INT Program on EIC Physics, INT-18-3 Oct. 1- Nov. 162018

- **Probing Nucleons and Nuclei in High Energy Collisions (INT-18-3)**
  October 1 - November 16, 2018
  Y. Hatta, Y. Kovchegov, C. Marquet, A. Prokudin
- Institute for Nuclear Theory, Seattle, WA

OCTOBER 1 – NOVEMBER 16, 2018 • SEATTLE, WASHINGTON

PROBING NUCLEONS AND NUCLEI IN HIGH ENERGY COLLISIONS

Dedicated to the Physics of the Electron Ion Collider

Program held at the Institute for Nuclear Theory, supported by the US Department of Energy

http://www.int.washington.edu/PROGRAMS/18-3

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PROGRAM STRUCTURE

Week 1 *October 1-5*	Week 2 *October 8-12*	Week 3 *October 15-19*	Week 4 *October 22-26*	Weeks 5 & 6 *Oct. 29-Nov. 9*	Week 7 *November 12-16*
Generalized parton distributions	**Transverse spin and TMDs**	**Longitudinal spin**	**Symposium week**	***eA* collisions**	***pA* and *AA* collisions**
Conveners: Tanja Horn, Andreas Metz, Christian Weiss	*Conveners:* Harut Avakian, Alessandro Bacchetta, Daniel Boer, Zhongbo Kang	*Conveners:* Elke Aschenauer, Keh-Fei Liu, Cédric Lorcé, Marco Stratmann	A five-day symposium will be held during the central week, covering all the major topics related to the EIC.	*Conveners:* Giovanni Chirilli, Charles Hyde, Anna Stasto, Thomas Ullrich, Bowen Xiao	*Conveners:* Adrian Dumitru, François Gelis, Tuomas Lappi, Yacine Mehtar-Tani

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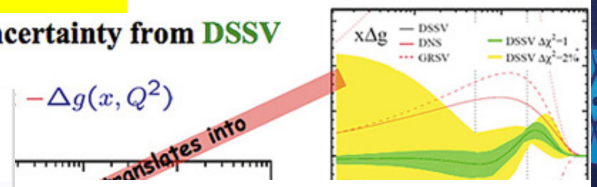
Gluons and the quark sea at high energie
distributions, polarization, tomography

