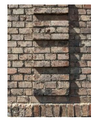
220906-annex 1 - final-prediction-tests-russ-tariq-macad22

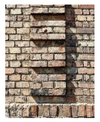
modell	trained data	prediction images	GT - Render DS BATCH	nr	simulation	scaling	prediction	% (inaccuracy)
	8-F-SFB-1-TEX-2050	0-GT-render			SOLAR_IRR_TOTAL			
OUR				2002	278740000	2787.4	2814.0369	-0.92
				2003	286030000	2860.3	2797.2712	2.17
				2004	273440000	2734.4	2803.7158	-2.39
				2005	290340000	2903.4	2791.6782	3.85
				2006	276630000	2766.3	2783.117	-0.58
				2007	275850000	2758.5	2821.3137	-2.17
			v2					
					SOLAR_IRR_TOTAL			
				2002	278740000	27874	28140.61	0.92
				2003	286030000	28603	27979.047	2.15
				2004	273440000	27344	28043.52	2.41
				2005	290340000	29034	27918.521	3.85
				2006	276630000	27663	27839.791	0.61
				2007	275850000	27585	28215.03	2.17
			v3 - RESNET50					
					SOLAR_IRR_TOTAL			
RES				2002	278740000	2787.4	2741.5447	1.58
				2003	286030000	2860.3	2734.2954	4.34
				2004	273440000	2734.4	2711.8188	0.78
				2005	290340000	2903.4	2712.5466	6.58
				2006	276630000	2766.3	2731.9841	1.18
				2007	275850000	2758.5	2740.2642	0.63

colour coding

- new test
- new model
- XX resluts clore to or above 90%

modell	trained data	prediction images	GT - Real Render						
	8-F-SFB-1-TEX-2050	0-GT-render			SOLAR_IRR_TOTAL			30.4 = 1 %	
OUR			1-SFB-TEX	2002	278740000	2787.4	2814.6	0.89	99.11
			2-SFB-TEX	2003	286030000	2860.3	2700.9	5.24	94.76
			3-SFB-TEX	2004	273440000	2734.4	2586.6	4.86	95.14
			4-SFB-TEX	2005	290340000	2903.4	2918.1	0.48	99.52
			5-SFB-TEX	2006	276630000	2766.3	2821.6	1.82	98.18
			6-SFB-TEX	2007	275850000	2758.5	2879.1	3.97	96.03
			7-RR-brunomarekallee		25382	2538.2	2641.5	3.40	96.60
			8-RR-brunomarekallee		25382	2538.2	2797.4	8.53	91.47
			9-RR-engerthstrasse		27842	2784.2	2803.9	0.65	99.35
			10-RR-dresdnerstrasse		30543	3054.3	2791.7	8.64	91.36
			11-RR-laboratoryV1		29575	2957.5	2782.7	5.75	94.25
			12-RR-laboratoryV2		29913	2991.3	2821.6	5.58	94.42
			13-RR-laboratoryV3		30971	3097.1	2973.5	4.07	95.93
			14-RR-online1-X		27457	2745.7	2973.5	7.49	92.51
			15-RR-online2 - ll		29266	2926.6	2902.0	0.81	99.19
			average prediction accuracy					**4.15**	**95.85**

modell	trained data	prediction images	GT - Real Images						
	8-F-SFB-1-TEX-2050	0-GT-real							
OUR			6-RR-brunomarekallee		25382	2538.2	2372.5	5.45	94.55
			7-RR-brunomarekallee		25382	2538.2	1390.7	37.75	62.25
			8-RR-brunomarekallee		25382	2538.2	1656.7	29.00	71.00
			9-RR-engerthstrasse		27842	2784.2	1550.2	40.59	59.41
			10-RR-dresdnerstrasse		30543	3054.3	2569.0	15.96	84.04
			11-RR-laboratoryV1		29575	2957.5	2125.1	27.38	72.62
			12-RR-laboratoryV2		29913	2991.3	2209.0	25.73	74.27
			13-RR-laboratoryV3		30971	3097.1	2209.0	29.21	70.79
			14-RR-online1-X		27457	2745.7	2455.6	9.54	90.46
			15-RR-online2 - ll		29266	2926.6	1851.7	35.36	64.64
			average prediction accuracy					**25.60**	**74.40**

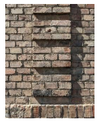
modell	trained data	prediction images	GT - Real Images						
	8-F-SFB-1-TEX-2050	a1-GT-real-HIST							
OUR			6-RR-brunomarekallee		25382	2538.2	2077.2	15.17	84.83
			7-RR-brunomarekallee		25382	2538.2	2016.7	17.15	82.85
			8-RR-brunomarekallee		25382	2538.2	2059.7	15.74	84.26
			9-RR-engerthstrasse		27842	2784.2	2048.7	24.19	75.81
			10-RR-dresdnerstrasse		30543	3054.3	2124.2	30.60	69.40
			11-RR-laboratoryV1		29575	2957.5	2097.9	28.27	71.73
			12-RR-laboratoryV2		29913	2991.3	2137.6	28.08	71.92
			13-RR-laboratoryV3		30971	3097.1	2137.6	31.56	68.44
			14-RR-online1-X		27457	2745.7	2192.2	18.21	81.79
			15-RR-online2 - ll		29266	2926.6	2113.1	26.76	73.24
			average prediction accuracy					**23.57**	**76.43**

modell	trained data	prediction images	GT - Real Images						
	8-F-SFB-1-TEX-2050	a1-GT-real-CLAHE							
OUR			6-RR-brunomarekallee		25382	2538.2	2221.1	10.43	89.57
			7-RR-brunomarekallee		25382	2538.2	1782.9	24.84	75.16
			8-RR-brunomarekallee		25382	2538.2	1886.6	21.43	78.57
			9-RR-engerthstrasse		27842	2784.2	1877.4	29.83	70.17
			10-RR-dresdnerstrasse		30543	3054.3	2337.0	23.59	76.41

