

DANGO

(DOINGS AND GOINGS ON)

UPDATES FROM THE STUDENTS

From Andrew Miller:

“Hello Everyone,
I missed the deadline for the last DANGO, so my entry for this one will just have to be extra long. Well, I arrived in Germany on May 23rd, after having to change all of my flights because the first one was cancelled. This led to less transfers though, which was nice. Dr. Willis met me at the airport in Hannover at about 3:30, and took me back to the apartment we're staying at. I had only slept about an hour in the 22 hours since I began my travel, but unfortunately it was still rather early here in Germany.

After unpacking stuff while Dr. Willis went back in to the institute for awhile, we went walking to downtown Hannover, and had dinner at an Italian restaurant (Although several of the Italians who work here at the institute assure me that there is no such thing anywhere outside of Italy). By the time we got back it was around 8 or so, so I went right to sleep. I was a little jetlagged the next day, and woke up at about 5 or 6 for a couple days, but it wasn't very bad.

My work here at the institute has been fun, mainly dealing with writing code for FFTs, mainly just wrappers for GPU algorithms, and doing lots of timing tests on said FFTs. I don't always know exactly what's going on, but I feel like I've actually contributed some amount of work.

Several weeks ago was the Gravitational-Wave Astronomy and Physics Workshop (GWPAW) which was a lot of fun. I understood most of one talk, and was introduced to a lot of astronomy/gravitational-wave vocabulary. They also had a tour of the GEO-600 detector, and the ATLAS computer cluster (which I've been doing most of my work on). It was definitely the best conference I've been to in terms of food however.

As far as non-work related things go however, there is a really nice church near us, in Hildesheim, where we've been going. We took the train the first couple weeks, but there is a lady who lives in Hannover who has been giving us a ride since then. I don't know if anyone knows Benjamin Bratcher from ACU, (He just finished his freshman year, so I hadn't met him before) but his parents are missionaries here at the church. They sing some songs in English, and someone sits behind us and translates the sermon for us, which is nice since I haven't really learned any German, since it doesn't take too much to get by.

On the weekends, we've been kept busy with various events planned by fellow-physicists at the institute, and the people at church. So far we've visited Goslar (a historic mining town), gone canoeing down the Leine River (Ours was the only canoe that tipped over, so we got to enjoy the full experience, and everyone else just missed out. On the bright side, we weren't bothered at all by the rain that started up later in the trip) up to Marienburg Castle, which we toured the next weekend, watched quite a few of the games in the Euro Cup, and saw some fireworks that rivaled many 4th of July shows in the States.

Living here in Germany is a lot of fun, I head back on July 22nd, so I'm already more than halfway through my time here! It goes by really quickly! The apartment where we're staying is nice, the building is owned by the Frankes, who own a restaurant on the first floor. Frau Franke has been keeping us well informed about what festivals and events are going on here in Hannover, which is really nice. The apartment has wifi, but the internet is unusably slow. I can check emails, but only on my ipod, if I tried to do it on my laptop, it would

take far too long (It can take up to 30 seconds to load google.com...). However, the internet at the institute works great, so if anyone is planning any zombie killing or LoL games, let me know!"

From Walker Nikolaus:

"We started this week off with a war. It was us versus the elements. A rain storm attacked the factory viciously Monday morning. This wouldn't have been a problem if there weren't holes in the ceiling. By the time we saw the problem the enemy had a firm take on our stronghold. In an attempt to slow down its progress, we proceeded to create barriers around our tent with foam and duct tape. We then sent out the foot soldiers with brooms to the front lines. Our efforts were futile. In the computer world we took a lot of log files that contained data from the RPCs we created last year and wrote programs to convert that data into viewable histograms. We are now looking through all of the histograms and gleaning what information is there to glean.

—Walker Nikolaus"

From Mathew Solomon:

"Hey guys,
To start off the week we had to battle the elements. It was ridiculous weather, it was pouring so hard that I could barely see anything outside and some of that rain was seeping into our factory. Our main priority was to protect the equipment that was in our tent so we made a dam out of styrofoam and duct tape. In the end man prevailed against mother nature. Other than that glorious battle, we have been primarily working on an analysis of the .root and .log files. I have been learning a lot about C Shell scripting in order to obtain the data that is useful to us and our endeavors. All in all, it was a pretty solid week.

