



QuarkNet 2017 - Vanderbilt University

24-28 July 2016

Welcome!

The week in a nutshell:

Monday Morning, news and talks

Monday Afternoon, CMS Detector, Special Relativity, and 4-Momentum

Tuesday Morning, talks

Tuesday Afternoon, eLabs and CRMD

Wednesday, day trip to Murfreesboro for Radio Jove and Uranidrome, Observatory, and Optics demos

Thursday, Marla Glover CMS Open Data Set, part 1

Friday, more CMS Open Data Set, talk from Dr. Chuck Higgins (MTSU)



Administration

- Introductions around the room.
- Make sure you check the day on the **attendance sheet**. It is how the stipend will be calculated. Check it and sign it your last day in attendance.
- Also hand-in the IRS forms needed to process your stipend.
- We have **three** working sets of cosmic ray muon detectors (CRMDs) and have old, but nice laptops for datataking and control. We have a **fourth** set with non-standard (small) scintillator paddles.
- Using the “standard” Java program *Equip* to control the boards/detectors.



Useful Links

- Vanderbilt QuarkNet Site:
<http://www.hep.vanderbilt.edu/~gabellwe/qnweb/>
- Vanderbilt QuarkNet “Drupal” group page:
<http://quarknet.i2u2.org/group/vanderbilt-university-quarknet-center>
- Vanderbilt QuarkNet Workshop 2017 agenda:
<http://quarknet.i2u2.org/content/vanderbilt-quarknet-workshop-2017>
- Marla Glover’s CMS Open Data Page, 2017:
<http://quarknet.i2u2.org/content/vanderbilt-cms-data-agenda>
- QuarkNet Cosmic Ray eLab Teacher page:
<http://www.i2u2.org/elab/cosmic/teacher/>
- QuarkNet CMS eLab page:
<http://www.i2u2.org/elab/cms/home/project.jsp>
- QuarkNet Eclipse Project:
<https://quarknet.i2u2.org/content/cosmic-ray-eclipse-project>
- 2016 Ken Cecire’s LIGO eLab page:
<https://quarknet.i2u2.org/content/ligo-e-lab-workshop-vanderbilt>



Monday Schedule

news and talk

8:00-8:30am Arrive, parking permits for the week, **check the attendance sheet & IRS**

8:30-8:45am The weeks schedule, Bill Gabella

8:45-9:15am CERN's Large Hadron Collider Status, Bill Gabella

9:15-9:45am Particle Physics Primer, Bill Gabella

9:45-10:00am Break

10:00-11:00am CMS Physics, Dark Matter, SUSY, Alfredo Gurolla

11:00-noon Eclipse 2017, Dr. Billy Teets (Dyer Observatory Outreach)

noon-1:15pm Lunch

1:15-2:15pm CMS Detector in some detail, Bill Gabella

2:15-2:25pm Break

2:25-3:25pm Special Relativity and 4-Momentum

3:25-4:00pm QuarkNet Eclipse Activities and Outreach programs, Pulsar Collaboratory, Radio Jove, Inspire, Others, Bill Gabella