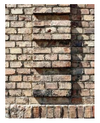
no texture

clahe

11-RR-laboratoryV1	29575	2957.5	2111.4	27.83	72.17
12-RR-laboratoryV2	29913	2991.3	2077.8	30.05	69.95
13-RR-laboratoryV3	30971	3097.1	2077.8	33.53	66.47
14-RR-online1-X	27457	2745.7	2229.8	16.97	83.03
15-RR-online2 - II	29266	2926.6	2058.6	28.55	71.45
average prediction accuracy				**24.71**	**75.29**

modell	**trained data**	**prediction images**	**GT - Real Images**				
	8-F-SFB-1-TEX-2050-CLAHE	0-GT-real					
OUR			6-RR-brunomarekallee	25382	2538.2	2566.8	0.94	99.06
			7-RR-brunomarekallee	25382	2538.2	1524.9	33.33	66.67
			8-RR-brunomarekallee	25382	2538.2	1808.7	24.00	76.00
			9-RR-engerthstrasse	27842	2784.2	1694.5	35.85	64.15
			10-RR-dresdnerstrasse	30543	3054.3	2776.4	9.14	90.86
			11-RR-laboratoryV1	29575	2957.5	2302.9	21.53	78.47
			12-RR-laboratoryV2	29913	2991.3	2396.0	19.58	80.42
			13-RR-laboratoryV3	30971	3097.1	2396.0	23.06	76.94
			14-RR-online1-X	27457	2745.7	2659.4	2.84	97.16
			15-RR-online2 - II	29266	2926.6	2018.9	29.86	70.14
			average prediction accuracy				**20.01**	**79.99**

no texture

modell	**trained data**	**prediction images**	**GT - Real Images**				
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-HIST					
OUR			6-RR-brunomarekallee	25382	2538.2	2255.2	9.31	90.69
			7-RR-brunomarekallee	25382	2538.2	2189.9	11.46	88.54
			8-RR-brunomarekallee	25382	2538.2	2238.0	9.87	90.13
			9-RR-engerthstrasse	27842	2784.2	2225.1	18.39	81.61
			10-RR-dresdnerstrasse	30543	3054.3	2306.9	24.59	75.41
			11-RR-laboratoryV1	29575	2957.5	2274.1	22.48	77.52
			12-RR-laboratoryV2	29913	2991.3	2326.2	21.88	78.12
			13-RR-laboratoryV3	30971	3097.1	2326.2	25.36	74.64
			14-RR-online1-X	27457	2745.7	2387.4	11.79	88.21
			15-RR-online2 - II	29266	2926.6	2297.6	20.69	79.31
			average prediction accuracy				**17.58**	**82.42**

no texture

HIST

modell	**trained data**	**prediction images**	**GT - Real Images**				
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-CLAHE					
OUR			6-RR-brunomarekallee	25382	2538.2	2407.5	4.30	95.70
			7-RR-brunomarekallee	25382	2538.2	1942.8	19.59	80.41
			8-RR-brunomarekallee	25382	2538.2	2055.5	15.88	84.12
			9-RR-engerthstrasse	27842	2784.2	2043.7	24.36	75.64
			10-RR-dresdnerstrasse	30543	3054.3	2532.8	17.16	82.84
			11-RR-laboratoryV1	29575	2957.5	2288.6	22.00	78.00
			12-RR-laboratoryV2	29913	2991.3	2260.4	24.04	75.96
			13-RR-laboratoryV3	30971	3097.1	2260.4	27.52	72.48
			14-RR-online1-X	27457	2745.7	2425.3	10.54	89.46
			15-RR-online2 - II	29266	2926.6	2240.5	22.57	77.43
			average prediction accuracy				**18.80**	**81.20**

no texture

CLAHE

modell	**trained data**	**prediction images**	**GT - Real Images**				
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-ADAME					
OUR			6-RR-brunomarekallee	25382	2538.2	2875.1	11.08	88.92
			7-RR-brunomarekallee	25382	2538.2	3034.8	16.34	83.66
			8-RR-brunomarekallee	25382	2538.2	2887.1	11.48	88.52
			9-RR-engerthstrasse	27842	2784.2	3029.4	8.07	91.93
			10-RR-dresdnerstrasse	30543	3054.3	2946.3	3.55	96.45
			11-RR-laboratoryV1	29575	2957.5	2907.2	1.65	98.35
			12-RR-laboratoryV2	29913	2991.3	2605.5	12.69	87.31
			13-RR-laboratoryV3	30971	3097.1	2605.5	16.17	83.83
			14-RR-online1-X	27457	2745.7	2698.3	1.56	98.44
			15-RR-online2 - II	29266	2926.6	2717.8	6.87	93.13
			average prediction accuracy				**8.95**	**91.05**

no texture

ADAME

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modell	**trained data**	**prediction images**	**GT - Real Images**				
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-BI-GLOBAL					
OUR			6-RR-brunomarekallee	25382	2538.2	2995.7	15.05	84.95
			7-RR-brunomarekallee	25382	2538.2	1138.1	46.06	53.94
			8-RR-brunomarekallee	25382	2538.2	1268.5	41.77	58.23
			9-RR-engerthstrasse	27842	2784.2	1075.0	56.22	43.78
			10-RR-dresdnerstrasse	30543	3054.3	3408.2	11.64	88.36
			11-RR-laboratoryV1	29575	2957.5	2888.4	2.27	97.73
			12-RR-laboratoryV2	29913	2991.3	3227.8	7.78	92.22
			13-RR-laboratoryV3	30971	3097.1	3227.8	4.30	95.70
			14-RR-online1-X	27457	2745.7	3379.1	20.83	79.17
			15-RR-online2 - II	29266	2926.6	2275.8	21.41	78.59
			average prediction accuracy				**22.73**	**77.27**

no texture

GLOBAL

modell	trained data	prediction images	GT - Real Images					
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-BI-ADAGA						
OUR			6-RR-brunomarekallee	25382	2538.2	2956.8	13.77	86.23
			7-RR-brunomarekallee	25382	2538.2	3136.9	19.69	80.31
			8-RR-brunomarekallee	25382	2538.2	3028.6	16.13	83.87
			9-RR-engerthstrasse	27842	2784.2	3183.3	13.13	86.87
			10-RR-dresdnerstrasse	30543	3054.3	2929.6	4.10	95.90
			11-RR-laboratoryV1	29575	2957.5	2957.5	0.00	100.00
			12-RR-laboratoryV2	29913	2991.3	2659.1	10.93	89.07
			13-RR-laboratoryV3	30971	3097.1	2659.1	14.41	85.59
	no texture	ADAGA	14-RR-online1-X	27457	2745.7	2710.2	1.17	98.83
			15-RR-online2 - II	29266	2926.6	2778.5	4.87	95.13
			average prediction accuracy				**9.82**	**90.18**