—Mathew Solomon"

From Aric Tate:

"Well it rained hard pretty hard Tuesday so we had a fun time trying to stop mother-nature from getting to close to our electronics and workspace. We have continued to do software tasks including root analysis and looking at histograms galore. Also, we still have a lot of hardware issues to take care of before the cosmic stand is functioning which include the TDCs, High Voltage Power Supply and the Clock Master. Now that we have completed the conversion of the phenix raw data files to usable root files we now are trying to make sense of the analysis we have in the noisy/dead channels histograms. Besides this I also used the oscilloscope to check each hodoscope and the rack with the discriminators to ensure that all channels are functioning properly. adios"

From Ramsey Towell:

"Dear Dango,

We spent our week reading scripts and analyzing plots of root files. We have several steps that take prdf's and turn them into root files using many different scripts so we made a README file so that you know which script to use in the correct order. Hopefully we'll get a little more interesting and exciting work do to next week other than coding on a computer. Also we went to the beach again on Saturday and that was pretty fun but it's been getting much hotter over here now.

—Ramsey"

From Noah Kitts:

"Hey everyone,

As of today (Saturday) I have been sick for sixteen days. Earlier in the week I found out I have mono. While it is

good to know what I have, I am still not too excited with the idea of feeling sick for another week. I should return to work next week, which is awesome news considering it has been so long since I have worked. At the apartment we have been watching plenty of epic movies, and eating vast amounts of delicious food cooked by Mrs. Isenhower. At work we will be wiring the wire chamber soon, and I



have been looking forward to this for a while. I hope everyone is having a great summer.

–Noah Kitts”

From Drew Boles:

“How's it hanging, DANGO?

This past week at Fermi, we finished a few things around NM4 including remounting a few hodoscopes at Station 4. On Tuesday, we were taught how we are going to wire the wire chamber that we'll be working on all summer. Then Wednesday and Thursday we had a collaboration meeting. Everything that was said was way over my head, but it was a good experience to see what happens at those things. And that was the week!

Peace, Drew”

From Kyle Bowling:

“Hello Dango!

This week was quite slow! Due to our collaboration meetings on Wednesday and Thursday, no productive work was done on the Station 3- wire chamber, however we did get a decent amount of work done on the timing issues down in NM4. We were also trained to properly wire the chamber properly on Monday so we expect to begin work on the chamber Monday morning and will be working in 2-4 hour shifts all day till the end of the summer. Sadly we will not be there to see its completion! But hopefully we will get to see the results next summer! Some good news, Noah will finally be returning to work!

–Kyle Bowling”

From Ramsey Towell:

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–Ramsey”

From Elizabeth Carlisle:

“Hello DANGO,

Sunday I returned from my vacation in Arizona. I had a lot of fun, but it's nice to come back home

and start working again. This week we are still working on calibration. We have to scan a laser target to get a position vs. brightness graph showing the light and dark spots on the target and then put that data into a computer to analyze and convert from number of pixels to an actual length, in microns. It's a long and tedious task, but at least Adam has finished his summer class, so he is able to join us. Here at ACU, things seem to be going fairly well. The June Passport session was earlier this week, so new students were spending time on campus. We got to see Dr. Towell for a few days, as he was here to meet the Passport participants. Dr. Olree was here as well, preparing to join the department as our new engineering professor. In other news, I unfortunately have discovered that my bathroom sink has been leaking into the cabinet below it, leaving me with a big mess to clean up and a bunch of water damage in the cabinet and the floor around it . . . ick. Anyway, other than that, it's been a great week. Hope everyone's summer is going well!

–Elizabeth

From Spenser Lynn:



After a morning of working in 90 Left. From left to right: Spenser, Dana Duke (Colorado School of Mines), Rhiannon Meharchand (Post-doc), and Paul Greife (Colorado State)

“Hello DANGO!

Work is moving along smoothly here at LANL. I am still working on the glove box, which by now I'm sure everyone is absolutely fascinated with. Apart from that project, we have been doing a lot of work on 90 Left where the neutron beam line is. We have cleaned, made cables, cleaned, moved stuff around, and cleaned some moreover the past two weeks. Still on tap though is painting the floor and shielding blocks. On non-work related things, I went white water rafting last weekend which was

amazing and almost death inducing for two of the people I was with. The fun and work continues here, but it is time to resume cable making with Paul. I've included a few pictures this week so enjoy and take care everybody!"



