Comparative Analysis: PASTIS Dataset (Wavelet) - 2024-10-25

Dataset Variations

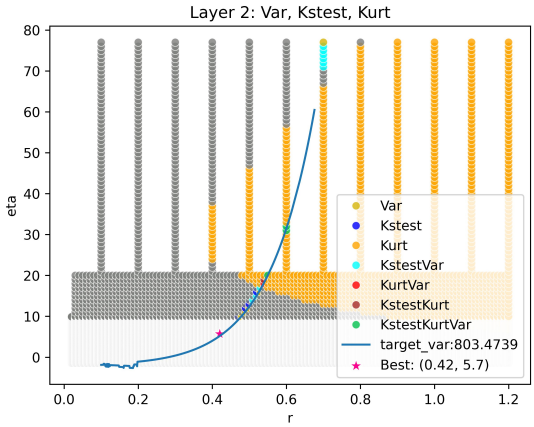
- **Variations compared:** approx1e5, full
- **Image Type:** Gray
- **Representation:** Wavelet

Comparative Results

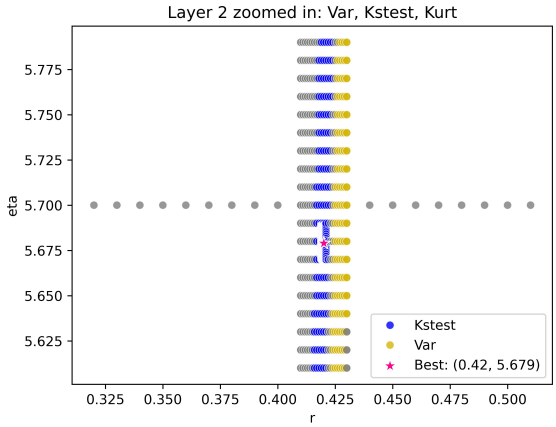
Full Grid Search Combo Plots Comparison

Layer 2

approx1e5

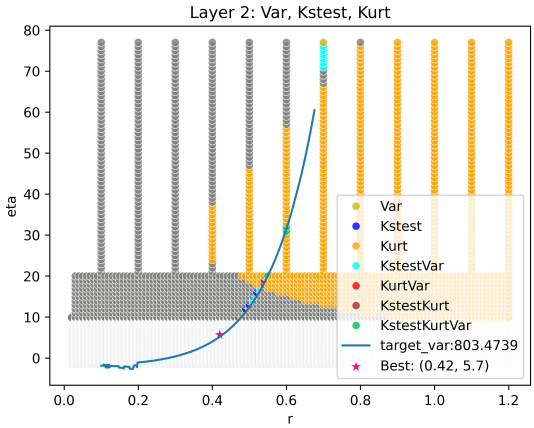


Full Grid Search