modell	trained data	prediction images	GT - Real Images					
	8-F-SFB-1-TEX-2050-CLAHE	a1-GT-real-BI-GAU-OTSU						
OUR			6-RR-brunomarekallee	25382	2538.2	2999.7	15.18	84.82
			7-RR-brunomarekallee	25382	2538.2	2545.1	0.23	99.77
			8-RR-brunomarekallee	25382	2538.2	3308.3	25.33	74.67
			9-RR-engerthstrasse	27842	2784.2	2963.2	5.89	94.11
			10-RR-dresdnerstrasse	30543	3054.3	3351.9	9.79	90.21
			11-RR-laboratoryV1	29575	2957.5	2633.5	10.66	89.34
			12-RR-laboratoryV2	29913	2991.3	1999.2	32.63	67.37
			13-RR-laboratoryV3	30971	3097.1	1999.2	36.11	63.89
	no texture	OTSU	14-RR-online1-X	27457	2745.7	3314.0	18.69	81.31
			15-RR-online2 - II	29266	2926.6	2485.2	14.52	85.48
			average prediction accuracy				**16.90**	**83.10**

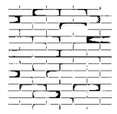
modell	trained data	prediction images	GT - Real Images			real			hist			CLAHE		
	8-F-SFB-1-TEX-2050-CLAHE													
RES			6-RR-brunomarekallee	25382	2538.2	2386.9	4.98	95.02	2390.6	4.85	95.15	2389.3	4.90	95.10
			7-RR-brunomarekallee	25382	2538.2	2399.2	4.57	95.43	2390.3	4.87	95.13	2392.9	4.78	95.22
			8-RR-brunomarekallee	25382	2538.2	2406.5	4.33	95.67	2403.4	4.43	95.57	2405.0	4.38	95.62
			9-RR-engerthstrasse	27842	2784.2	2403.3	12.53	87.47	2395.5	12.79	87.21	2396.7	12.75	87.25
			10-RR-dresdnerstrasse	30543	3054.3	2388.9	21.89	78.11	2394.9	21.69	78.31	2392.1	21.78	78.22
			11-RR-laboratoryV1	29575	2957.5	2394.1	18.53	81.47	2394.9	18.51	81.49	2394.1	18.53	81.47
			12-RR-laboratoryV2	29913	2991.3	2387.6	19.86	80.14	2385.8	19.92	80.08	2383.9	19.98	80.02
			13-RR-laboratoryV3	30971	3097.1	2387.6	23.34	76.66	2385.8	23.40	76.60	2383.9	23.46	76.54
	no texture		14-RR-online1-X	27457	2745.7	2393.1	11.60	88.40	2410.9	11.01	88.99	2405.5	11.19	88.81
			15-RR-online2 - II	29266	2926.6	2399.0	17.36	82.64	2396.7	17.43	82.57	2398.6	17.37	82.63
			average prediction accuracy				**13.90**	**86.10**		**13.89**	**86.11**		**13.91**	**86.09**

modell	trained data	prediction images	GT - Real Images			real			hist			CLAHE			adame			BI-global			adaga			otsu		
	8-F-SFB-1-TEX-2050-HIST																									
RES			6-RR-brunomarekallee	25382	2538.2	3052.1	16.91	83.09	3049.9	16.83	83.17	3051.2	16.87	83.13	3038.6	16.46	83.54	3054.9	17.00	83.00	3036.2	16.38	83.62	3054.8	16.99	83.01
			7-RR-brunomarekallee	25382	2538.2	3031.9	16.24	83.76	3049.3	16.81	83.19	3047.6	16.76	83.24	3029.4	16.16	83.84	3047.6	16.76	83.24	3031.8	16.24	83.76	3057.8	17.09	82.91
			8-RR-brunomarekallee	25382	2538.2	3031.3	16.22	83.78	3042.2	16.58	83.42	3040.2	16.51	83.49	3029.8	16.17	83.83	3038.6	16.46	83.54	3029.2	16.15	83.85	3046.7	16.73	83.27
			9-RR-engerthstrasse	27842	2784.2	3029.1	8.05	91.95	3046.1	8.61	91.39	3045.0	8.58	91.42	3032.8	8.18	91.82	3043.3	8.52	91.48	3034.6	8.24	91.76	3053.0	8.84	91.16
			10-RR-dresdnerstrasse	30543	3054.3	3043.5	0.35	99.65	3045.1	0.30	99.70	3045.2	0.30	99.70	3027.9	0.87	99.13	3041.8	0.41	99.59	3029.9	0.80	99.20	3039.8	0.48	99.52
			11-RR-laboratoryV1	29575	2957.5	3039.7	2.70	97.30	3039.3	2.69	97.31	3037.9	2.65	97.35	3032.6	2.47	97.53	3042.7	2.80	97.20	3032.9	2.48	97.52	3040.5	2.73	97.27
			12-RR-laboratoryV2	29913	2991.3	3045.8	1.79	98.21	3043.4	1.71	98.29	3044.4	1.75	98.25	3033.6	1.39	98.61	3041.5	1.65	98.35	3035.6	1.46	98.54	3039.9	1.60	98.40
			13-RR-laboratoryV3	30971	3097.1	3045.8	1.69	98.31	3043.4	1.77	98.23	3044.4	1.73	98.27	3033.6	2.09	97.91	3041.5	1.83	98.17	3035.6	2.02	97.98	3039.9	1.88	98.12
	no texture		14-RR-online1-X	27457	2745.7	3044.3	9.82	90.18	3041.5	9.73	90.27	3042.2	9.75	90.25	3031.4	9.40	90.60	3044.9	9.84	90.16	3031.7	9.41	90.59	3044.6	9.83	90.17
			15-RR-online2 - II	29266	2926.6	3041.2	3.77	96.23	3044.0	3.86	96.14	3043.0	3.83	96.17	3031.1	3.44	96.56	3045.4	3.91	96.09	3028.4	3.35	96.65	3040.7	3.75	96.25
			average prediction accuracy				**7.75**	**92.25**		**7.89**	**92.11**		**7.87**	**92.13**		**7.66**	**92.34**		**7.92**	**92.08**		**7.65**	**92.35**		**7.99**	**92.01**

