

Table 1: Justification of "cut and shift" in simulated fluorescence traces, and comparison of different models for prediction followed by "cut and shift" correction

type of processing	simulated τ_D [ms] ($\sim D[\frac{\mu\text{m}^2}{\text{s}}]$) log 10% tol.	163.3	140.9	112.7	56.36	28.18	18.79	11.27	3.76
		(~ 0.069)	(~ 0.08)	(~ 0.1)	(~ 0.2)	(~ 0.4)	(~ 0.6)	(~ 1)	(~ 3)
		98.1 to 271.9	85.9 to 231.1	70.3 to 180.8	37.66 to 84.34	20.18 to 39.35	14.01 to 25.19	8.85 to 14.36	3.29 to 4.29
fit*									
control: no correction	1	58.92	142.83	80.93	145.00	27.55	54.11	110.39	287.87
	2	15.85 ^f (58%) 229.90 ^s (42%)	70.02 ^f (61%) 445.84 ^s (39%)	12.82 ^f (28%) 138.39 ^s (72%)	53.66 ^f (54%) 446.38 ^s (46%)	13.17 ^f (79%) 383.01 ^s (21%)	16.68 ^f (67%) 424.67 ^s (33%)	47.23 ^f (55%) 284.90 ^s (45%)	16.59 ^f (32%) 643.73 ^s (68%)
new method: cut and shift	1	161.43	130.03	100.67	53.11	26.25	17.43	11.52	3.62
	2	120.86 ^f (76%) 429.73 ^s (24%)	4.33 ^f (1%) 131.89 ^s (99%)	100.67 ^f (25%) 100.68 ^s (75%)	0.00 ^f (6%) 53.11 ^s (94%)	0.01 ^f (26%) 26.34 ^s (74%)	17.43(100%)	11.52(100%)	3.62 ^f (80%) 3.62 ^s (20%)
old method: weight=0	1	383.41	253.55	293.12	301.92	287.00	143.32	142.88	362.80
	2	28.66 ^f (29%) 819.05 ^s (71%)	45.97 ^f (45%) 1158.57 ^s (55%)	36.14 ^f (34%) 723.50 ^s (66%)	44.09 ^f (43%) 1733.81 ^s (57%)	19.30 ^f (35%) 747.77 ^s (65%)	10.94 ^f (23%) 211.09 ^s (77%)	34.31 ^f (52%) 1041.96 ^s (48%)	20.37 ^f (29%) 775.82 ^s (71%)
prediction model: ff67b (14 MB)	1	156.34	135.95	94.43	54.65	26.58	18.00	17.49	8.10
	2	156.34(100%)	32.68 ^f (16%) 168.07 ^s (84%)	5.14 ^f (5%) 100.84 ^s (95%)	40.17 ^f (84%) 309.14 ^s (16%)	0.14 ^f (8%) 26.85 ^s (92%)	18.00(100%)	9.67 ^f (81%) 117.21 ^s (19%)	4.20 ^f (81%) 2340.75 ^s (19%)
prediction model: 34766 (73 MB)	1	181.31	212.60	129.42	66.74	48.20	36.40	41.45	170.29
	2	181.31(100%)	124.87 ^f (71%) 1381.10 ^s (29%)	63.30 ^f (38%) 197.86 ^s (62%)	44.95 ^f (68%) 147.20 ^s (32%)	25.55 ^f (77%) 512.85 ^s (23%)	18.68 ^f (79%) 557.81 ^s (21%)	11.92 ^f (70%) 624.95 ^s (30%)	3.71 ^f (55%) 636.66 ^s (45%)
prediction model: 714af (234 MB)	1	153.90	141.27	93.37	52.06	25.64	17.60	14.14	4.44
	2	15.88 ^f (14%) 189.82 ^s (86%)	141.27(100%)	94.35(100%)	37.92 ^f (84%) 278.93 ^s (16%)	2.90 ^f (2%) 25.98 ^s (98%)	17.60(100%)	10.84 ^f (91%) 156.28 ^s (9%)	4.01 ^f (97%) 990.62 ^s (3%)
prediction model: 34a6d (7 MB)	1	161.69	136.14	111.05	65.55	37.54	31.64	28.53	67.19

