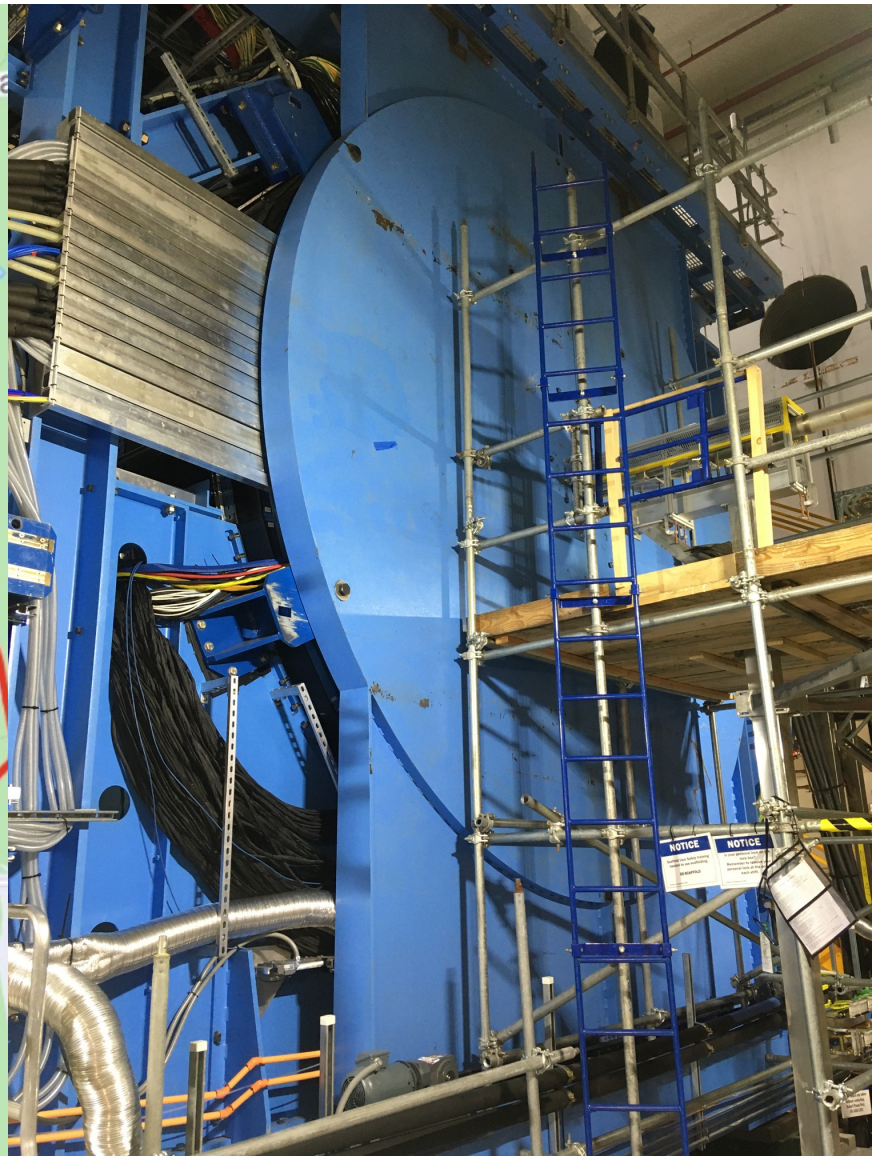
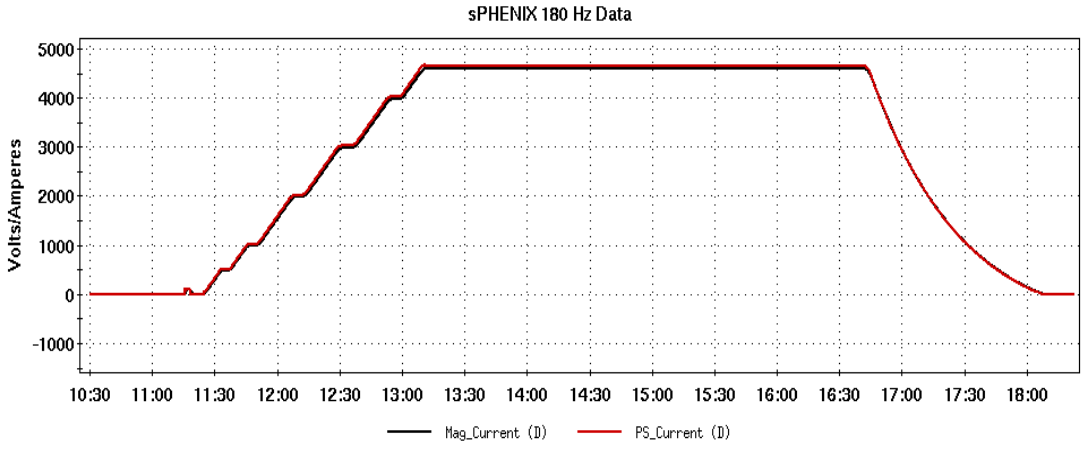
sPHENIX Status
RHIC Coordination Meeting
April 23, 2024

