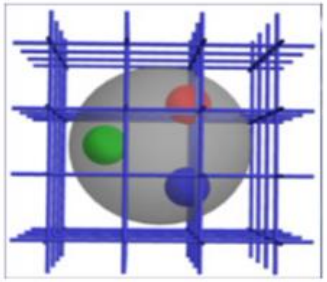
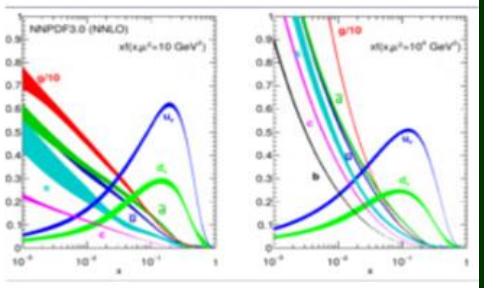


W. K. Kellogg Biological Station
MICHIGAN STATE UNIVERSITY



Parton Distributions and Lattice Calculations (PDFLattice 2019)

Kellogg Biological Station, MSU, MI, USA

Welcome to the second workshop on *Parton Distributions and Lattice Calculations* (PDFLattice2019)

Organizers: Huey-Wen Lin, Emanuele Nocera, Fred Olness, Kostas Orginos

Important!

§ Workshop is subsidized by MSU!

§ Keep your badge with you at all times!

- Must have during meal time!
- Staff will only serve food to those with badges

§ Breakfast (7:30–8:30AM), Lunch (12:30–1:30PM), Dinner (6:00–7:00PM)

- Late hours for the chef and staff are a special favor to us beyond the regular schedule
- Please be on time ending your presentations
- There is plenty of time for group and individual discussions at other times during the workshop

Important!

§ Tobacco-free campus

- No smoking anywhere on MSU properties

§ Wi-Fi

- eduroam
- MSUnet Guest 3.0 (no password required)

§ Check-out time is 11AM

- Remove your luggage before 11AM
  - The code won't work after that
- If you have any problems, please consult the reception staff

§ Workshop includes Friday lunch

- CTEQ meeting open session starts after Friday lunch
- Welcome to join, but
  dinner will cost you extra if you haven't registered yet

Thursday

§ Kellogg Manor House Tour (5:45–6:45PM)

- Built on the highest point overlooking Gull Lake in 1925–6, the Manor House has awe-inspiring views and historic grandeur.
- W.K. Kellogg Manor House is the former estate of cereal magnate W.K. Kellogg and his wife, Dr. Carrie Staines Kellogg.
- Restored to its original grandeur in 2000, the home is rich with history and elegance with natural gardens around a lovely lakeside setting.

§ Workshop dinner at Kellogg Manor House (6:45PM–)

- Everyone will receive ONE drink ticket
  - Given out during Thursday-afternoon coffee break
- The workshop dinner is sponsored by MSU

Things to Do

- See Kellogg Manor House
- KBS Trail Guide
- W.K. Kellogg Bird Sanctuary (http://birdsanctuary.kbs.msu.edu/)
  - "A unique wildlife center located in Southwest Michigan offering conservation-focused public programs, interpretive tours, and accessible trails that allow close views of captive and wild birds."
- Recreation
  - Explore the interactive map to see on-site recreational activities
- More to do around here, check this link

Workshop Format

§ Plenty of discussions across community!

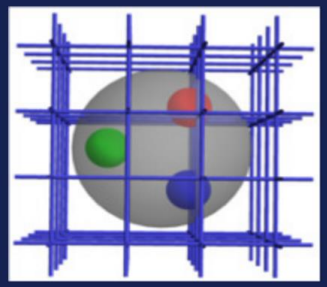
- We want to see new collaboration!

