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DANGO (Doings and Goings On) - Vol. 22 | Issue 10

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DANGO (Doings and Goings On)

Picture of the Week Winner: “BNL Red Team” -Dr. Towell



Group Updates



FROM CECILY TOWELL:

Bonjour Dango,

What a week. We tested the mylar mRPC over the weekend and didn't get the

results we had been wanting. So we took it out of the stand and saw that the anti-coating hadn't quite done its job since the sheets of mylar were sticking together. So we changed it to a simple glass rpc and have been testing that this week. We've also been taking apart, cleaning and then remaking two mRPC's made out of very thin glass. Hopefully we'll be able to test those next week. During our spare time we finished editing our CEU abstracts and started working on our posters.

Au Revoir,
Cecily

FROM HALEY STIEN:

Diggity Dango,

This week I worked on assembling a glass mRPC with some assistance from Matt. Since this is the first one I've done without too much help from Cecily, I was relatively pleased that I only made one tiny mistake that took a mere 3 hours to fix! I'll count that as a win. I was also happy to submit my abstract on Friday. I just want to be in Canada already dontcha know! Besides that, I know we've been taking data on the mRPCs, but that's more of a Cecily/Aric project. This week I'm hoping to finish building another glass mRPC, get some data on a 3D printed mRPC, and work on my poster a bit.

Less than a week!

Haley

FROM ARIC TATE:

Hello everyone,

This week we focused on getting good data from glass RPCs. It has been a mix of gas leaks, high voltage fluctuations, and low voltage failures. Despite this we remain hopeful that cosmic events will be seen. Our last week looks to be filled with taking more data and removing cables from the PHENIX IR.

-Aric

FROM MATTHEW KIMBALL:

LOL-ing

FROM DR. TOWELL:

Hello Dango,

This week has seen us doing a little bit of everything at BNL. Unfortunately, with just one more week here it feels like our list of tasks to complete is getting longer and not shorter. I don't know how we will get everything done before we have to go.

As we've been taking apart the RPC systems of PHENIX, we've accumulated a nice pile of equipment that needs to be shipped to ACU and UIUC. We have decided that we will buy wooden crates to ship the equipment back to ACU and that we will just consolidate the parts for UIUC and store them for later transport to Urbana. The wooden crates arrived at the lab today, but it's not clear if the union workers can transport them across the lab before next Tuesday. Assuming we get the crates, we will load them with the spare RPC1s, FEE, HV, cables, and gas distribution parts.

In the TOF lab, we've finally really started making progress on several different prototypes. We've got the glass we needed to rebuild the mRPCs with the world's best timing resolution. We've repaired the pressure vessel to test the mylar mRPCs and we are taking a long set of data this weekend with the world's first 3-D printed mRPC. Fun stuff.

One thing we thought we'd get to do a good bit of this summer was to disconnect a bunch of PHENIX subsystems. Today we finally got permission to start doing that for the south RPC1 chambers. So next week we will be working on that, removing more detectors from the tunnel, packing equipment to ship to ACU, and continue testing mRPCs. I think we've got a full week ahead of us.

Grace and peace,
Rusty



FROM VICENTE ROJAS:

For the past seven weeks, most of the work I did, if not all, was related to civil environmental engineering. Environmental engineering deals with the purification of water through water and wastewater plants, solid waste treatment, remediation of contaminated sites, among other things. This week, I got a glimpse at what civil transportation engineering looks like. Abilene is looking to fix the streets in the downtown area. There have been multiple complaints about their current status, and the City has retained eHT to

work on this project. Two Engineers in Training (EIT) and I inspected 8 blocks this week. We tried to do it as early as possible in order to avoid traffic and heat. I have continued to work on several other projects including the addition and dosing of several new chemicals to water treatment plants in Missouri City and Midland, performance simulations of manufacturer's reverse osmosis technologies, and report editing.

-Vicente



FROM CALEB HICKS:

<Generic Greeting>,

This week was fairly productive. I worked the day shift Saturday and Sunday, during which I generated all the Monte Carlo events I need for my project. I took Monday and Thursday off, but spent the rest of the week generating plots and analyzing the data I'd generated. Also on Wednesday I spent a few hours making ribbon cable, though fortunately most of it was finished on Thursday, when I wasn't working. Even with the days I had off, I made fairly good progress this week.

<Generic Send-off>,

Caleb Hicks

FROM ZHAOJIA XI:

Bonjour everyone,

This week I spent some time working on my abstract and personal contribution. I am very thankful to those people who gave me comments and feedback. Last week Josh and Dr. D got lots of cables out of the seaquest floor. In order to reuse these cables, another thing we did this week was cutting, testing and labeling these cables.

Can't believe there's only one week left,
Zhaojia(Tiffany) Xi

FROM JOSHUA MARTINEZ:

Wassup DANGO

Amazing news, I finally finished the light tight box! Well almost, I have a few more holes to drill into it. But I have been able to start testing some of the scintillators in a way that I didn't initially plan for but it seems to be working rather well. Hopefully, I get all these holes drilled and some precious precious data by the time we leave. In other news, I get to go on a Muon G-2 tour today that I'm really excited for. My tour guide for the NuMI Underground tour works there and told us a lot about it. I'm praying it lives up to my expectations.