Jamie Nagle
University of Colorado Boulder
sPHENIX Run Coordinator



sPHENIX Magnet Status

Last Thursday (Apr. 18), after completing all the tests / checks, we ramped up the magnet to the top ~4600 A at the first attempt. Done. ☺

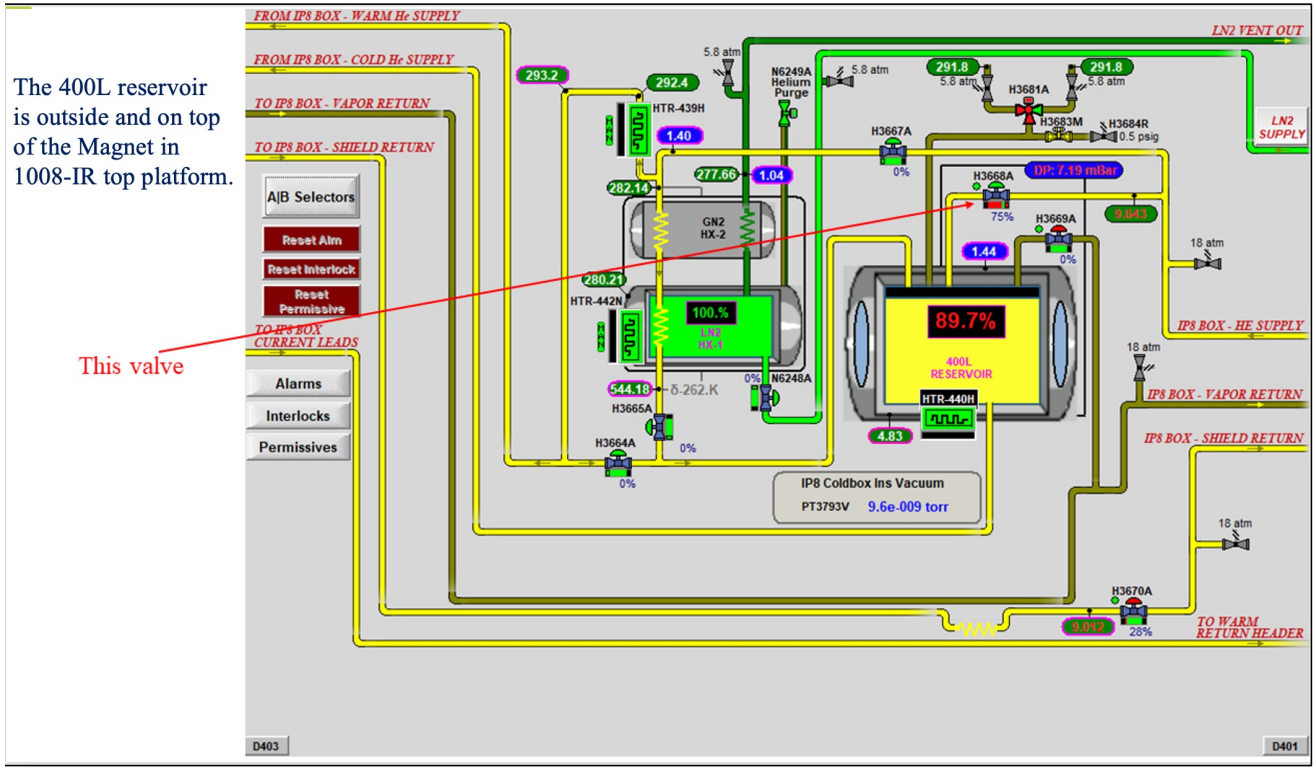


But before 17:00, Roberto (Cryo) called and informed Kin that there was a valve problem in the 400 L reservoir (in 1008-IR) and we needed to ramp down the Magnet. ☹

It turned out that we needed to warm up the reservoir vessel over the weekend and fixed the valve. The stem was found to be bent and was straightened out and a new seat was installed. Calibrations are to be completed today and cooling will then start. ☺

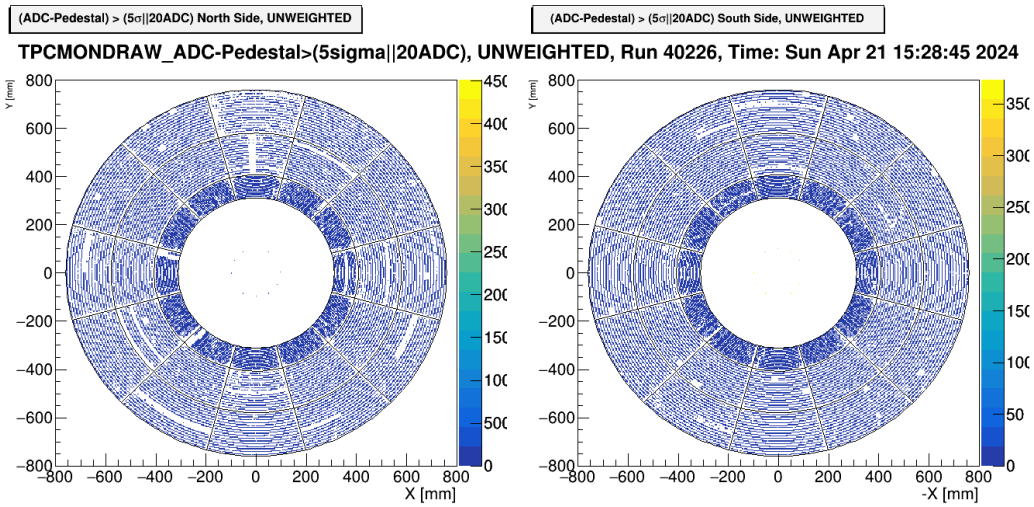
The 400L reservoir is outside and on top of the Magnet in 1008-IR top platform.

This valve



TPC Status

Chain of Sort-out-Box with MightyJack to reprogram TPC electronics firmware working.



New firmware with features needed for physics is being tested on one off-detector sector and one sector of the TPC

Features include activating zero suppression in the SAMPA, clock synchronization, and busy return to Global-Level-1/Global-Timing-Module

Latest “Contingency Box” resistor swaps show near-final gain balancing.

sPHENIX Hero: Marianna Albanese

How long have you been working at Brookhaven and in what capacity?

I joined Brookhaven in January 2022 as a mechanical engineer in the Collider Accelerator Department's Facilities and Experimental Support (FES) team, immediately taking on the role of sPHENIX Liaison Engineer. I also support other scientific experiments such as CEC, LEReC, and general CAD/EIC support.

What is the focus of your work on the sPHENIX experiment?

I offer engineering expertise, coordination, project oversight, and support to our FES technical groups, spanning carpentry, electricians, rigging, mechanical technicians, electronic services, survey, and water group. Additionally, I serve as the Liaison Engineer for CAD facilities, ensuring effective communication and planning to meet facility users' needs and expectations. Our engineering team plays a crucial role in bridging CAD facilities with the Physics Department.

Where were you born and what is your background before your current position?

