24^{th} ILDG meeting

French site report

Members of "LATFOR"; VO for continental Europe (Germany, France, Italy, Spain)

Potential users of ILDG are:
– Clermont-Ferrand (IN2P3/CNRS)
– Grenoble (IN2P3/CNRS)
– Marseille (INP/CNRS)
– Orsay (INP/CNRS)
– Saclay (CEA)
– Tours (INP/CNRS)

Computer capacity

Unquenched configurations produced at CNRS computing center IDRIS (4 racks of BlueGene/Q).

Analyses performed in different places:
– Computing center of IN2P3 in Lyon
– Computing center of CNRS (BlueGene/Q, SandyBridge: 1.5 Pflop/s)
– Computing center of CINES in Montpellier (Intel 12-cores: 2.1 Pflop/s)
– Computer center at Université of Reims (GPU Tesla K20X: 255 Tflops)
– Laboratories computers and clusters

Physics projects

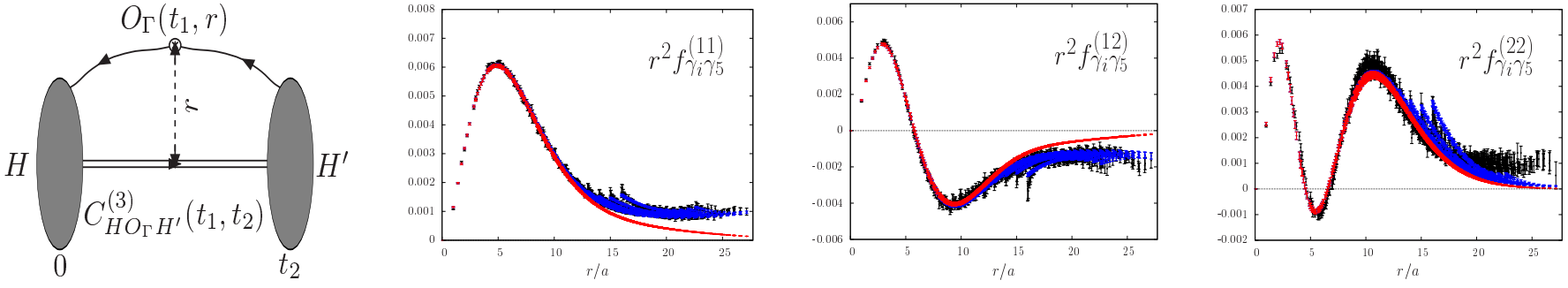
Clermont/Grenoble/Orsay/Saclay

European Twisted Mass Collaboration (ETMC): $\mathrm{N_f} = 2 + 1 + 1$ twisted mass (+ Clover term) configurations, at the physical point.
Physics topics: semileptonic B decays, QCD in the infrared regime, topological properties of the gluon fields, gradient flow.

Orsay

Flavour physics, form factors of rare decays, physics of radially excited heavy-light mesons.
Alpha Collaboration: B physics, access to configurations produced by "CLS" (stored on ILDG as soon as possible, once software issues are solved).

[Axial density distribution in the B meson]



Marseille

Budapest-Marseille-Wuppertal Collaboration (BMW-c): electromagnetic and mass isospin breaking effects, muon $g-2$, σ term of the nucleon, width of the ρ meson, access to configurations produced by BMW-c (not stored on ILDG).

Tours

Vacuum properties in presence of strong magnetic fields and gluon plasma, quantum particle in an external magnetic field.

Use of the ILDG grid

We are part of the LATFOR (continental Europe) virtual organisation.

ILDG storage element working in the IN2P3 computing center in Lyon.

No downloads since more than one year, enough space to keep the ensembles under heavy use: twisted quarks, Wilson-Clover quarks.

Independently of ILDG, store the propagators to compute 2-pt and 3-pt correlation functions and Green functions.

Funding and issues with use of HPC

In 2016 France has not made the Tier-0 machine Curie available to PRACE, waiting for the next phase of the project.

No special funding for ILDG. IN2P3 involved via its storage element working in the Tier 1 computing center in Lyon and by providing us with fast network facilities.

Future of "Université Paris-Saclay" (19 partners including CNRS, CEA, Ecole Polytechnique, Université Paris-Sud, 50 000 people, funding of 1 G €)? HPC is an important working axis: creation of a master, buy a dedicated machine to test codes, develop a network among local computer centers, submit common projects to European calls, invite visitors; impact for the lattice community in Paris area?

Our country is lacking man power, my impression is that we are loosing our ability to catch expertise and perform preparatory works; cultural issue, computational science not well considered by our colleagues and friends in theoretical physics.