Until Next Time,
Joshua Daniel Martinez

FROM PAUL CARSTENS:

Salutations!

The penultimate week has been filled with panic and cables. Lots and lots of cables... At the start of the week the database that I'd started my magnet study on shut down for a couple days leaving me to restart it on a different database. Then, several days into my second attempt I learned that the runs I was using were incorrectly labeled with the wrong geometry tables. Now, on my third attempt it turns out something is still very wrong as jTracker is now producing significantly fewer dimuons than it was previously.

In less panicky more cable-y news, the ACU students have produced over 100 ribbon cables for the new station 1. We took bundles of old ribbon cables from beneath the floor, cut them to size, attached the leads, and tested their connections. We've still got another 50 cables to go, but these ones will be shorter so they should go faster.

Nearing the end,
Paul Carstens

FROM REUBEN BYRD:

Hi Dango,

This week I spent a lot of time working on my abstract, and trying to tie up loose ends of things I have done throughout the summer. As a group we also spent a lot of time making ribbon cable. To be more precise, we make 112 21 foot cables are in the process of making

56 more 3 foot cables. These will be installed into the detector of the shutdown. As much fun as it was, I think I had my fill of cutting and coiling ribbon cable. I can't believe there is only one more week for us at SeaQuest! I will spend the last week gathering things I will need for my poster and running a last few things through sqerp.

'Til next week,
Reuben

FROM DR. MIKE DAUGHERITY:

Hi Dango,

It's been a fun week as always. We stayed in downtown Chicago last weekend while my wife was at the law librarian's conference. Chicago has world-class museums, the best architecture in America, and amazing food. This year we finally made it to the Field Museum of Natural History and the Museum of Science and Industry. Having fun adventures has always been one of my favorite things about summer research.

SeaQuest is still chugging along, but the experiment is really telling us that the run has been going on a little too long. We are playing air conditioner whack-a-mole in our building. There are three separate A/C units for our building, and when one breaks it makes the others run too long and conk out or freeze up. It feels like we are paying penance for all the gloating we've done about our cool Chicago summer. To make things worse, we're

helping load and unload giant dewars of liquid nitrogen as we're sweltering in the building. I've been sorely tempted to "accidentally" dump a few hundred liters of liquid nitrogen in the office. Unfortunately, we need them for the targets since a temporary power outage caused some of the liquid deuterium target to evaporate. We only need to make it one more week.

Gotta catch em all,
-Dr D

FROM DR. ISENHOWER:

Dear Dangoites,

This is my last entry for July. I will be gone for the next two weeks (be back on Aug. 5). Cindy and I are taking a long planned, long looked forward to, tour of the Canadian Rockies on a fancy train called the Rocky Mountaineer. It's a 2-week trip and we will be enjoying it.

This week has been mixed. I fixed 4 HV 1445 controllers only to have one have a tantalum capacitor blow up and destroy components nearby today. Another one was destroyed when a tantulum capacitor developed a dead short, started smoking and then exploded. The weird thing is that now that power supply, after removing that capacitor on the -15V power will put out -15V, but no longer puts out +15 or +5 Volts. The 1445 Controller boards no longer work that I was using at the time, so I am not happy! We still have three spares, so I'm content, but in my work to find more

that 2 spare low voltage spares, I'm killing off my other spare controllers. I think I may stop at the two spares. The problem is that these things have basic mistakes in their design that I was taught as a freshman not to do, so I have no idea who they let design the circuits or review their work.

Hope everybody gets their CEU applications in on time!

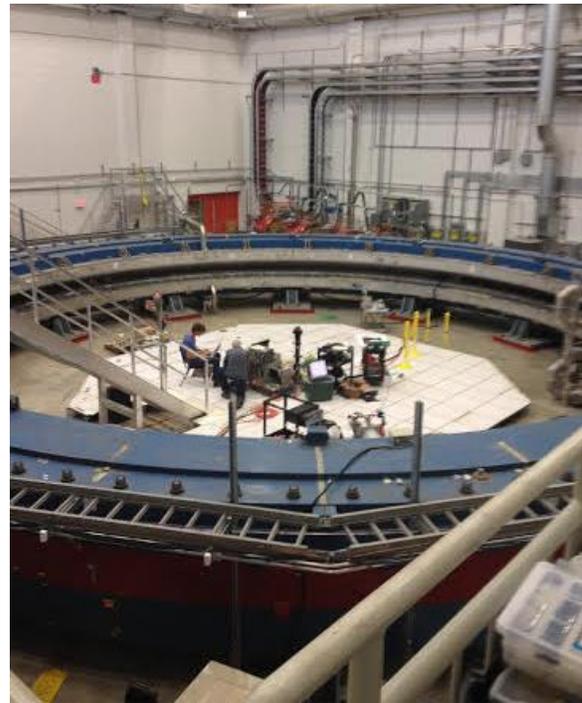
Dr. I.

Picture of the week candidates

Dr. D: "My picture of Sue, the largest and most complete *T. rex* ever found."



Zhaojia: "Muon g-2 ring"



Dr. Towell: "Sherpa Cecily summits PHENIX with HV cables."



Haley: "WOW HOW'D SHE GET IN THERE"