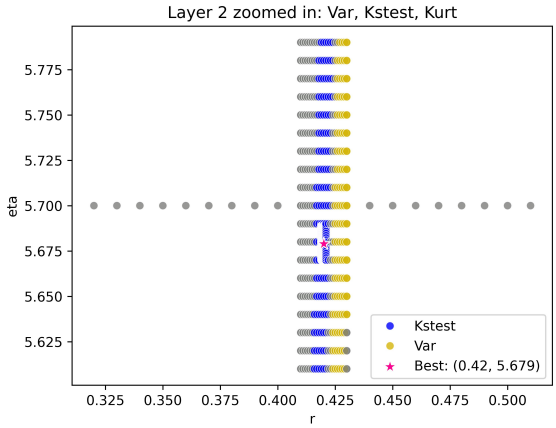


Fine Grid Search

full



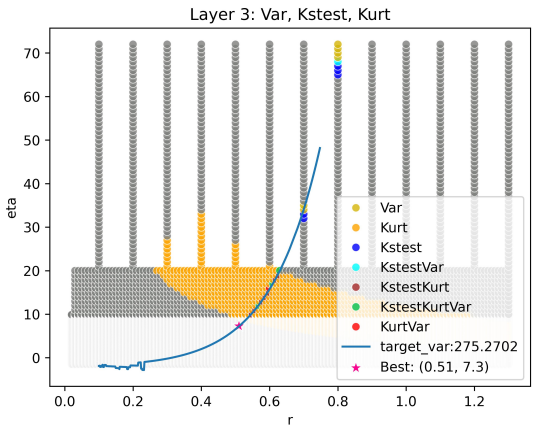
Full Grid Search



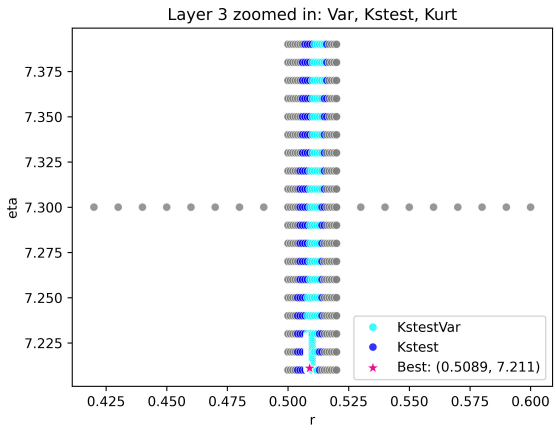
Fine Grid Search

Layer 3

approx1e5

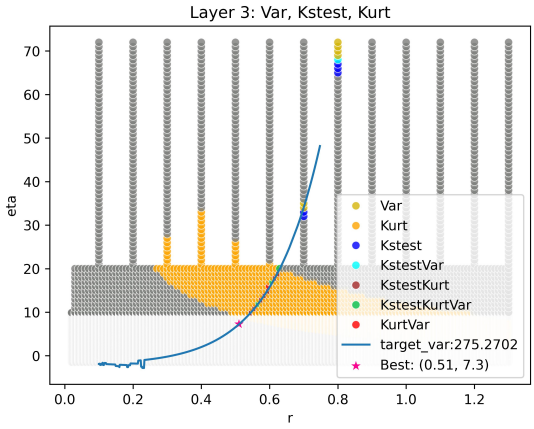


Full Grid Search



Fine Grid Search

full



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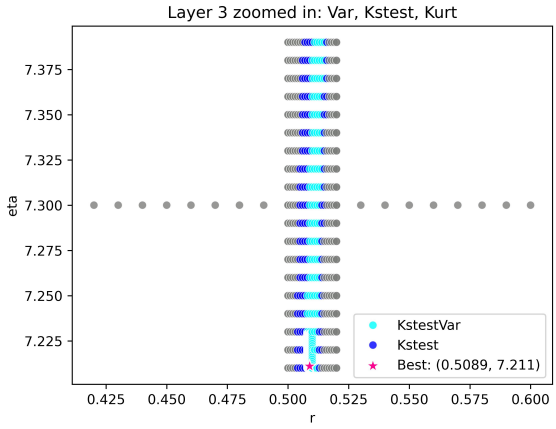
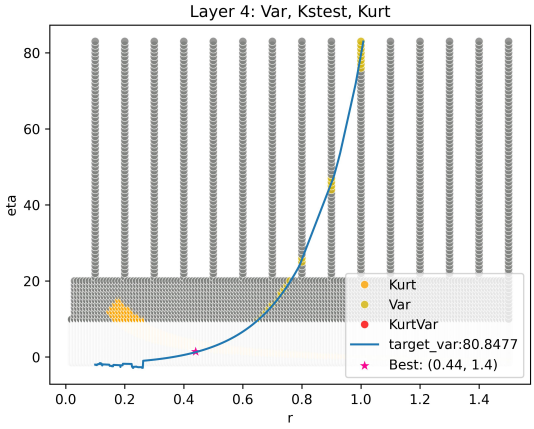