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		simulated τ_D [ms] ($\sim D[\frac{\mu\text{m}^2}{\text{s}}]$) log 10% tol.	163.3 (~ 0.069) 98.1 to 271.9	140.9 (~ 0.08) 85.9 to 231.1	112.7 (~ 0.1) 70.3 to 180.8	56.36 (~ 0.2) 37.66 to 84.34	28.18 (~ 0.4) 20.18 to 39.35	18.79 (~ 0.6) 14.01 to 25.19	11.27 (~ 1) 8.85 to 14.36	3.76 (~ 3) 3.29 to 4.29
type of processing	fit*									
prediction model: 484af (275 MB)	2	149.58(100%)	121.78 ^f (93%) 1192.60 ^s (7%)	109.68(100%)	50.31 ^f (85%) 297.08 ^s (15%)	23.34 ^f (79%)	16.50 ^f (77%)	14.23 ^f (79%)	4.92 ^f (62%) 462.22 ^s (38%)	
	1	151.08	111.76	91.14	49.36	27.78	20.82	14.02	5.76	
	2	80.46 ^f (50%) 282.73 ^s (50%)	1.19 ^f (6%) 118.42 ^s (94%)	16.73 ^f (4%) 95.90 ^s (96%)	39.27 ^f (84%) 154.44 ^s (16%)	0.01 ^f (34%) 27.96 ^s (66%)	3.99 ^f (7%) 22.09 ^s (93%)	7.12 ^f (31%) 17.68 ^s (69%)	3.39 ^f (88%) 45.14 ^s (12%)	
prediction model: 0cd20 (200 MB)	1	149.58	140.81	95.96	0.01	26.23	18.83	13.34	7.50	
	2	149.58(100%)	140.81(100%)	96.19(100%)	0.01 ^f (33%) 56.46 ^s (67%)	17.49 ^f (50%) 37.06 ^s (50%)	16.68 ^f (88%) 40.02 ^s (12%)	10.81 ^f (86%) 37.87 ^s (14%)	3.80 ^f (87%) 319.55 ^s (13%)	
prediction model: fe81d (186 MB)	1	160.28	120.45	100.05	54.84	27.03	18.95	12.82	4.28	
	2	74.11 ^f (37%) 246.07 ^s (63%)	3.65 ^f (3%) 123.31 ^s (97%)	0.83 ^f (3%) 101.35 ^s (97%)	40.48 ^f (74%) 120.52 ^s (26%)	20.63 ^f (43%) 32.47 ^s (57%)	18.29 ^f (96%) 43.78 ^s (4%)	10.56 ^f (89%) 41.99 ^s (11%)	4.14 ^f (99%) 3021.55 ^s (1%)	
prediction model: 19e3e (172 MB)	1	155.33	141.61	103.37	63.42	39.25	34.79	29.00	54.94	
	2	119.77 ^f (75%) 343.36 ^s (25%)	141.61(100%)	102.14(100%)	54.75 ^f (93%) 763.89 ^s (7%)	25.10 ^f (82%) 275.49 ^s (18%)	16.41 ^f (73%) 182.79 ^s (27%)	16.04 ^f (81%) 808.30 ^s (19%)	4.66 ^f (62%) 300.03 ^s (38%)	
prediction model: c1204 (312 MB)	1	209.28	239.19	127.84	65.01	41.27	31.23	39.92	242.43	
	2	101.90 ^f (52%) 467.37 ^s (48%)	239.19(100%)	84.13 ^f (75%) 650.56 ^s (25%)	45.24 ^f (80%) 288.65 ^s (20%)	24.72 ^f (81%) 997.08 ^s (19%)	19.49 ^f (83%) 914.58 ^s (17%)	12.34 ^f (70%) 1158.53 ^s (30%)	3.00 ^f (53%) 684.20 ^s (47%)	