I am a proud product of Long Island's south shore, particularly West Islip. After graduating from the University of Rhode Island with a BS in Industrial Engineering, I embarked on my career in the maritime industry with Great Lakes Dredge and Dock. Progressing swiftly, I advanced to the role of project engineer, contributing to projects along the coasts of the USA on dredging projects such as: Beach Replenishment, Coastal Protection/Restoration, and Port/Channel Deepening projects.

What was the most exciting/challenging project you have worked on?

Supporting sPHENIX construction from almost the very beginning of the build to the completion was extremely rewarding. I work very closely with the sPHENIX team and constantly had to work with competing priorities, space needs, work planning, safety, and a tight schedule.

sPHENIX Hero: Kevin Mandracchia

How long have you been working at Brookhaven and in what capacity?

In 2013, I worked for Siemens Power Supply Group for about two years. Later, in 2018, I joined the Instrumentation group and have been back at BNL for a little over six years now.

What is the focus of your work on the sPHENIX experiment?

I have experience in learning and upgrading old instrumentation systems, and also helped with projects such as BNNT, BIF and Diamond Detector. During the construction of sPhenix, I was assigned to help with wiring all infrastructure I/O and any other tasks required of me for a year. For Run 24/25, I will be providing technical support on a part-time basis, primarily during maintenance days and as needed for operational support.

Where were you born and what is your background before your current position?

I was born in Smithtown, NY and grew up in the Patchogue/Medford school district. After completing my education, I joined the Army in 2004 as a Forward Observer, FIST (Fire Infantry Support Team). I served two tours of duty in Southeast Baghdad, each lasting around 12 months. During my first tour, I worked closely with the infantry and supported them in their missions. During my second tour, I was part of a Personal Security Detachment (PSD) unit, providing security to high-ranking officials in our area of operation. During this tour, I was promoted to sergeant.

After leaving the Army in June 2009, I enrolled in SUNY Farmingdale to pursue a B.S. degree in Electrical Engineering Technology. After graduation in 2013, I joined the Siemens Power Supply group at BNL, where I worked for almost two years. Following that, I worked as a design engineer at Beta Transformers, leading prototype projects and assisting the test department for about two years. I completed my MBA with a focus on Management and Leadership from Dowling College.

In 2015, I started working as a Field Service Engineer at IBA (Ion Beam Applications), where I worked on accelerators used in manufacturing plants worldwide. I was later promoted to installation manager. In 2018, I returned to BNL, working in the CAD Instrumentation group.

sPHENIX Hero: Tristan Protzman

How long have you been working in sPHENIX and at what institution?

I have been working on sPHENIX since the fall of 2021 at Lehigh University.

What is the focus of your work on the sPHENIX experiment?

My primary focus and responsibility has been the construction, installation, and commissioning of the sPHENIX Event Plane Detector.

Where were you born and what is your educational background before your current position?

I am from northeastern Pennsylvania, and I completed a B.S. in physics and computer science at Rensselaer Polytechnic Institute.

What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

My thesis is tentatively titled Azimuthal anisotropy of jets in \sqrt_{s_{\rm NN}}=200 GeV Ru+Ru and Zr+Zr collisions, which I had the pleasure of presenting the current status of at Hard Probes 2023 in Aschaffenburg, Germany.

sPHENIX Hero: Yeonju Go

How long have you been working in sPHENIX and at what institution?

I joined sPHENIX in the summer of 2020 when I was in University of Colorado, Boulder as a postdoc. I briefly worked on the jet reconstruction software, and then more actively worked on the sEPD performance evaluation, DAQ and trigger development. After moving to BNL as my second postdoc last summer, I started joining the TPC work.

Where were you born and what is your educational background before your current position?

I was born in South Korea and graduated from Korea University. During my PhD, I did analyses focusing on photons and jets for the CMS experiment. Afterward, I joined the Colorado Boulder group as a postdoc, where I transitioned to working with the ATLAS experiment. I have measured photon-tagged jet RAA and jet-hadron correlations in photon+jet events with ATLAS.