Fine Grid Search

Layer 4

approx1e5



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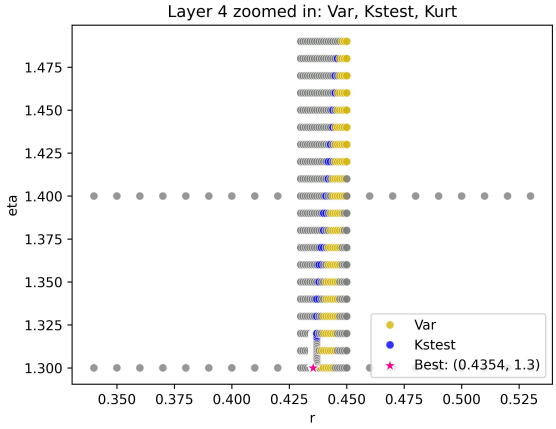
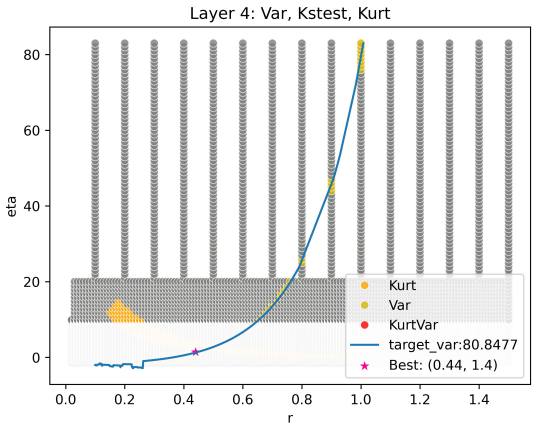


Fine Grid Search

full



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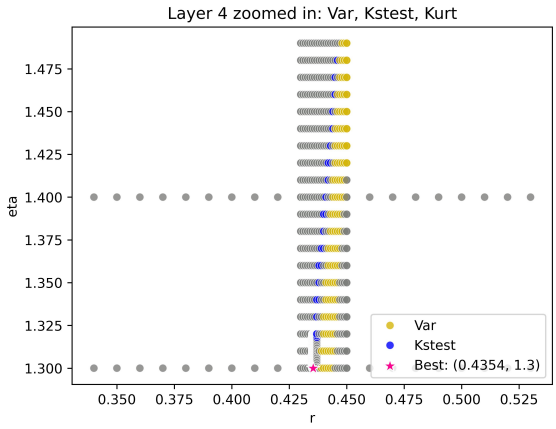
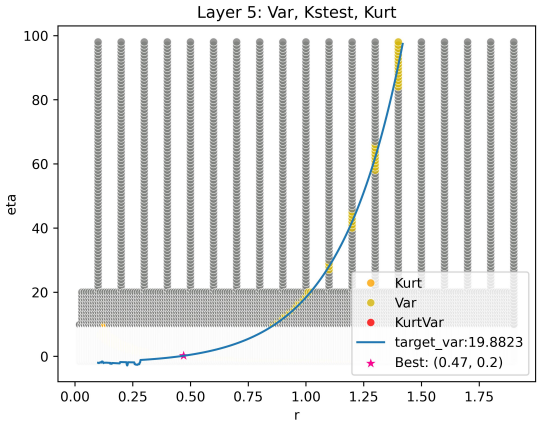


Fine Grid Search

Layer 5

approx1e5



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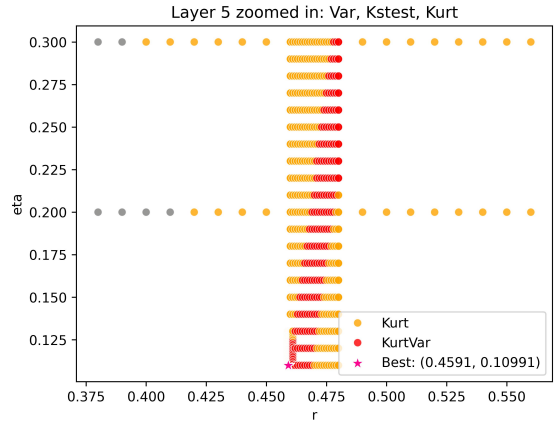
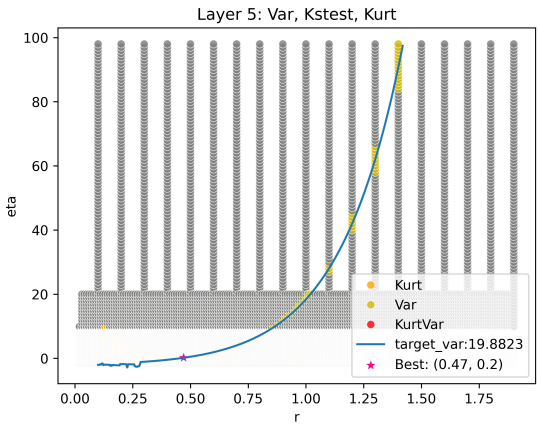