White Water Rafting. From Left to Right: Spenser, Pablo Vaquer (University of Florida), Geordie McKenzie (University of Illinois), Chris Leibs (University of Colorado), Nate Nelson (LANL), Dylan Rittman (University of Michigan)



Taken from the summit of Santa Fe Bald, elevation 12,700 feet.

UPDATES FROM THE PROFESSORS

From Dr. Rusty Towell:

"Hello Dango,

I spent the first half of the week at ACU welcoming a new group of students to our department. The students attending Passport look to be an excellent group that are very excited about coming to ACU. While at ACU I also met with Dr. Ken Olree, our new faculty member. He and I will be teaching a

new class this fall for all of our new students. I'm looking forward to teaching this new class.

Thursday I flew back to NY and got to spend Friday working with everyone in the RPC factory. There seems to be a problem with the Data Acquisition System (DAQ) of the cosmic stand but the noisy and hot channel analysis is moving forward nicely. While I was away the guys produced lots of plots and we spend much of the day trying to understand what we could learn from all of them. The last thing we did at the end of the week was to take a short tour of the PHENIX detector now that the large shielding wall is out.

I also got my abstract written for the DNP conference this fall. I hope everyone is looking forward to attending the conference with me.

Grace and Peace,
Rusty"

From Dr. Michael Daugherty:

"DANGO,

Our most exciting time this week was working on some hydrological engineering projects trying to keep waters from the torrential downpour away from our detectors. I'm including a picture showing our cutting-edge science in action. We've got lots of software work ahead while our trigger for the cosmic ray test stand is broken. Finally, I'm looking forward to the official discovery of the Higgs this week.

Happy Higgsdependence Day,
Dr D"

From Dr. Donald Isenhower:

"Dear DANGOs,

Man there are all sorts of people trying to steal the DANGO name so carefully arrived at by previous undergraduates! Now that one of them is a chairman of a department I don't know how he takes it. First there was FANDANGO, which was a ripoff of FUNDANGO, which was an academic year DANGO newsletter that was not intended for the serious of mind. Now there's going to be a movie called JDANGO, which even though the "D" is supposed to be silent I still think is a ripoff. Or Mike Sadler's and my "old" students can take it that they were onto a good thing.

The beginning of last week involved some visits with Dr. Thad Walker, who has been one of the Physics Department's 5-year review team. His work on making detectors that are going to outdo SQUIDS is incredible. We will HAVE to get him

to give a talk the next time he's in Abilene. Anybody who deals with measuring magnetic field strengths down to 10 attoTesla is doing cool stuff (just for comparison, the Earth's magnetic field is 50 microTesla, so we are talking about noise that is less than one-trillionth of this).

Last week was taken up getting ready for our SeaQuest collaboration meeting plus writing an abstract for an invited talk on PHENIX heavy-flavor results for the BEACH 2012 Conference (the "beach" will be in Wichita, Kansas). I will have to keep the parts that I talked about before on this on Fermilab E866/NuSea and what we will be doing on SeaQuest out of my thinking as I work on this. Right now I'm working on my abstract for the Fall DNP meeting, just as Dr. Towell and Dr. Daugherty are doing. Real work done last week was on understanding the timing issues of the station 3 and 4 hodoscopes. Naturally the things that I thought should be true turned out to be correct qualitatively, but were off enough quantitatively that I've got to do some more work to understand what exactly is going on.

Of course the most important event was yesterday (Saturday the 30th), which marked Cindy and mine's 33rd wedding anniversary.

-Dr. I.

P.S. I've attached a photo that shows that even at an apartment complex in a city there is still wildlife around. We also have a fox, egret, ducks, and a variety of others running around nearby.



"We experimentalists are not like theorists: the originality of an idea is not for being printed in a paper, but for being shown in the implementation of an original experiment (London 1962)."
Professor Patrick M.S. Blackett"

IN OTHER NEWS...

The PDG will send you a copy of the Review of Particle Physics book for free if you sign up on the website below. Lots of good info there also.



The PARTICLE DATA GROUP Announces:

The 2012 edition of the Review of Particle Physics is now available on the Web: <http://pdg.lbl.gov/>

- Summary Tables
- Particle Listings
- pdgLive
- Review articles

The full-sized book will be mailed in late July.
The Booklet will be mailed in October.

The PDG recommends our website for the public:

<http://ParticleAdventure.org>

We thank the 700 members of the particle physics community who contribute to the Review of Particle Physics.

We always welcome your suggestions for improvements.

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