GT - Real Images			HIST-CLAHE			HIST-GLOB			HIST-ADAME		
6-RR-brunomarekallee	25382	2538.2	3049.1	16.80	83.20	3053.4	16.95	83.05	3038.8	16.47	83.53
7-RR-brunomarekallee	25382	2538.2	3051.0	16.87	83.13	3057.6	17.09	82.91	3028.4	16.12	83.88
8-RR-brunomarekallee	25382	2538.2	3041.1	16.54	83.46	3039.2	16.48	83.52	3029.7	16.17	83.83
9-RR-engerthstrasse	27842	2784.2	3047.6	8.67	91.33	3049.9	8.74	91.26	3030.1	8.09	91.91
10-RR-dresdnerstrasse	30543	3054.3	3043.0	0.37	99.63	3039.4	0.49	99.51	3029.2	0.82	99.18
11-RR-laboratoryV1	29575	2957.5	3037.7	2.64	97.36	3042.2	2.79	97.21	3032.5	2.47	97.53
12-RR-laboratoryV2	29913	2991.3	3042.0	1.67	98.33	3037.3	1.51	98.49	3034.5	1.42	98.58
13-RR-laboratoryV3	30971	3097.1	3042.0	1.81	98.19	3037.3	1.97	98.03	3034.5	2.06	97.94
14-RR-online1-X	27457	2745.7	3041.2	9.72	90.28	3030.0	9.35	90.65	3034.0	9.49	90.51
15-RR-online2 - II	29266	2926.6	3043.3	3.84	96.16	3040.4	3.74	96.26	3031.7	3.46	96.54
average prediction accuracy				**7.89**	**92.11**		**7.91**	**92.09**		**7.66**	**92.34**

modell	trained data	prediction images	GT - Real Images	real	hist	CLAHE	adame	BI-global	adaga	otsu
	8-F-SFB-1-TEX-2050-BI_GLOBAL									

OUR



no texture

6-RR-brunomarekallee	25382	2538.2	2124.4	13.61	86.39	1867.6	22.06	77.94		83.49	16.51	2392.4	4.80	95.20	2481.0	1.88	98.12	2454.7	2.75	97.25	2483.5	1.80	98.20
7-RR-brunomarekallee	25382	2538.2	1260.1	42.04	57.96	1811.4	23.91	76.09		83.49	16.51	2520.4	0.59	99.41	945.7	52.39	47.61	2604.8	2.19	97.81	2106.0	14.22	85.78
8-RR-brunomarekallee	25382	2538.2	1494.4	34.33	65.67	1850.9	22.61	77.39		83.49	16.51	2393.0	4.78	95.22	1053.3	48.85	51.15	2512.9	0.83	99.17	2737.1	6.54	93.46
9-RR-engerthstrasse	27842	2784.2	1400.0	45.53	54.47	1840.5	31.04	68.96		91.59	8.41	2512.2	8.95	91.05	890.7	62.29	37.71	2641.5	4.69	95.31	2452.2	10.92	89.08
10-RR-dresdnerstrasse	30543	3054.3	2296.0	24.94	75.06	1907.9	37.71	62.29		100.47	-0.47	2448.6	19.92	80.08	2819.9	7.71	92.29	2430.7	20.51	79.49	2772.9	9.26	90.74
11-RR-laboratoryV1	29575	2957.5	1904.5	34.64	65.36	1881.2	35.40	64.60		97.29	2.71	2409.5	18.03	81.97	2391.2	18.63	81.37	2455.7	16.51	83.49	2179.4	25.59	74.41
12-RR-laboratoryV2	29913	2991.3	1985.2	33.10	66.90	1933.0	34.81	65.19		98.40	1.60	2169.5	27.03	72.97	2678.7	10.28	89.72	2213.9	25.57	74.43	1665.8	43.60	56.40
13-RR-laboratoryV3	30971	3097.1	1985.2	36.58	63.42	1933.0	38.29	61.71		101.88	-1.88	2169.5	30.51	69.49	2678.7	13.76	86.24	2213.9	29.05	70.95	1665.8	47.08	52.92
14-RR-online1-X	27457	2745.7	2203.3	17.84	82.16	1983.2	25.08	74.92		90.32	9.68	2244.9	16.47	83.53	2799.1	1.76	98.24	2255.1	16.14	83.86	2746.4	0.02	99.98
15-RR-online2 - II	29266	2926.6	1672.8	41.24	58.76	1904.8	33.61	66.39		96.27	3.73	2262.8	21.83	78.17	1891.0	34.06	65.94	2312.4	20.20	79.80	2061.7	28.45	71.55
average prediction accuracy				**32.39**	**67.61**		**30.45**	**69.55**		**92.67**	**7.33**		**15.29**	**84.71**		**25.16**	**74.84**		**13.85**	**86.15**		**18.75**	**81.25**