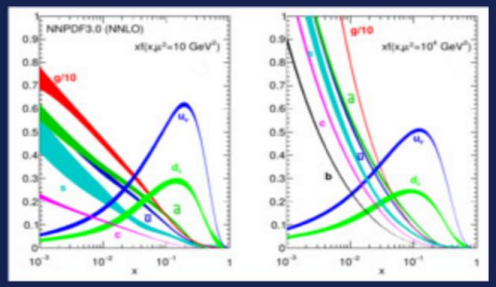
§ Few review (30 mins) talks + short talks

- Slightly more detail in the overview talks
  (but be kind to the other half of the community…
  reduce technical jargon when possible)
- Stick to the big picture for short talks
  (will have a chance to follow up details if there is interest)

§ Expanding topics

- Unpol./pol. PDF (Wed. morning), transversity (Wed. afternoon),
  TMD (Thur. morning), GPD (Thur. afternoon)
- Summary talk + whitepaper organization/discussion
  (structure, assignments, format, deadline)

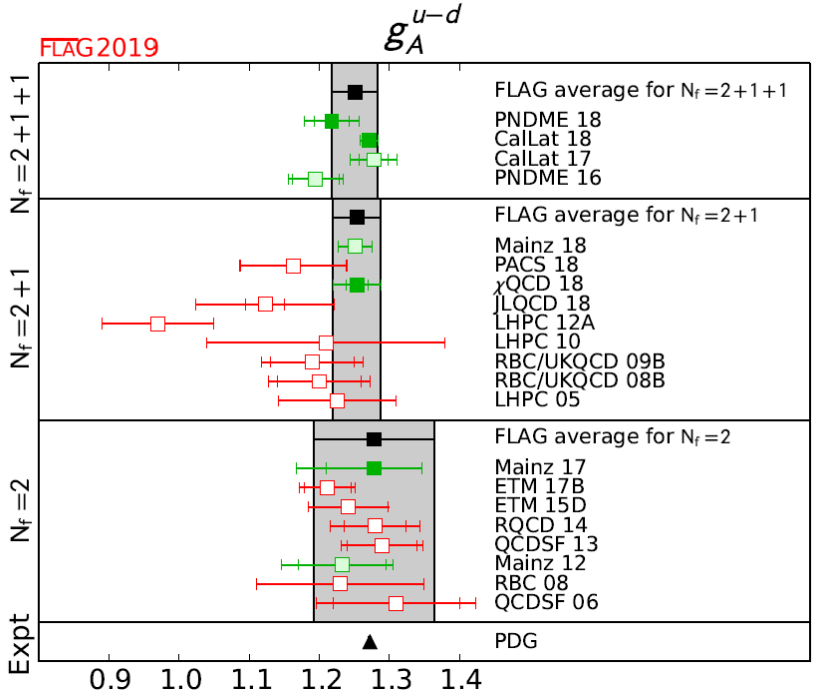




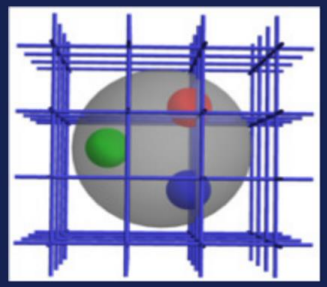
Parton Distributions and Lattice Calculations in the LHC era (PDFLattice 2017)