Tuesday Schedule

Other Science out there and muon detectors

8:30-9:00am Arrive

9:00-10:00am Gravitational Wave and LIGO Update, Bill Gabella

10:00-10:50am Hanford LIGO Travelogue, Terry King

10:50-11:00am Coffee Break

11:00-noon CMS Status and Upgrades, Will Johns

noon-1:15pm Lunch

1:15-2:15pm Understanding Alpha and Beta Radiation, Nick Horton

2:15-2:25pm Break

2:25-3:30pm+ Muon Detectors, unprogrammed time



Wednesday Schedule

Visit to MTSU Department of Physics and Astronomy, Murfreesboro

Maps <https://www.mtsu.edu/maps/>

Radio Jove, Uranidrome, Observatory

9:30-10:00am Arrive, pay attention to parking, WPS Building Room W316

10:00-11:00am Tour of Uranidrome and Observatory, Eric Klump

11:00-noon Radio Jove Demo, Terry King and Beverly

noon-1:15pm Lunch

1:15-2:00pm The Physics and Astronomy Department at MTSU, Ron Henderson

2:15-2:25pm Coffee Break

2:25-4:00pm Optics and Polarization of Light Demos, Terry King and Bill Gabella

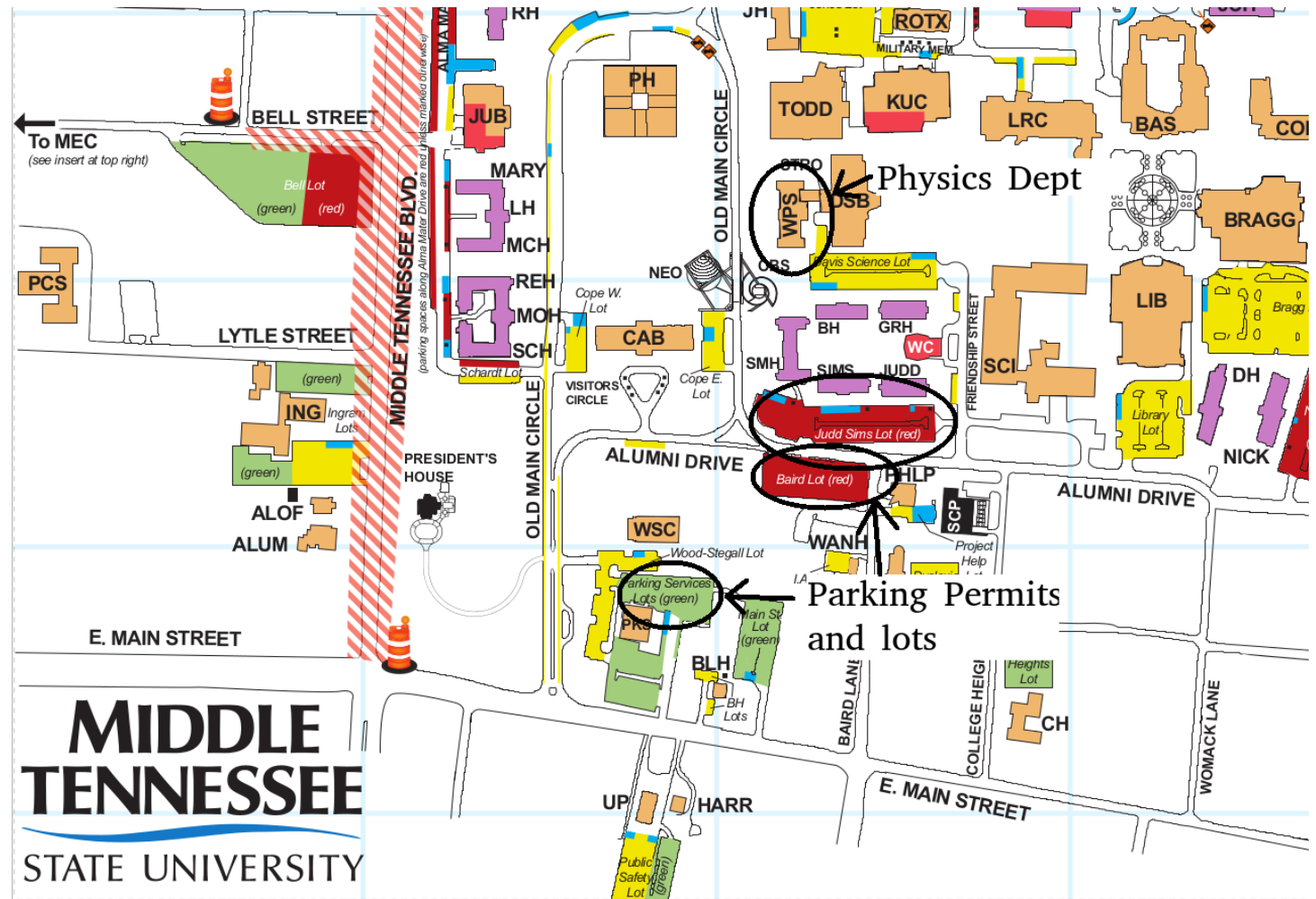


MTSU, Murfreesboro, TN

Visit to MTSU Department of Physics and Astronomy, Murfreesboro

Maps <https://www.mtsu.edu/maps/>

Wednesday





Thursday Schedule

Visit from Marla Glover, QuarkNET Educator, CMS Open Data Set

<http://quarknet.i2u2.org/content/vanderbilt-cms-data-agenda>

9:00am Registration

10:30am Break

noon-1:00pm Lunch

2:00pm Coffee Break

4:00pm Stop



Friday Schedule

Visit from Marla Glover, QuarkNET Educator, CMS Open Data Set

<http://quarknet.i2u2.org/content/vanderbilt-cms-data-agenda>

9:00am Coffee/Recap

10:45am Break

11:00am-noon Radio Jove Science, Dr. Chuck Higgins (MTSU)

noon-1:00pm Lunch

3:00pm Evaluation and Close