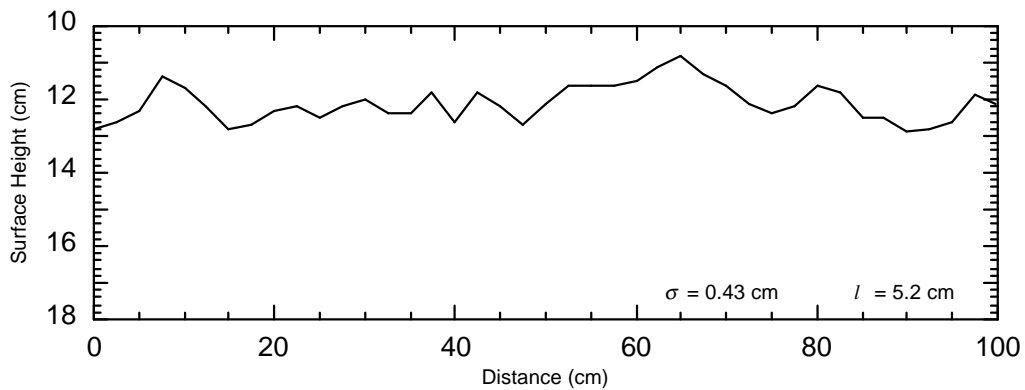


Figure D.53: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

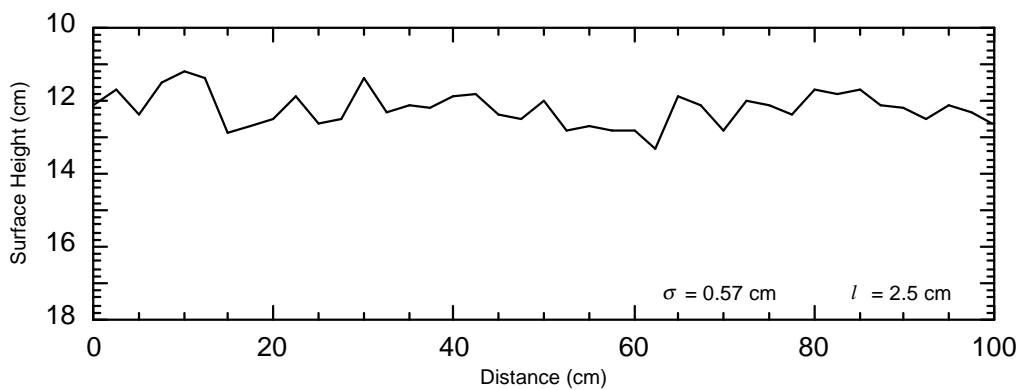


Figure D.54: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 9 on Julian day 265 1997 with rms roughness height σ and correlation length l .

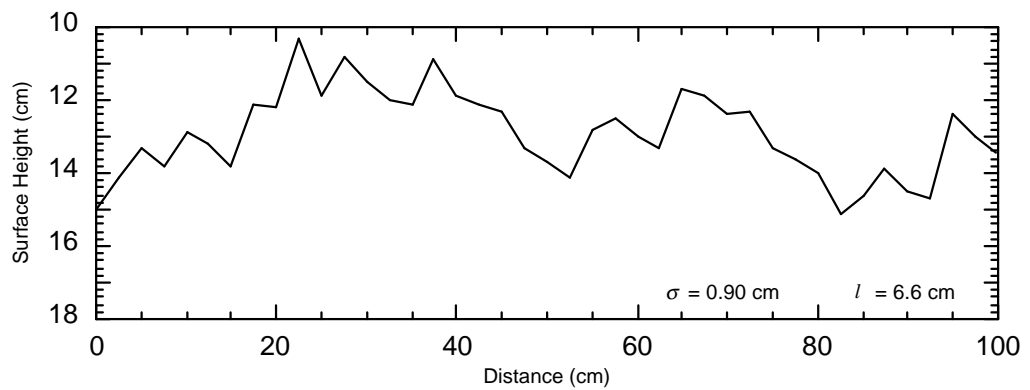


Figure D.55: Roughness data for first 1 m profile segment in a north- south direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .

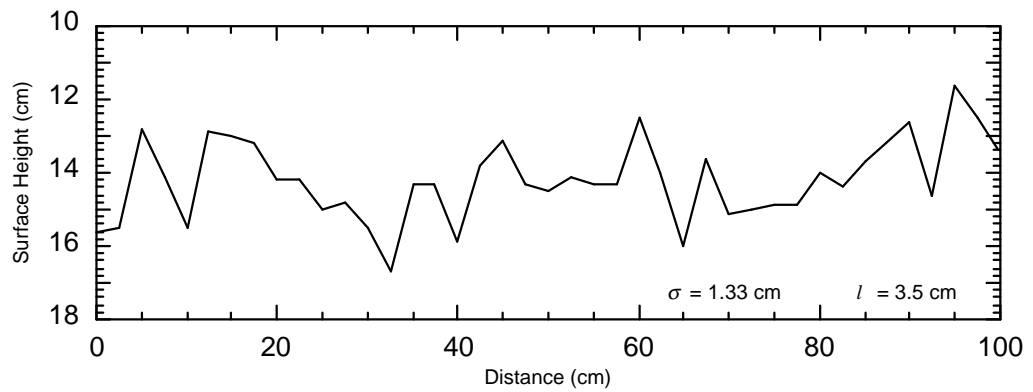


Figure D.56: Roughness data for second 1 m profile segment in a north-south direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .

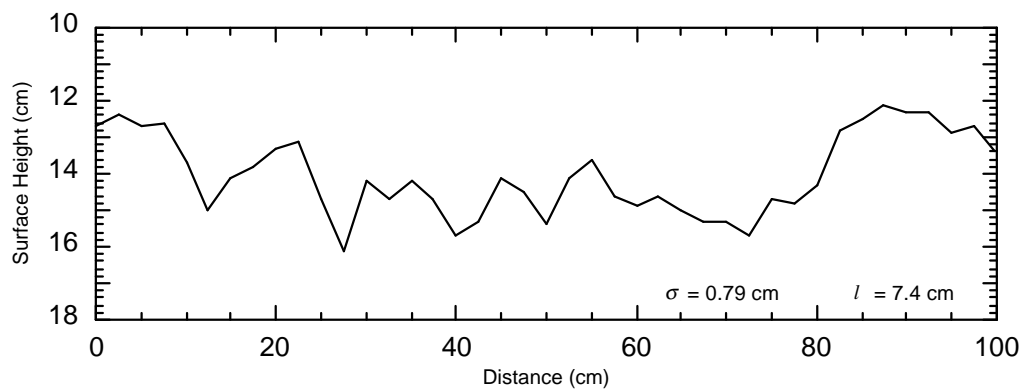


Figure D.57: Roughness data for first 1 m profile segment in an east-west direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .

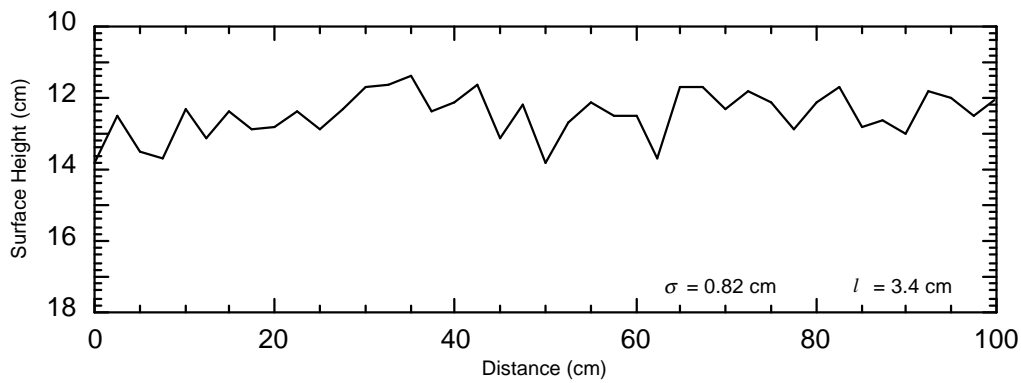


Figure D.58: Roughness data for second 1 m profile segment in an east-west direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .

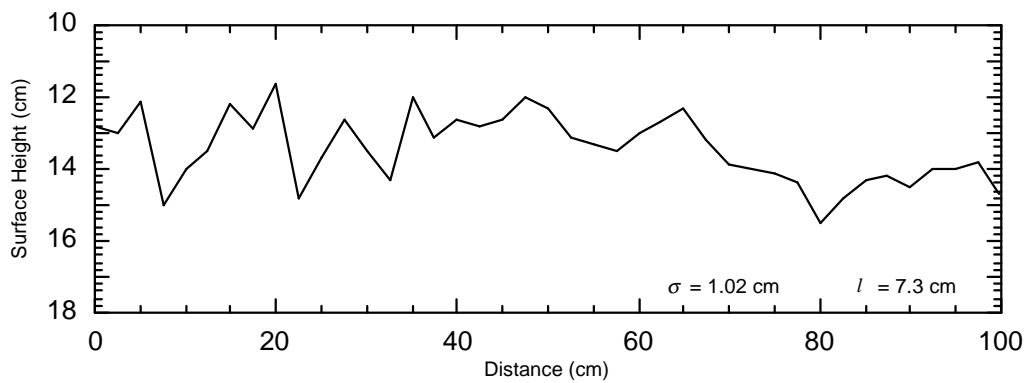


Figure D.59: Roughness data for first 1 m profile segment in a north-east south-west direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .

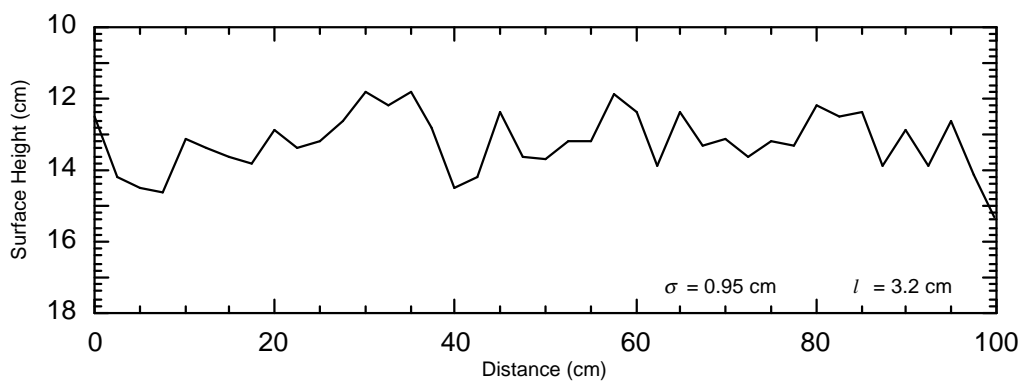


Figure D.60: Roughness data for second 1 m profile segment in a north-east south-west direction at soil moisture profile site 8 on Julian day 265 1997 with rms roughness height σ and correlation length l .