modell | **trained data** | **prediction images**

8-F-SFB-1-TEX-2050-HIST

OUR

no texture

GT - Real Images			**real**			**hist**			**CLAHE**			**adame**			**Bl-global**			**adaga**			**otsu**		
6-RR-brunomarekallee	25382	2538.2	3441.8	29.72	70.28	3018.9	15.81	84.19	3225.2	22.60	77.40	3828.5	42.44	57.56	4022.4	48.82	51.18	3931.0	45.82	54.18	4028.2	49.01	50.99
7-RR-brunomarekallee	25382	2538.2	2032.1	16.65	83.35	2930.7	12.91	87.09	2595.5	1.88	98.12	4047.3	49.64	50.36	1496.7	34.26	65.74	4189.2	54.31	45.69	3412.5	28.76	71.24
8-RR-brunomarekallee	25382	2538.2	2413.3	4.11	95.89	2991.9	14.92	85.08	2743.4	6.75	93.25	3822.5	42.25	57.75	1664.6	28.74	71.26	4025.1	48.91	51.09	4443.5	62.68	37.32
9-RR-engerthstrasse	27842	2784.2	2261.0	17.21	82.79	2976.7	6.33	93.67	2730.6	1.76	98.24	4027.4	40.89	59.11	1407.6	45.28	54.72	4246.0	48.09	51.91	3977.8	39.26	60.74
10-RR-dresdnerstrasse	30543	3054.3	3723.8	22.02	77.98	3085.9	1.04	98.96	3391.3	11.09	88.91	3938.5	29.08	70.92	4579.6	50.17	49.83	3901.0	27.85	72.15	4503.9	47.69	52.31
11-RR-laboratoryV1	29575	2957.5	3087.0	4.26	95.74	3048.2	2.98	97.02	3067.7	3.62	96.38	3901.3	31.05	68.95	3877.3	30.26	69.74	3969.0	33.27	66.73	3532.5	18.91	81.09
12-RR-laboratoryV2	29913	2991.3	3207.7	7.12	92.88	3106.3	3.78	96.22	3020.3	0.95	99.05	3454.3	15.23	84.77	4318.7	43.66	56.34	3525.5	17.57	82.43	2659.1	10.93	89.07
13-RR-laboratoryV3	30971	3097.1	3207.7	3.64	96.36	3106.3	0.30	99.70	3020.3	2.53	97.47	3454.3	11.75	88.25	4318.7	40.18	59.82	3525.5	14.09	85.91	2659.1	14.41	85.59
14-RR-online1-X	27457	2745.7	3561.7	26.84	73.16	3185.2	14.46	85.54	3238.8	16.22	83.78	3580.3	27.46	72.54	4536.0	58.89	41.11	3595.1	27.94	72.06	4452.8	56.15	43.85
15-RR-online2 - II	29266	2926.6	2696.9	7.56	92.44	3072.6	4.80	95.20	2994.9	2.25	97.75	3608.3	22.42	77.58	3036.4	3.61	96.39	3689.4	25.09	74.91	3327.3	13.18	86.82
average prediction accuracy				**13.91**	**86.09**		**7.73**	**92.27**		**6.97**	**93.03**		**31.22**	**68.78**		**38.39**	**61.61**		**34.29**	**65.71**		**34.10**	**65.90**

GT - Real Images			**HIST-CLAHE**			**HIST-GLOB**			**HIST-ADAME**		
6-RR-brunomarekallee	25382	2538.2	2952.8	13.64	86.36	3222.3	22.50	77.50	3631.7	35.97	64.03
7-RR-brunomarekallee	25382	2538.2	2988.5	14.81	85.19	3408.1	28.61	71.39	3911.2	45.16	54.84
8-RR-brunomarekallee	25382	2538.2	3073.1	17.60	82.40	4110.4	51.72	48.28	3629.7	35.90	64.10
9-RR-engerthstrasse	27842	2784.2	3104.7	10.54	89.46	3897.9	36.63	63.37	3755.3	31.94	68.06
10-RR-dresdnerstrasse	30543	3054.3	3080.6	0.86	99.14	3846.0	26.04	73.96	3770.0	23.54	76.46
11-RR-laboratoryV1	29575	2957.5	3032.1	2.46	97.54	3632.4	22.20	77.80	3885.7	30.53	69.47
12-RR-laboratoryV2	29913	2991.3	3111.2	3.94	96.06	3469.7	15.74	84.26	3514.8	17.22	82.78
13-RR-laboratoryV3	30971	3097.1	3111.2	0.46	99.54	3469.7	12.26	87.74	3514.8	13.74	86.26
14-RR-online1-X	27457	2745.7	3133.1	12.74	87.26	3606.7	28.32	71.68	3459.7	23.49	76.51
15-RR-online2 - II	29266	2926.6	3051.7	4.12	95.88	3332.5	13.35	86.65	3588.0	21.76	78.24
average prediction accuracy			**8.12**	**91.88**		**25.74**	**74.26**		**27.93**	**72.07**	

GT - Real Images		**real**		**HIST**		**Bl-global**		**CLAHE**	
16- karachi	12501.313	11338	91.32	13542.0	83.55	16916.00	67.05	13578.0	91.97
17-karachi	12369.37	10918	89.17	13723.0	79.07	17230.00	63.73	13500.0	91.56
18- karachi	12197.93	11347	93.65	13603.0	83.16	16726.00	66.21	13186.0	92.63
average prediction accuracy		**91.38**		**81.93**		**65.66**		**92.05**	

modell | **trained data** | **prediction images**

8-F-SFB-1-TEX-2050-CLAHE-BI-GLO

OUR

no texture

GT - Real Images			**real**			**hist**			**CLAHE**			**adame**			**Bl-global**			**adaga**			**otsu**		
6-RR-brunomarekallee	25382	2538.2	2374.4	5.39	94.61	2085.9	14.88	85.12	2226.9	10.24	89.76	2648.5	3.63	96.37	2772.3	7.70	92.30	2721.6	6.03	93.97	2775.9	7.82	92.18
7-RR-brunomarekallee	25382	2538.2	1408.9	37.15	62.85	2024.7	16.89	83.11	1795.8	24.42	75.58	2802.7	8.70	91.30	1048.5	49.00	51.00	2899.4	11.88	88.12	2354.6	6.04	93.96
8-RR-brunomarekallee	25382	2538.2	1669.3	28.58	71.42	2066.3	15.52	84.48	1896.3	21.11	78.89	2650.8	3.70	96.30	1163.8	45.21	54.79	2790.5	8.30	91.70	3059.2	17.14	82.86
9-RR-engerthstrasse	27842	2784.2	1565.0	40.11	59.89	2055.8	23.96	76.04	1887.4	29.50	70.50	2790.4	0.20	99.80	985.3	59.17	40.83	2939.8	5.12	94.88	2740.8	1.43	98.57
10-RR-dresdnerstrasse	30543	3054.3	2566.4	16.05	83.95	2129.8	30.41	69.59	2339.0	23.53	76.47	2719.7	11.01	88.99	3153.1	3.25	96.75	2694.3	11.84	88.16	3101.1	1.54	98.46
11-RR-laboratoryV1	29575	2957.5	2130.8	27.19	72.81	2104.5	28.06	71.94	2118.0	27.61	72.39	2691.8	8.74	91.26	2672.9	9.36	90.64	2739.7	7.16	92.84	2436.9	17.13	82.87
12-RR-laboratoryV2	29913	2991.3	2215.7	25.51	74.49	2150.5	27.66	72.34	2090.0	29.65	70.35	2403.0	19.35	80.65	2985.3	0.20	99.80	2452.6	17.72	82.28	1846.2	37.67	62.33
13-RR-laboratoryV3	30971	3097.1	2215.7	29.00	71.01	2150.5	31.14	68.86	2090.0	33.13	66.87	2403.0	22.83	77.17	2985.3	3.68	96.32	2452.6	21.20	78.80	1846.2	41.15	58.85
14-RR-online1-X	27457	2745.7	2459.2	9.43	90.57	2206.9	17.72	82.28	2242.1	16.56	83.44	2488.2	8.47	91.53	3124.7	12.47	87.53	2499.5	8.10	91.90	3066.3	10.55	89.45
15-RR-online2 - II	29266	2926.6	1865.9	34.89	65.11	2124.0	26.40	73.60	2071.0	28.15	71.85	2509.1	13.74	86.26	2104.3	27.05	72.95	2564.7	11.90	88.10	2299.5	20.63	79.37
average prediction accuracy				**25.33**	**74.67**		**23.26**	**76.74**		**24.39**	**75.61**		**10.04**	**89.96**		**21.71**	**78.29**		**10.93**	**89.07**		**16.11**	**83.89**