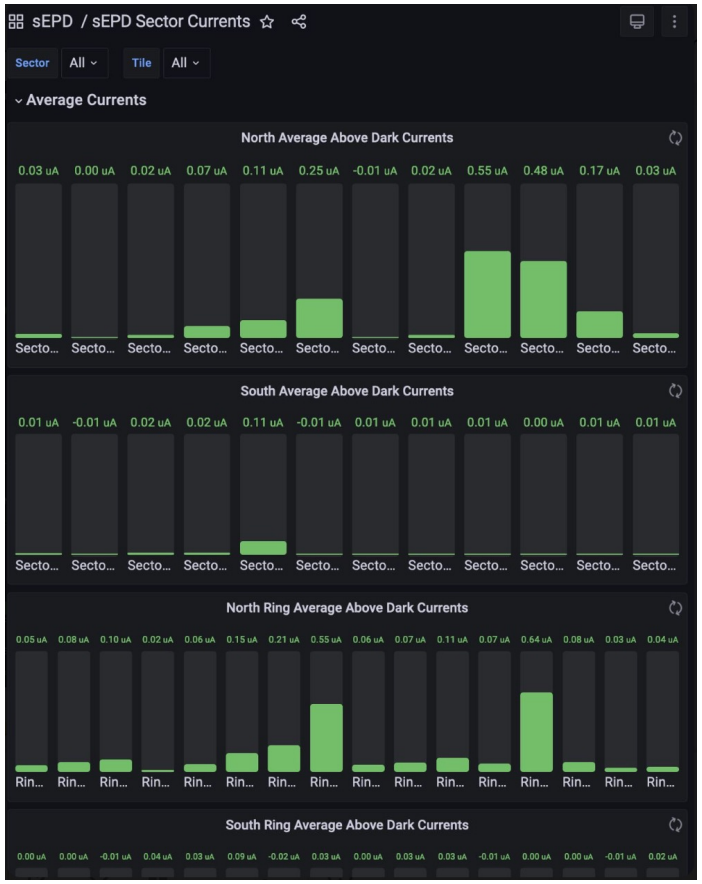
What is the title of your Ph.D. or tentative title? Awards or biggest talk highlight?

My thesis title was “Production of isolated photons in pp and PbPb collisions at sqrt(s_NN) = 5.02 TeV with the CMS detector at the LHC”. As a BNL postdoc, I was awarded the “Goldhaber Distinguished Fellowship”. I had plenary talks at Quark Matter 2023 and Hard Probes 2023, both on the topic of ‘Jet-induced medium response’.

How did you decide to go into heavy ion or spin research?

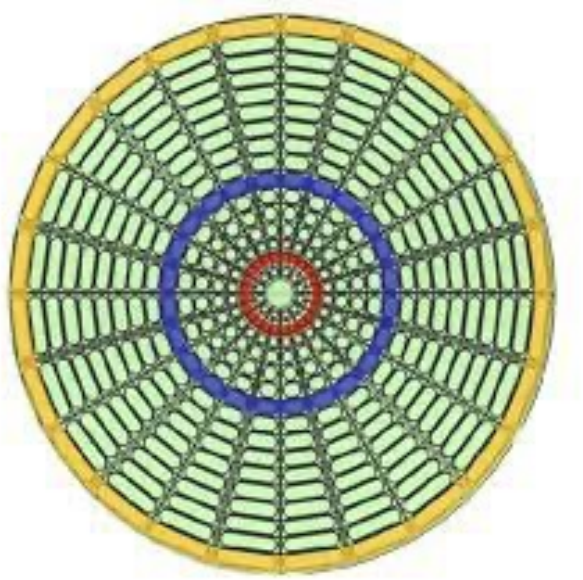
In high school, I was part of an astronomy club and was fascinated by stars and astrophysics. Later, during my undergraduate years, I had an internship with the heavy ion group, where I found that studying Quark Gluon Plasma is exploring the universe early a topic that had intrigued me for a long time.

https://www.sphenix.bnl.go…



Excited for beam and first collisions…

sEPD currents show rise from single beam



Before you start to enter and work in 1008-IR/Assembly-Hall, please inform our Shift Leader in the 1008 Control Room.