Groups and Sites

German paticipation in the following groups

BMW	Jülich, Wuppertal
CLS	various collabrations (ALPHA, Mainz, Regensburg) and sites (Berlin, Mainz, Münster, Regensburg, Wuppertal,Zeuthen)
ETMC	Berlin, Hamburg, Münster, Zeuthen $\rightarrow$ Giannis
QCDSF	Hamburg, Jülich, Leipzig, München
RBG	Darmstadt, Bielefeld

Disclaimer:
The presenter in this talk is new to this field.
IDLG activities will be part of responsibilities within
Simulation Lab (Cyprus, Jülich, DESY)

Resources in Germany

JuQueen at FZ-Jülich
BG/Q System, 5.9 Pflops

Juropa at FZ-Jülich
Bull (Intel based) system, 210 Tflops

SuperMuc LRZ Munich
IBM (Intel based) system, 2.8 Pflops

HLRN-III at HLRN Berlin, Hanover
CRAY XC30, 329 Tflops in Phase I
next year: phase II to 1.9 Pflops

Clusters based at Universities

CLS

Coordinated **L**attice **S**imulations

Not a collaboration $\rightarrow$ no common physics programme

Consortium to generate common set of ensembles

Members in

Berlin, CERN, Dublin, Mainz, Madrid, Münster, Milano, Odense, Regensburg, Rome, Valencia, Wuppertal, Zeuthen

CLS: goals

$N_f = 2 + 1$ flavors of non-perturbatively improved Wilson fermions

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Open boundary condition in time

solve problem of topological freezing

simulations at 0.05 fm lattice spacings possible

Twisted mass reweighting

Simulate

$$\det D \to \frac{\det^2(D + i\mu\gamma_5)}{\det(D + i\sqrt{2}\mu\gamma_5)}$$

Solves problem of exceptional configurations $\to$ ergodicity

Reweighting factor included in measurement

Simulation with public openQCD package

CLS and the ILDG

Plan to make configurations publicly available via ILDG, after reasonable delay for first publications

Access restrictions within ILDG would save additional storage step.

Issues for ensemble description

Open boundary conditions $\longrightarrow$ to be implemented

Twisted mass reweighting

Non-standard "action" in simulation

Reweighting factor must be computed for correct measurements.