GT - Real Images			**CLA-GLOB**				
6-RR-brunomarekallee	25382	2538.2	2477.0	2.01	97.99	83.49	16.51
7-RR-brunomarekallee	25382	2538.2	2155.1	12.60	87.40	83.49	16.51
8-RR-brunomarekallee	25382	2538.2	2402.2	4.47	95.53	83.49	16.51
9-RR-engerthstrasse	27842	2784.2	2533.7	8.24	91.76	91.59	8.41
10-RR-dresdnerstrasse	30543	3054.3	2844.4	6.90	93.10	100.47	-0.47
11-RR-laboratoryV1	29575	2957.5	2337.3	20.40	79.60	97.29	2.71
12-RR-laboratoryV2	29913	2991.3	2316.1	22.21	77.79	98.40	1.60
13-RR-laboratoryV3	30971	3097.1	2316.1	25.69	74.31	101.88	-1.88
14-RR-online1-X	27457	2745.7	2651.6	3.09	96.91	90.32	9.68
15-RR-online2 - II	29266	2926.6	2229.3	22.94	77.06	96.27	3.73
average prediction accuracy			**12.86**	**87.14**		**92.67**	**7.33**

modell | **trained data** | **prediction images**

8-F-SFB-1-TEX-2050-ADAME

OUR

GT - Real Images			**real**			**hist**			**CLAHE**			**adame**			**Bl-global**			**adaga**			**otsu**		
6-RR-brunomarekallee	25382	2538.2	2358.1	5.92	94.08	2068.7	15.45	84.55	2210.0	10.79	89.21	2651.1	3.72	96.28	2757.6	7.22	92.78	2726.7	6.20	93.80	2760.7	7.32	92.68
7-RR-brunomarekallee	25382	2538.2	1391.8	37.71	62.29	2008.6	17.42	82.58	1779.1	24.97	75.03	2796.5	8.50	91.50	1032.3	49.54	50.46	2892.4	11.65	88.35	2339.0	6.55	93.45
8-RR-brunomarekallee	25382	2538.2	1655.4	29.04	70.96	2053.3	15.95	84.05	1884.1	21.52	78.48	2659.5	3.99	96.01	1152.2	45.59	54.41	2790.8	8.31	91.69	3046.5	16.72	83.28
9-RR-engerthstrasse	27842	2784.2	1549.1	40.63	59.37	2040.9	24.45	75.55	1872.7	29.98	70.02	2791.5	0.24	99.76	972.5	59.60	40.40	2936.8	5.02	94.98	2726.4	1.90	98.10
10-RR-dresdnerstrasse	30543	3054.3	2552.1	16.52	83.48	2116.0	30.87	69.13	2325.5	23.97	76.03	2709.1	11.36	88.64	3139.4	2.80	97.20	2695.7	11.79	88.21	3086.7	1.07	98.93

no texture

11-RR-laboratoryV1	29575	2957.5	2112.5	27.79	72.21	2085.5	28.68	71.32	2098.8	28.25	71.75	2672.9	9.36	90.64	2656.5	9.90	90.10	2719.6	7.83	92.17	2420.4	17.67	82.33
12-RR-laboratoryV2	29913	2991.3	2198.8	26.07	73.93	2133.6	28.22	71.78	2072.5	30.22	69.78	2392.2	19.71	80.29	2977.0	0.47	99.53	2442.6	18.05	81.95	1830.4	38.19	61.81
13-RR-laboratoryV3	30971	3097.1	2198.8	29.55	70.45	2133.6	31.70	68.30	2072.5	33.71	66.29	2392.2	23.19	76.81	2977.0	3.95	96.05	2442.6	21.53	78.47	1830.4	41.67	58.33
14-RR-online1-X	27457	2745.7	2444.1	9.92	90.08	2191.3	18.24	81.76	2226.5	17.08	82.92	2480.0	8.74	91.26	3114.8	12.14	87.86	2490.4	8.40	91.60	3051.7	10.06	89.94
15-RR-online2 - II	29266	2926.6	1850.1	35.41	64.59	2108.5	26.91	73.09	2055.4	28.66	71.34	2497.4	14.12	85.88	2089.8	27.53	72.47	2554.1	12.25	87.75	2285.1	21.10	78.90
average prediction accuracy				**25.86**	**74.14**		**23.79**	**76.21**		**24.92**	**75.08**		**10.29**	**89.71**		**21.87**	**78.13**		**11.10**	**88.90**		**16.22**	**83.78**

GT - Real Images			**HIST-ADAME**					
6-RR-brunomarekallee	25382	2538.2	2516.7	0.71	99.29	83.49	16.51	
7-RR-brunomarekallee	25382	2538.2	2705.8	5.51	94.49	83.49	16.51	
8-RR-brunomarekallee	25382	2538.2	2527.5	0.35	99.65	83.49	16.51	
9-RR-engerthstrasse	27842	2784.2	2607.5	5.81	94.19	91.59	8.41	
10-RR-dresdnerstrasse	30543	3054.3	2593.6	15.15	84.85	100.47	-0.47	
11-RR-laboratoryV1	29575	2957.5	2662.3	9.71	90.29	97.29	2.71	
12-RR-laboratoryV2	29913	2991.3	2434.2	18.33	81.67	98.40	1.60	
13-RR-laboratoryV3	30971	3097.1	2434.2	21.81	78.19	101.88	-1.88	
14-RR-online1-X	27457	2745.7	2397.0	11.47	88.53	90.32	9.68	
15-RR-online2 - II	29266	2926.6	2483.2	14.58	85.42	96.27	3.73	
average prediction accuracy				**10.34**	**89.66**	**92.67**	**7.33**	