Fine Grid Search

full



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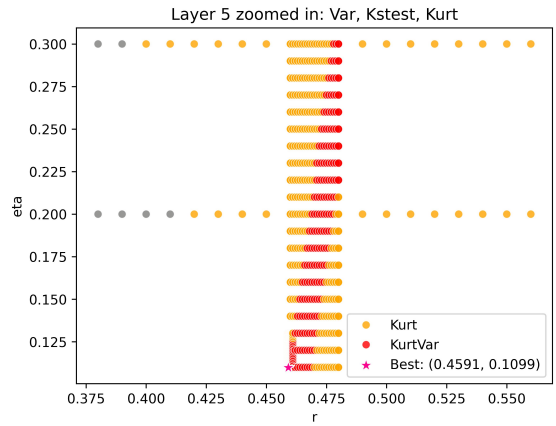
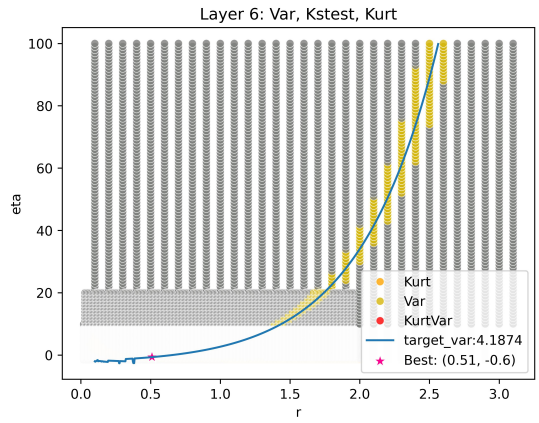


Fine Grid Search

Layer 6

approx1e5



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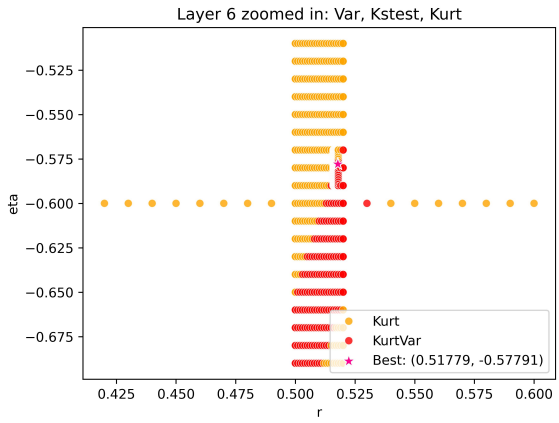
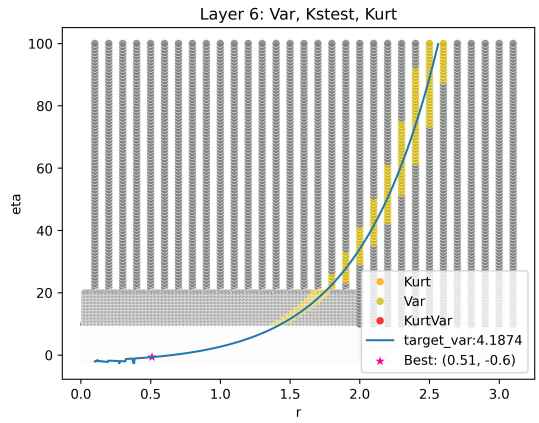
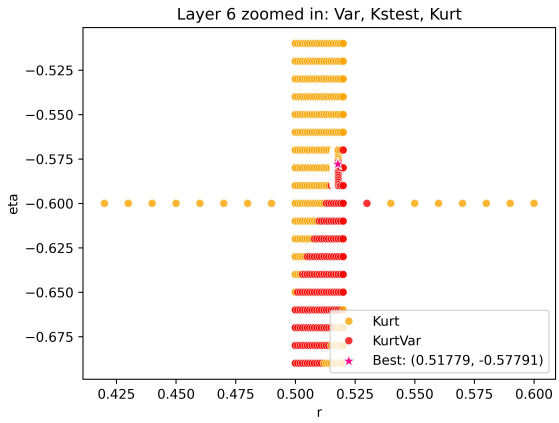