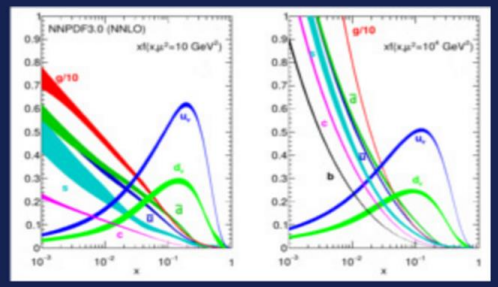
22-24 March 2017, Oxford, UK

§ Review: Nucleon matrix elements is now included in FLAG



Collaboration	Ref.	N_f	publication status	continuum extrapolation	chiral extrapolation	finite volume	renormalization	excited states	g_A^{u-d}
PNDME 18[a]	[84]	2+1+1	A	★‡	★	★	★	★	1.218(25)(30)
CalLat 18	[85]	2+1+1	A	○	★	★	★	★	1.271(10)(7)
CalLat 17	[831]	2+1+1	P	○	★	★	★	★	1.278(21)(26)
PNDME 16[a]	[830]	2+1+1	A	○‡	★	★	★	★	1.195(33)(20)
Mainz 18	[915]	2+1	C	★	○	★	★	★	1.251(24)
PACS 18	[808]	2+1	A	■	■	★	★	■	1.163(75)(14)
χQCD 18	[6]	2+1	A	○	★	★	★	★	1.254(16)(30)[$]
JLQCD 18	[839]	2+1	A	■	○	○	★	★	1.123(28)(29)(90)
LHPC 12A[b]	[916]	2+1	A	■‡	★	★	★	★	0.97(8)
LHPC 10	[846]	2+1	A	■	○	■	★	■	1.21(17)
RBC/UKQCD 09B	[833]	2+1	A	■	■	○	★	■	1.19(6)(4)
RBC/UKQCD 08B	[832]	2+1	A	■	■	○	★	■	1.20(6)(4)
LHPC 05	[917]	2+1	A	■	■	★	★	■	1.226(84)





Parton Distributions and Lattice Calculations in the LHC era (PDFLattice 2017)

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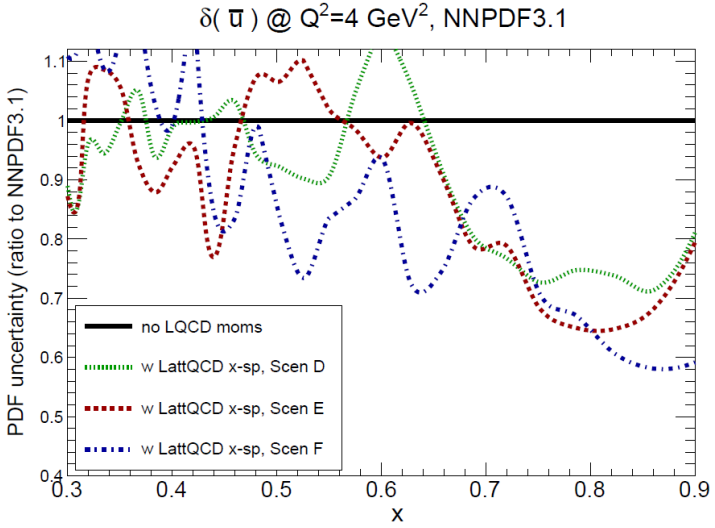
§ Predict: Implementing the pseudo-data from LQCD with $x = 0.7–0.9$

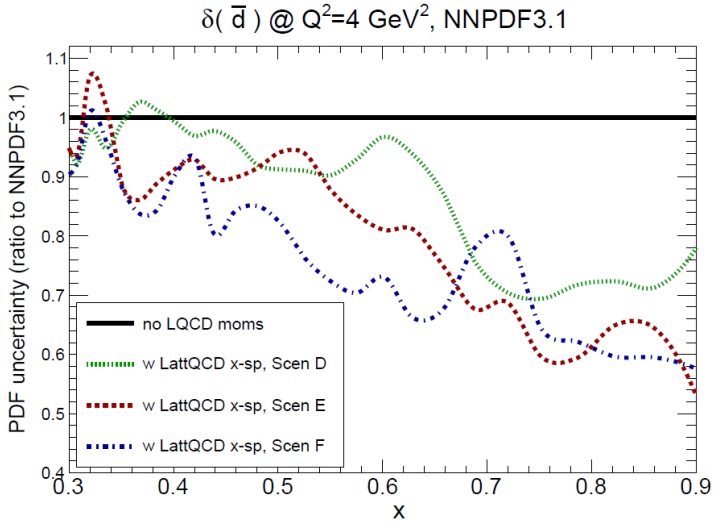
$$u(x_i, Q^2) - d(x_i, Q^2) \text{ and } \bar{u}(x_i, Q^2) - \bar{d}(x_i, Q^2)$$

D: 12%

E: 6%

F: 3%





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We look forward to another successful workshop!