

Site Report on Physics Plan from Japan

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Summary table of available configurations

flavors	fermion/ gluon action	machine collaboration	a(fm)	lattice	pi/rho	approx #configs	status
2	Wilson-clover/ Iwasaki (2001)	CP-PACS/Tsukuba CP-PACS	0.20	12 ³ x24	0.8-0.55	1000x4	available
			0.15	16 ³ x32	0.8-0.55	1000x4	
			0.10	24 ³ x48	0.8-0.55	800x4	
2	Wilson-clover/ Plaquette (2002)	SR8000/KEK JLQCD	0.10	20 ³ x40	0.8-0.6	1200x5	in preparation
2+1	Wilson-clover/ Iwasaki (2006)	ES/JAMSTEC SR8000/KEK CP-PACS/Tsukuba CP-PACS+JLQCD	0.12	16 ³ x32	0.8-0.6	800x5x2	available
			0.10	20 ³ x40	0.8-0.6	800x5x2	
			0.07	28 ³ x56	0.8-0.6	600x5x2	
2	overlap/ Iwasaki (2006)	BG/L/KEK JLQCD	0.12	16 ³ x32	0.66-0.34	O(500)x6	available at Jan. 2010
2+1	Wilson-clover/ Iwasaki (2008)	PACS-CS/Tsukuba PACS-CS	0.09	32 ³ x64	0.6-0.2	≈2600	available

Overlap confs will be in public release on ILDG at the end of January 2010.

PACS-CS: status and plan

2+1 flavor QCD

- Clover with NP csw and Iwasaki
- MP²DDHMC for ud and UV-filtered PHMC for s

Status

- Physical pt. simulation on 64⁴ at beta=1.9(a~0.09fm)
- Preparatory runs at other beta

Plan

- Physical pt. simulations on (6fm)³ box with a->0

JLQCD: status and plan

Overlap fermion/Iwasaki gauge + topology fixing term

- 2 flavors: $16^3 \times 32$, $a \sim 0.12\text{fm}$, $m_q > m_s^{phys}/6$ ($6 m_q$)
 - 10k trjs ready at each m_q , $Q=0$ (-2, -4 for some m_q)
 - To be available on ILDG at the end of January 2010
- 2+1 flavors: $16^3 \times 48$, $a \sim 0.11\text{fm}$, $m_q > m_s^{phys}/6$ ($5m_q \times 2m_s$)
 - 2500 trjs ready at each (m_q, m_s) , $Q=0$
 - Algorithm and spectrum papers are in preparation
 - To be supplied to ILDG after publication
- 2+1 flavors: $24^3 \times 48$, $a \sim 0.11\text{fm}$, $m_q \sim m_s^{phys}/6$ ($2 m_q \times 1m_s$)
 - In progress