Fine Grid Search

full



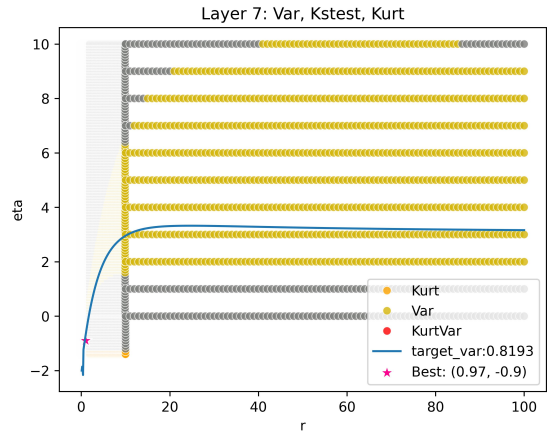
Full Grid Search



Fine Grid Search

Layer 7

approx1e5



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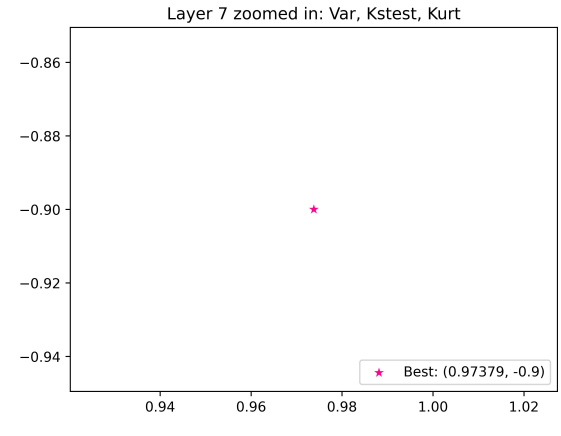
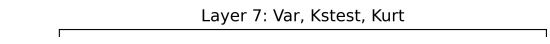
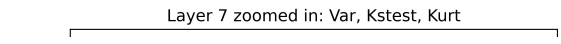
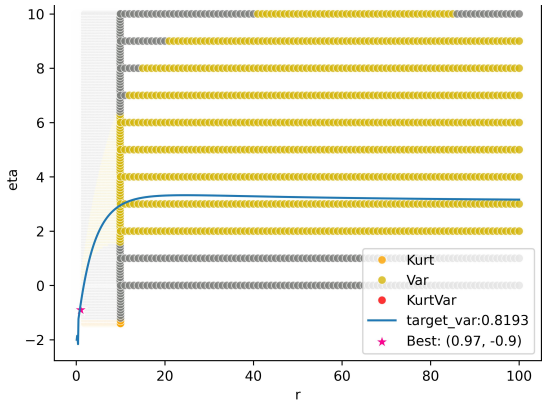