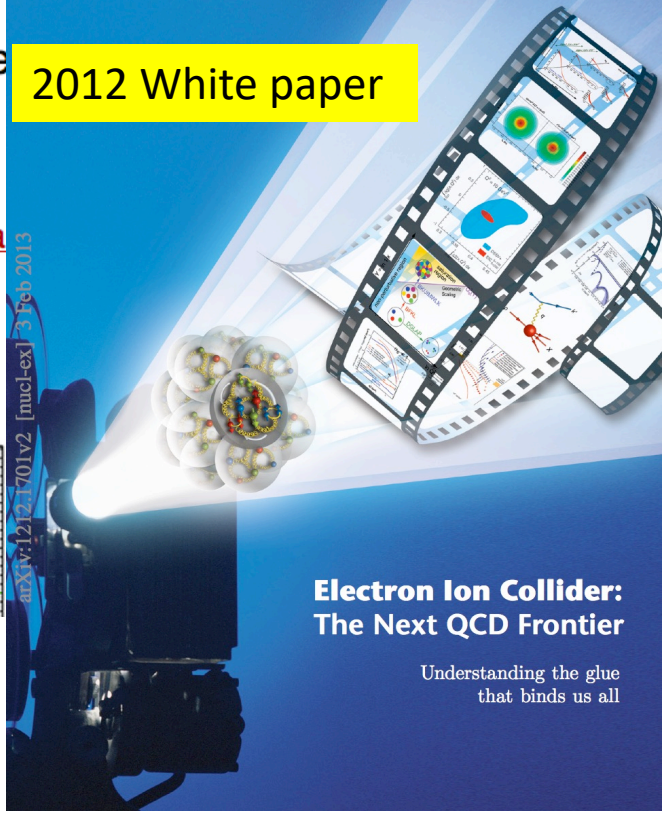
September 13 to November 19, 2010

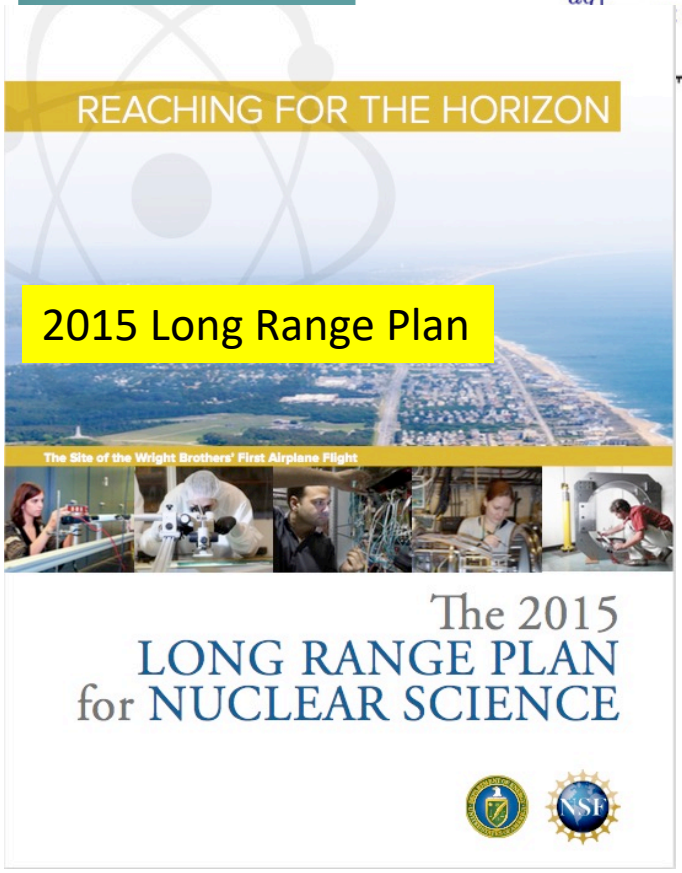
Report from the INT program "Gluons and the quark sea
energies:
distributions, polarization, tomography"

2010 INT workshop



2012 White paper





2015 Long Range Plan

An Assessment of U.S.-Based Electron-Ion Collider Science

"The committee finds that the science that can be addressed by an EIC is compelling, fundamental and timely."

2018 NAS report

2018 INT workshop

http://www.int.washington.edu/PROGRAMS/18-3/

Goal: assess the current status of the EIC-related physics (theory/phenomenology), with the aim of laying the groundwork for another EIC White Paper, to be presented in preparation to the next NSAC Long Range plan.

	# of participants
Week 1 (October 1-5) : Generalized parton distributions Conveners: Tanja Horn, Andreas Metz, Christian Weiss	25
Week 2 (October 8-12) : Workshop on Transverse spin and TMDs Harut Avakian, Alessandro Bacchetta, Daniel Boer, Zhongbo Kang	39
Week 3 (October 15-19) : Longitudinal spin Elke Aschenauer, Keh-Fei Liu, Cedric Lorce, Marco Stratmann	26
Week 4 (October 22-26) : Symposium week	35
Weeks 5 & 6 (October 29-November 9) : eA collisions Giovanni Chirilli, Charles Hyde, Anna Stasto, Thomas Ullrich, Bowen Xiao	23 & 24
Week 7 (November 12-16) : pA and AA collisions Adrian Dimitru, Francois Gelis, Tuomas Lappi, Yacine Mehtar-Tani	25

2018 INT Program

- Currently we have 116 people registered for the program (including 4 organizers and ~20 conveners). Mainly theorists, but with a healthy number of experimentalists.
- The program is 7 weeks long – a bit shorter than the 2010 program which was 10 weeks long. Hence we will have a slightly faster pace.
- The program received generous support from JLAB and BNL with each of the labs supporting most of their participants.
- Wiki pages for each week to document discussions, to be maintained by conveners https://wiki.bnl.gov/EIC2018/index.php/Main_Page
- Talks will be broadcasted (remote participation by Zoom), recorded and posted (if the speaker permits) https://zoom.us/j/9821312855

BROOKHAVEN NATIONAL LABORATORY

Jefferson Lab
Thomas Jefferson National Accelerator Facility

Plans

- Wiki pages for each week to document important developments, to be maintained by conveners;
  https://wiki.bnl.gov/EIC2018/index.php/Main_Page
  plenty of INT-style discussions;
  identify key new measurements one can do at the EIC;
  try to achieve deeper understanding of existing observables;

- Ultimately will put together proceedings, post them on the arXiv and publish them too.