modell	**trained data**	**prediction images**	**GT - Real Images**			**real**			**hist**			**CLAHE**			**adame**			**BI-global**			**adaga**			**otsu**		
	8-F-SFB-1-TEX-2050-OTSU																									
OUR			6-RR-brunomarekallee	25382	2538.2	2645.0	3.51	96.49	2318.9	7.21	92.79	2477.7	1.99	98.01	2923.7	12.68	87.32	3090.0	18.15	81.85	3008.5	15.47	84.53	3095.0	18.32	81.68
			7-RR-brunomarekallee	25382	2538.2	1562.1	32.11	67.89	2252.7	9.39	90.61	1994.5	17.88	82.12	3100.5	18.50	81.50	1147.1	45.76	54.24	3211.1	22.13	77.87	2622.9	2.79	97.21
			8-RR-brunomarekallee	25382	2538.2	1854.9	22.48	77.52	2298.9	7.87	92.13	2107.7	14.16	85.84	2931.1	12.92	87.08	1273.7	41.60	58.40	3086.4	18.03	81.97	3414.5	28.83	71.17
			9-RR-engerthstrasse	27842	2784.2	1737.8	34.42	65.58	2287.2	16.35	83.65	2098.1	22.57	77.43	3086.1	9.93	90.07	1077.6	56.14	43.86	3254.8	15.48	84.52	3056.4	8.95	91.05
			10-RR-dresdnerstrasse	30543	3054.3	2862.0	6.33	93.67	2370.3	22.50	77.50	2605.2	14.77	85.23	3016.8	1.23	98.77	3520.3	15.33	84.67	2986.4	2.23	97.77	3462.1	13.41	86.59
			11-RR-laboratoryV1	29575	2957.5	2373.1	19.22	80.78	2343.1	20.21	79.79	2358.0	19.72	80.28	2996.5	1.28	98.72	2980.1	0.74	99.26	3043.9	2.84	97.16	2716.8	7.92	92.08
			12-RR-laboratoryV2	29913	2991.3	2463.6	17.36	82.64	2383.2	20.00	80.00	2317.6	22.16	77.84	2645.0	11.39	88.61	3314.4	10.63	89.37	2700.5	9.57	90.43	2036.8	31.40	68.60
			13-RR-laboratoryV3	30971	3097.1	2463.6	20.84	79.16	2383.2	23.48	76.52	2317.6	25.64	74.36	2645.0	14.87	85.13	3314.4	7.15	92.85	2700.5	13.05	86.95	2036.8	34.88	65.12
	no texture		14-RR-online1-X	27457	2745.7	2735.5	0.34	99.66	2443.2	9.95	90.05	2485.2	8.57	91.43	2741.3	0.15	99.85	3482.5	24.24	75.76	2752.9	0.24	99.76	3418.9	22.15	77.85
			15-RR-online2 - II	29266	2926.6	2069.9	28.18	71.82	2358.1	18.70	81.30	2297.8	20.68	79.32	2763.7	5.36	94.64	2327.4	19.71	80.29	2827.0	3.28	96.72	2552.4	12.31	87.69
			average prediction accuracy				**18.48**	**81.52**		**15.57**	**84.43**		**16.82**	**83.18**		**8.83**	**91.17**		**23.94**	**76.06**		**10.23**	**89.77**		**18.09**	**81.91**

GT - Real Images			**HIST-ADAME**			**HIST-GLOBAL**			**CLAHE-GLOBAL**		
6-RR-brunomarekallee	25382	2538.2	2771.7	7.68	92.32	2473.9	2.12	97.88	2753.7	7.09	92.91
7-RR-brunomarekallee	25382	2538.2	2995.1	15.03	84.97	2619.2	2.67	97.33	2391.4	4.83	95.17
8-RR-brunomarekallee	25382	2538.2	2782.1	8.02	91.98	3153.7	20.25	79.75	2657.9	3.94	96.06
9-RR-engerthstrasse	27842	2784.2	2878.4	3.10	96.90	2993.8	6.90	93.10	2814.4	0.99	99.01
10-RR-dresdnerstrasse	30543	3054.3	2886.4	5.52	94.48	2951.3	3.39	96.61	3167.5	3.72	96.28
11-RR-laboratoryV1	29575	2957.5	2984.1	0.87	99.13	2792.0	5.44	94.56	2603.5	11.65	88.35
12-RR-laboratoryV2	29913	2991.3	2692.5	9.83	90.17	2659.8	10.90	89.10	2557.2	14.28	85.72
13-RR-laboratoryV3	30971	3097.1	2692.5	13.31	86.69	2659.8	14.38	85.62	2557.2	17.76	82.24
14-RR-online1-X	27457	2745.7	2647.8	3.22	96.78	2763.0	0.57	99.43	2929.2	6.04	93.96
15-RR-online2 - II	29266	2926.6	2747.9	5.88	94.12	2556.0	12.19	87.81	2469.3	15.04	84.96
average prediction accuracy				**7.25**	**92.75**		**7.88**	**92.12**		**8.53**	**91.47**

modell	**trained data**	**prediction images**	**GT - Real Images**					
		0-GT-render						
				SOLAR_IRR_TOTAL			30.4 = 1 %	
OUR			1-SFB-TEX	2002	278740000	2787.4	2797.6	0.34	99.66
			2-SFB-TEX	2003	286030000	2860.3	2684.4	5.78	94.22
			3-SFB-TEX	2004	273440000	2734.4	2572.6	5.32	94.68
			4-SFB-TEX	2005	290340000	2903.4	2900.5	0.10	99.90
			5-SFB-TEX	2006	276630000	2766.3	2804.7	1.26	98.74
			6-SFB-TEX	2007	275850000	2758.5	2861.5	3.39	96.61
			7-RR-brunomarekallee		25382	2538.2	2627.6	2.94	97.06
			8-RR-brunomarekallee		25382	2538.2	2781.0	7.99	92.01
			9-RR-engerthstrasse		27842	2784.2	2787.3	0.10	99.90
			10-RR-dresdnerstrasse		30543	3054.3	2775.1	9.18	90.82
			11-RR-laboratoryV1		29575	2957.5	2766.7	6.28	93.72
			12-RR-laboratoryV2		29913	2991.3	2804.6	6.14	93.86
			13-RR-laboratoryV3		30971	3097.1	2954.5	4.69	95.31
			14-RR-online1-X		27457	2745.7	2954.5	6.87	93.13
			15-RR-online2 - II		29266	2926.6	2883.1	1.43	98.57
	with texture	no texture	**average prediction accuracy**				**4.12**	**95.88**