Fine Grid Search

full







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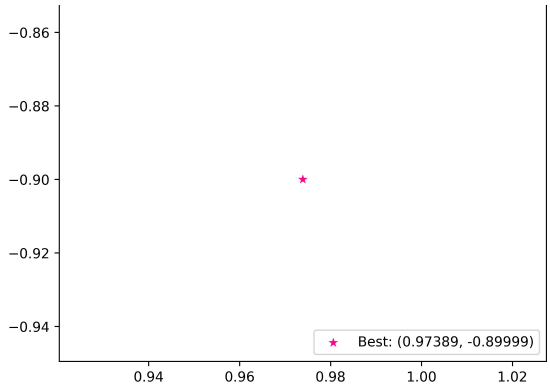
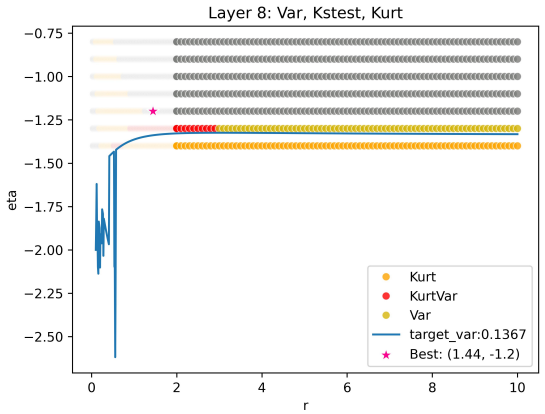


Fine Grid Search

Layer 8

approx1e5



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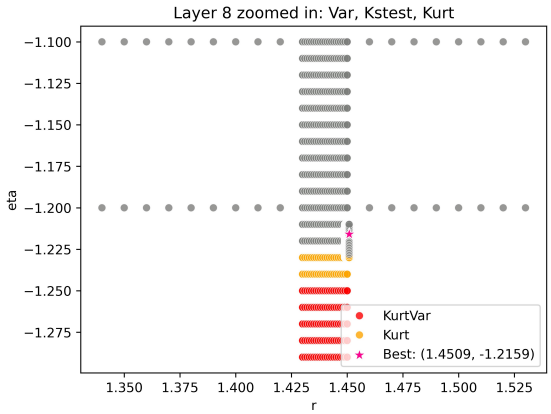
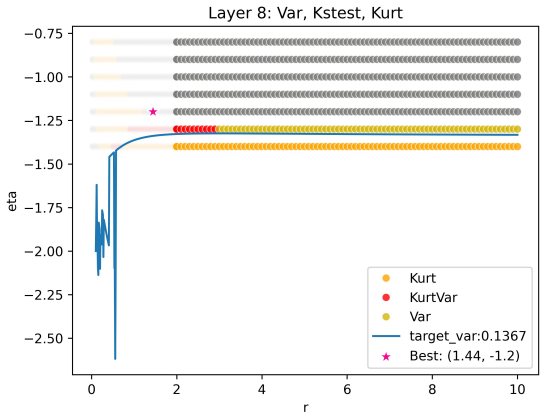
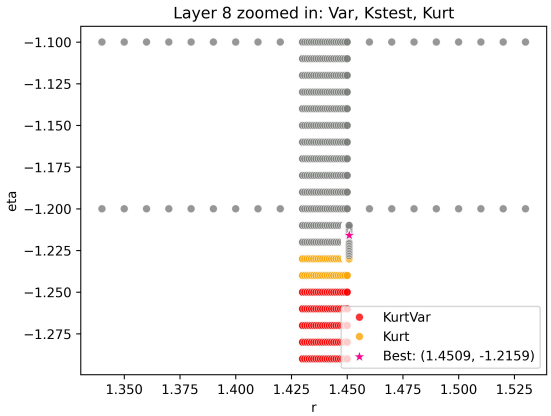


