VMCAI2022 - Supplemental Material

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1 Tables

This section presents tables with the full, detailed results of the comparison between STAMINA 1.0 and STAMINA 2.0

Table 1: Performance of STAMINA 2.0 relative to STAMINA 1.0 on the hazard circuit. A $\star$ by the improvement indicates STAMINA 1.0 could not achieve the desired w within 10 iterations; † indicates STAMINA 1.0 did not complete due to memory constraints.

Glitch	Transition	STAMINA 2.0				STAMINA 1.0				Improvement	
		$\lvert\mathcal{G}\rvert$ (K)	T (C/A)	P_{min}	P_{max}	$\lvert\mathcal{G}\rvert$ (K)	T (C/A)	P_{min}	P_{max}	$\lvert\mathcal{G}\rvert$ (%)	T (%)
Glitch Zero	$(0,1,0) \to (1,1,1)$	$3,527$	$1006/2872$	0.0166	0.0168	$8,382$	$5708/41,592$	0.0060	0.9218	**$\star$57.9**	**$\star$91.8**
	$(0,1,0) \to (1,0,0)$	85	$13/35$	0.3950	0.3951	933	$224/706$	0.3951	0.3960	**90.9**	**94.8**
	$(1,1,1) \to (1,0,0)$	406	$86/184$	0.7357	0.7358	$3,464$	$1,936/4,595$	0.7351	0.7361	**88.3**	**95.9**
	$(1,1,1) \to (0,1,0)$	468	$97/219$	0.6947	0.6948	$6,929$	$829/1,464$	0.6947	0.6947	**93.2**	**86.2**
	$(1,0,0) \to (0,1,0)$	165	$30/76$	0.4550	0.4551	$3,408$	$2,133/9,892$	0.4550	0.4555	**95.2**	**99.1**
	$(1,0,0) \to (1,1,1)$	$3,569$	$1021/2850$	0.0166	0.0168	$9,280$	$6,029/42,336$	0.0125	0.5405	**$\star$61.5**	**$\star$92.0**
Glitch One	$(0,1,1) \to (1,0,1)$	$2,813$	$818/1988$	0.9895	0.9897	$11,462$	$8,102/65,546$	0.8608	0.9990	**$\star$75.5**	**$\star$96.2**
	$(0,0,0) \to (0,1,1)$	$2,544$	$590/2034$	0.8260	0.8262	$14,408$	$7,611/54,156$	0.6661	0.9669	**†82.3**	**†95.8**
	$(0,0,0) \to (1,0,1)$	$2,830$	$810/2,165$	0.9902	0.9905	$9,406$	$4,976/46,219$	0.9477	0.9998	**$\star$69.9**	**$\star$94.2**
	$(1,0,1) \to (0,1,1)$	$3,006$	$821/2,170$	0.9895	0.9898	$17,994$	$6,124/41,362$	0.8498	0.9981	**†83.3**	**†93.7**
	$(0,1,1) \to (0,0,0)$	381	$70/174$	0.8574	0.8575	$7,077$	$3,868/23,541$	0.8574	0.8580	**94.6**	**99.1**
	$(1,0,1) \to (0,0,0)$	328	$59/151$	0.8644	0.8645	$8,165$	$3,611/24,023$	0.8642	0.8652	**96.0**	**99.2**

Table 2: Performance STAMINA 2.0 relative to STAMINA 1.0 on the benchmarks.

Model	Params	STAMINA 2.0				STAMINA 1.0				Improvement	
		$\lvert\mathcal{G}\rvert$ (K)	T (C/A)	P_{min}	P_{max}	$\lvert\mathcal{G}\rvert$ (K)	T (C/A)	P_{min}	P_{max}	$\lvert\mathcal{G}\rvert$ (%)	T (%)
Robot (n/K)	32/ 64	474	51/ 165	0.9755	0.9756	696	38/ 321	0.9756	0.9756	**31.9**	**39.8**
	32/ 1024	474	51/ 167	0.9755	0.9756	696	37/ 329	0.9756	0.9756	**31.9**	**40.4**
	64/ 64	1,562	139/ 354	2.94e-5	1.78e-4	2,273	123/ 870	1.46e-4	1.68e-4	**31.3**	**50.4**
	64/ 1024	1,562	138/ 375	2.94e-5	1.78e-4	2,273	121/ 829	1.46e-4	1.68e-4	**31.3**	**46.0**
Jackson (N/λ)	4/ 5	187	15/ 19	0.8654	0.8655	167	18/ 41	0.8653	0.8657	**-10.7**	**42.4**
	5/ 5	1,480	176/ 273	0.8194	0.8202	6,141	1,852/ 2,606	0.8197	0.8197	**75.9**	**89.9**
Polling (N)	12	0.001	0.016/ 0.018	1.0	1.0	19	3/ 24	1.0	1.0	**99.9**	**99.9**
	16	0.001	0.017/ 0.012	1.0	1.0	57	17/ 79	1.0	1.0	**99.9**	**99.9**
	20	0.001	0.018/ 0.019	1.0	1.0	113	25/ 149	1.0	1.0	**99.9**	**99.9**
Tandem (c)	2047	21	1/ 13	0.4990	0.4990	25	0.3/ 26	0.4990	0.4990	**16**	**46.8**
	4095	42	2/ 51	0.4993	0.4993	50	1/ 117	0.499	0.499	**16**	**55.1**