

From the ALD's Desk
A Quarterly RHIC News Bulletin
March 2016

A lot has happened since early December 2015 when I sent out the last edition of the RHIC Bulletin. Congress approved a FY2016 budget that allows for a 20 cryo-week RHIC run (not quite the 22 cryo-weeks we hoped for, but close to it). The presidential budget request for FY2017 contains a healthy increase for RHIC operations. RHIC Run-16 started very well, but we hit a snag last week when an electronic component in one dipole magnet failed, which requires an approximately three-week maintenance shutdown. I hope that you will find this quarterly memo again informative and useful.



André Michalek

RHIC Run-16: RHIC Run-16 started promising, with RHIC again exceeding its previous luminosity record for full energy Au+Au. A somewhat reduced budget allocation forced us to reduce our run plans from 22 cryo-weeks to 20 cryo-weeks, including a 10-week Au+Au run at top RHIC energy and a nearly 5-week beam energy scan for the d+Au system, followed by a week of running a single Au beam at lower energy for a first test of the coherent electron cooling proof-of-principle experiment. A major goal of the Au+Au run is the first measurement of charmed baryon (Λ_c) production and improved statistics data for open charm and beauty meson production. A primary goal of the d+Au energy scan will be to study the beam energy dependence of quark-gluon plasma production in small systems.

The run hit an obstacle on March 18 when a diode in one of the RHIC dipole magnets in the blue RHIC ring failed. After two days of diagnostic tests, when the reason for the failure was clear, the operations team decided to begin the repair process by warming up the affected ring sector. The warm-up was completed on March 24 and the repair crew began opening the dipole magnet. We hope to resume the RHIC run around April 8 if everything goes according to plan. Since some electricity costs will be saved during the maintenance period, and power costs have been unexpectedly low this winter, we hope to make up for some of the lost time by extending the run beyond its anticipated end date.

STAR iTPC Upgrade: Following a successful cost, schedule, and risk review in January, the DOE Office of Nuclear Physics approved our request to begin with the STAR iTPC upgrade. The first components have been ordered, and the project team led by Flemming Videbaek expects to complete the upgrade on schedule for the planned 2019 low energy RHIC run.

sPHENIX: Elections for spokesperson of the sPHENIX Collaboration were held in January 2016. Gunther Roland (MIT) and David Morrison (BNL) who ran as a team,

received the required majority of votes and has begun to represent the collaboration in bi-weekly meetings with BNL management and on the sPHENIX Project Management Group. Planning to get the sPHENIX proposal ready for a CD0 decision continues. A decommissioning plan for PHENIX after RHIC Run-16 has been completed and will soon be submitted to DOE.

RHIC/AGS PAC: Several new members have accepted invitations to serve on the 2016 RHIC/AGS PAC, replacing several long-time members whose terms have ended. Among the new members are: J.C. Peng (Illinois), A. Metz (Temple), and M. Asakawa (Osaka). The 2016 PAC will be chaired by John Harris (Yale). Further information can be found at the PAC website: <https://www.bnl.gov/npp/pac.php>

RHIC Cold QCD Plan Update: A special task force, led by Elke Aschenauer, completed an updated RHIC Cold QCD Plan that was submitted to the Office of Nuclear Physics at the end of January 2016. The plan, which identifies key future cold QCD measurements that utilize polarized p+p and p+A collisions at RHIC, can be downloaded from the URL: <https://www.phenix.bnl.gov/WWW/publish/elke/RHIC.Cold.QCD.Plan/RHIC.ColdQCD.Plan.013016.pdf>

NSAC Meeting: NSAC met on March 23 in Washington. The new Director of the DOE Office of Science, Cherry Murray, presented an overview of the funding priorities and commented very positively on the achievements and promises of the RHIC program. Associate Director for NP, Tim Hallman, announced new funding program for EIC Accelerator R&D starting in FY2017, which would be funded at the level of about \$7M annually. He also plans to convene a “community” panel chaired by a person chosen by NP, which will meet later this year and establish priorities for EIC accelerator R&D that will inform the new program.

eRHIC Planning: The eRHIC R&D Advisory Committee will hold its third meeting on April 7-8, 2016. The committee, chaired by Mike Harrison (BNL) and including both BNL and outside members, will assess the progress of the ongoing efforts aimed at developing a lower risk eRHIC design option.

EIC Users Group: The community of prospective EIC users assembled in Berkeley in early January 2016 to discuss how the community can best organize following up on the strong recommendation in the new NSAC Long Range Plan of an EIC as the next major construction project after the completion of FRIB. The more than 120 attendants voted to form an international EIC Users Group (EICUG) that will be governed by an Institutional Board with a standing Steering Committee. The mission of the EICUG will be to promote the case for an Electron-Ion Collider, to enhance and refine the scientific case for the EIC, and to represent the interests of its future users around the globe. At this time, over 500 scientists from more than 100 institutions have expressed their interest to join the EICUG. A Charter for the group is under development. Anyone who has not yet signed up but is interested in joining the EICUG should visit <http://www.eicug.org> on the web. The next meeting of the EICUG will be held at Argonne National Lab on July 7-9, 2016.