Fine Grid Search

full

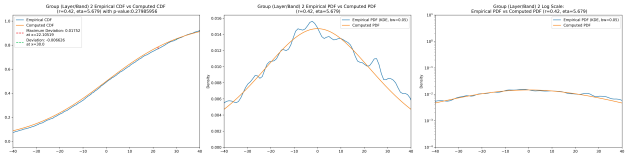


Full Grid Search

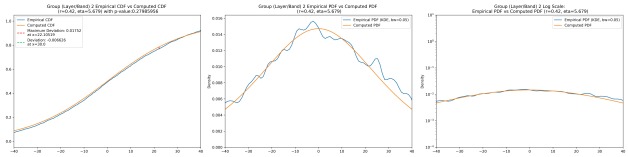


Fine Grid Search

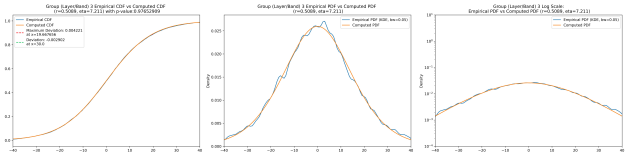
Compare CDF PDF Plots



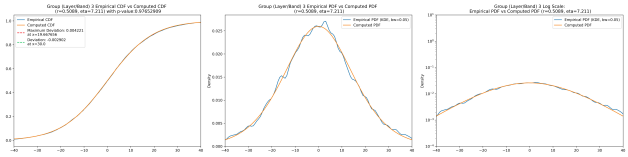
approx1e5



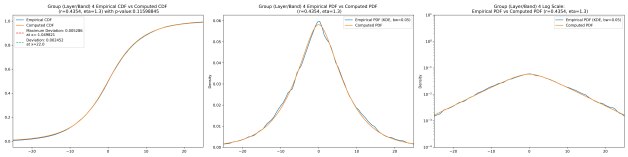
full



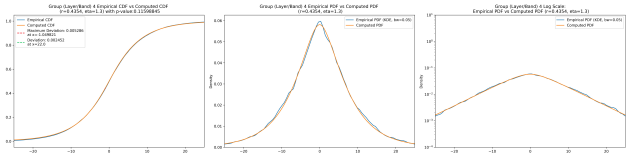
approx1e5



full



approx1e5



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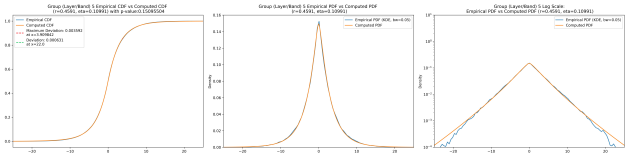
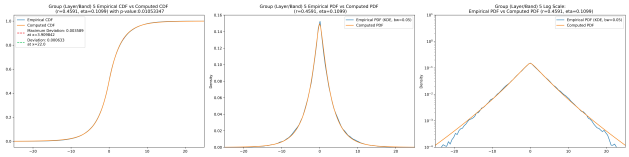


approx1e5



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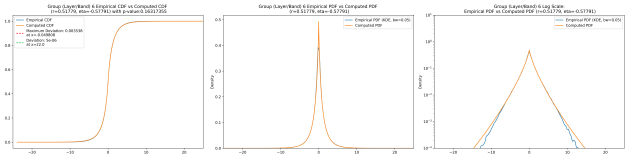
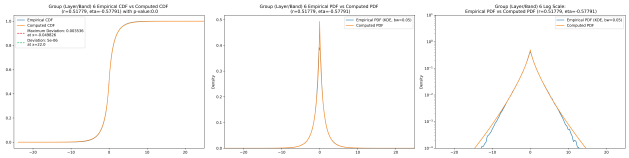


approx1e5



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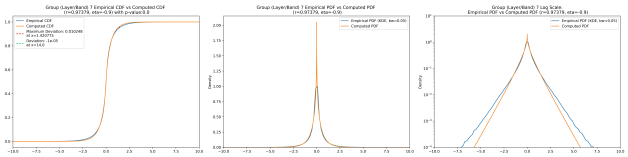
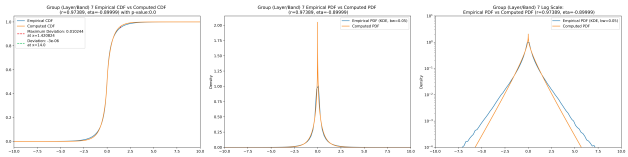


approx1e5



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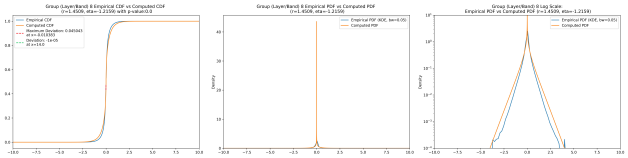
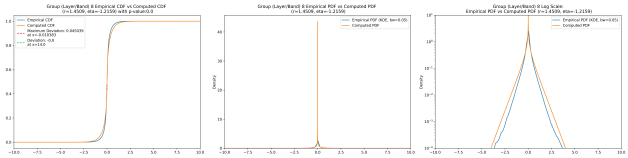