modell	**trained data**	**prediction images**	**GT - Real Images**					
	8-F-SFB-1-2050	0-GT-real						
OUR			6-RR-brunomarekallee		25382	2538.2	2363.7	5.74	94.26
			7-RR-brunomarekallee		25382	2538.2	1398.7	37.48	62.52
			8-RR-brunomarekallee		25382	2538.2	1660.4	28.87	71.13
			9-RR-engerthstrasse		27842	2784.2	1555.3	40.43	59.57
			10-RR-dresdnerstrasse		30543	3054.3	2556.1	16.39	83.61

			11-RR-laboratoryV1		29575	2957.5	2119.5	27.56	72.44
			12-RR-laboratoryV2		29913	2991.3	2204.2	25.89	74.11
			13-RR-laboratoryV3		30971	3097.1	2204.2	29.37	70.63
			14-RR-online1-X		27457	2745.7	2447.6	9.81	90.19
			15-RR-online2 - ll		29266	2926.6	1854.2	35.28	64.72
			average prediction accuracy					**25.68**	**74.32**

modell	**trained data**	**prediction images**	**GT - Real Images**						
	8-F-SFB-1-TEX-2050	0-GT-render							
					SOLAR_IRR_TOTAL			30.4 = 1 %	
RESNET50			1-SFB-TEX	2002	278740000	2787.4	2755.6	1.05	98.95
			2-SFB-TEX	2003	286030000	2860.3	2756.3	3.42	96.58
			3-SFB-TEX	2004	273440000	2734.4	2755.5	0.69	99.31
			4-SFB-TEX	2005	290340000	2903.4	2756.0	4.85	95.15
			5-SFB-TEX	2006	276630000	2766.3	2757.1	0.30	99.70
			6-SFB-TEX	2007	275850000	2758.5	2755.0	0.12	99.88
			7-RR-brunomarekallee			25382	2538.2	2755.9	7.16	92.84
			8-RR-brunomarekallee			25382	2538.2	2755.6	7.15	92.85
			9-RR-engerthstrasse			27842	2784.2	2755.0	0.96	99.04
			10-RR-dresdnerstrasse			30543	3054.3	2755.7	9.82	90.18
			11-RR-laboratoryV1			29575	2957.5	2756.3	6.62	93.38
			12-RR-laboratoryV2			29913	2991.3	2804.6	6.14	93.86
			13-RR-laboratoryV3			30971	3097.1	2757.1	11.18	88.82
			14-RR-online1-X			27457	2745.7	2757.1	0.38	99.62
			15-RR-online2 - ll			29266	2926.6	2757.6	5.56	94.44
			average prediction accuracy						**4.36**	**95.64**

modell	**trained data**	**prediction images**	**GT - Real Images**					
	8-F-SFB-1-TEX-2050	0-GT-real						
RESNET50			6-RR-brunomarekallee		25382	2538.2	2755.4	7.14	92.86
			7-RR-brunomarekallee		25382	2538.2	2753.2	7.07	92.93
			8-RR-brunomarekallee		25382	2538.2	2754.6	7.12	92.88
			9-RR-engerthstrasse		27842	2784.2	2754.6	0.97	99.03
			10-RR-dresdnerstrasse		30543	3054.3	2756.2	9.81	90.19
			11-RR-laboratoryV1		29575	2957.5	2754.8	6.67	93.33
			12-RR-laboratoryV2		29913	2991.3	2754.7	7.78	92.22
			13-RR-laboratoryV3		30971	3097.1	2754.7	11.26	88.74
			14-RR-online1-X		27457	2745.7	2756.5	0.36	99.64
			15-RR-online2 - ll		29266	2926.6	2753.6	5.69	94.31
			average prediction accuracy					**6.39**	**93.61**

modell	**trained data**	**prediction images**	**GT - Real Images**					
	8-F-SFB-1-TEX-2050	a1-GT-real-HIST						
RESNET50			6-RR-brunomarekallee		25382	2538.2	2755.2	7.14	92.86
			7-RR-brunomarekallee		25382	2538.2	2754.4	7.11	92.89
			8-RR-brunomarekallee		25382	2538.2	2755.4	7.15	92.85
			9-RR-engerthstrasse		27842	2784.2	2754.5	0.98	99.02
			10-RR-dresdnerstrasse		30543	3054.3	2754.5	9.86	90.14
			11-RR-laboratoryV1		29575	2957.5	2754.0	6.69	93.31
			12-RR-laboratoryV2		29913	2991.3	2750.9	7.91	92.09
			13-RR-laboratoryV3		30971	3097.1	2750.9	11.39	88.61
			14-RR-online1-X		27457	2745.7	2755.2	0.31	99.69
			15-RR-online2 - ll		29266	2926.6	2753.2	5.70	94.30
			average prediction accuracy					**6.42**	**93.58**

modell	**trained data**	**prediction images**	**GT - Real Images**					
	8-F-SFB-1-TEX-2050	a1-GT-real-CLAHE						
RESNET50			6-RR-brunomarekallee		25382	2538.2	2755.2	7.14	92.86
			7-RR-brunomarekallee		25382	2538.2	2753.6	7.08	92.92
			8-RR-brunomarekallee		25382	2538.2	2754.8	7.13	92.87
			9-RR-engerthstrasse		27842	2784.2	2754.4	0.98	99.02
			10-RR-dresdnerstrasse		30543	3054.3	2755.0	9.85	90.15
			11-RR-laboratoryV1		29575	2957.5	2753.6	6.71	93.29
			12-RR-laboratoryV2		29913	2991.3	2752.0	7.87	92.13
			13-RR-laboratoryV3		30971	3097.1	2752.0	11.35	88.65
			14-RR-online1-X		27457	2745.7	2755.7	0.33	99.67
			15-RR-online2 - ll		29266	2926.6	2753.0	5.71	94.29
			average prediction accuracy					**6.41**	**93.59**