approx1e5



full

Comparative Parameter Analysis

Best parameters comparison:

layer	A_total_samples	F_total_samples	A_best_r	F_best_r	A_best_eta	F_best_eta	A_kstest_stat_best	F_kstest_stat_best
2	3180	3180	0.42	0.42	5.679	5.679	0.0175199	0.0175199
3	12720	12720	0.5089	0.5089	7.211	7.211	0.0042211	0.0042211
4	50880	50880	0.4354	0.4354	1.3	1.3	0.0052863	0.0052863

layer	A_total_samples	F_total_samples	A_best_r	F_best_r	A_best_eta	F_best_eta	A_kstest_stat_best	F_kstest_stat_best
5	203520	203520	0.4591	0.4591	0.10991	0.1099	0.0035924	0.0035907
6	814080	814080	0.51779	0.51779	-0.57791	-0.57791	0.0035378	0.0035361
7	3.25632e+06	3.25632e+06	0.97379	0.97389	-0.9	-0.89999	0.0102482	0.0102435
8	1.30253e+07	1.30253e+07	1.4509	1.4509	-1.2159	-1.2159	0.0450433	0.0450394

Individual Analyses

approx1e5

Optimization progression:

layer	initial_r	initial_eta	best_r	best_eta	iter1_r	iter1_eta	kstest_stat_iter1	iter2_r	iter2_eta	kstest_stat_iter2	iter3_r	iter3_eta	kste
2	0.42	5.7	0.42	5.679	0.42	5.68	0.0175418	0.42	5.679	0.0175199	nan	nan	
3	0.51	7.3	0.5089	7.211	0.509	7.22	0.0042633	0.5089	7.211	0.0042211	nan	nan	
4	0.44	1.4	0.4354	1.3	0.436	1.31	0.0053152	0.4354	1.3	0.0052863	nan	nan	
5	0.47	0.2	0.4591	0.10991	0.46	0.12	0.0038664	0.4591	0.11	0.0035958	0.4591	0.10991	
6	0.51	-0.6	0.51779	-0.57791	0.517	-0.58	0.0035895	0.5178	-0.578	0.0035424	0.51779	-0.57791	
7	0.97	-0.9	0.97379	-0.9	0.974	-0.9	0.0102584	0.9738	-0.9	0.0102486	0.97379	-0.9	
8	1.44	-1.2	1.4509	-1.2159	1.45	-1.22	0.0468238	1.4509	-1.216	0.045086	1.4509	-1.2159	

full

Optimization progression:

layer	initial_r	initial_eta	best_r	best_eta	iter1_r	iter1_eta	kstest_stat_iter1	iter2_r	iter2_eta	kstest_stat_iter2	iter3_r	iter3_eta	kste
2	0.42	5.7	0.42	5.679	0.42	5.68	0.0175418	0.42	5.679	0.0175199	nan	nan	
3	0.51	7.3	0.5089	7.211	0.509	7.22	0.0042633	0.5089	7.211	0.0042211	nan	nan	
4	0.44	1.4	0.4354	1.3	0.436	1.31	0.0053152	0.4354	1.3	0.0052863	nan	nan	
5	0.47	0.2	0.4591	0.1099	0.46	0.12	0.0038628	0.4591	0.11	0.0035949	0.4591	0.1099	
6	0.51	-0.6	0.51779	-0.57791	0.517	-0.58	0.0035878	0.5178	-0.578	0.0035407	0.51779	-0.57791	
7	0.97	-0.9	0.97389	-0.89999	0.974	-0.9	0.0102497	0.9739	-0.9	0.0102448	0.97389	-0.89999	
8	1.44	-1.2	1.4509	-1.2159	1.45	-1.22	0.0468199	1.4509	-1.216	0.0450822	1.4509	-1.2159	