ISPP REMINDER

November, 2012

OUR NEXT MEETING…

…is at
DePaul University
Tuesday December 4
6:30 – 9:00 pm

Go to the last page for a map and directions.

FUTURE MEETINGS…

Jan 5-9 (Sat-W)	AAPT Winter Meeting, New Orleans
Jan 23 (W)	Elmhurst College, 39th Annual Tri-Physics Meeting (Brian Wilhite/Venkatesh Gopal/Earl Swallow)
Feb 11 (M)	NEIU (Paul Dolan)
March 6 (W)	Loyola U (Gordon Ramsey)
March/April ?? (SAT)	CSAAPT
Apr 10 (W)	Lake Forest College (Bailey Donnally/Mike Kash/Scott Schappe)
June 4 (T)	MSI, tentative (Ruth Goehmann)

AT OUR LAST MEETING…

We were welcomed to Oak-Park River Forest High School by **Kevin McCarron** with a nice galaxy exercise. We got one piece of paper with an assortment of galaxies. Then we got a transparency with a different assortment. When we match up one of the galaxies we see the other galaxies were displaced proportionate to the distance they are from the galaxy we chose. We could choose any galaxy as our "home" and see the same effect.
Kevin said Google Cosmic Questions for a PDF from Harvard for more information.

Martha Lietz (Niles West High School) announced changes in the AP B class rolling out in the 2015 exam. The exam will be in two parts and the student can take either (or both). Exam 1 assumes 120 class days and Exam 2 assumes 140 class days. Both involve significant changes in curriculum so if AP teaching is in your future you should check this out ASAP.

Roy Coleman (retired) celebrated his 70th birthday with us and after reminiscing a few minutes, Googled "the world's largest period table." A building used each window for an element.

Then Roy talked about his operation to remove cataracts from his eyes. Afterward he noticed with each eye he would see a green traffic light from a distance as a double, but not the red. A blue LED also doubled. When he went for glasses he explained the problem to his doctor who kind of shrugged. He found Roy had extreme astigmatism and the new glasses cleared up any problem but no one had any good explanation of why the separation should be color dependent.

Debby Lojkutz (Joliet West High School) passed out her reaction time lab sheets which record the falling meter stick before the student grabs it. This time the topic generated a lot of additional discussion. After her students finished measuring their reaction time, **Martha Lietz** (Niles West High School) had them measure it while texting on their phones and found an average .06 second increase in reaction time. It was mentioned that in one city that outlawed texting while driving the accident rate increased by a factor of 2 or 3. It seems motorists had been texting with the hand on the dashboard but when it became illegal they merely move their hand below the dashboard. It made me think we should run the reaction time activity without actually letting the student see the ruler.

Aaron Podolner (OPRFHS) has changed his regular physics grading system so quiz scores solely account for the student's grade. After years of marking homework and lab reports that count for a significant portion of a student's grade, Aaron decided that the students didn't value any form of homework as a learning experience but merely as a token to turn in for any grade. Any kind of paper (including a computer copy) should be counted in his students minds. Aaron still assigns homework but now has a short quiz (3 to 5 questions) on scantron. The quizzes count as 100% of the student's grade. He collects the quizzes and goes over the answers as he runs them through the machine. He says he even gets cheers from the class as he goes over the answers to the last question. One student said to him "Gee Mr. P, I never get a good grade on the quiz when I don't do the homework." A truly learning experience IMHO.

Aaron has also been recycling old physics books. Some have more value than you'd think. Try Carrie Dragon Books (708-288-1775 or email aaron.podolner@gmail.com)

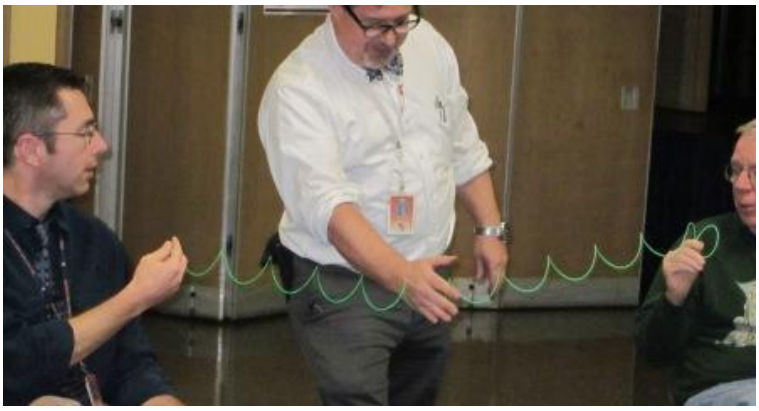
Ben Cain (OPRFHS) showed some free software called "Tracker" that allows you to take a video and calculate *x*, *v* and *a* in two dimensions. He showed a basketball free throw and bowling balls dropped from a roof on a car from the Letterman show.

You can do the same thing with Logger Pro 3.7 or 3.8. **John Milton** suggested there is still value in using the old ticker tape.

Karlene Joseph (Lane Tech High School) noticed while she was picketing that she could hear the Doppler change in pitch of the horns of the cars as they passed by. The next day she brought her video recorder and tried to catch the change in pitch. It seemed to me like she did but she needs to do more editing. Karlene said she might be able to bring something better to a future meeting.

Kevin McCarron (OPRFHS) mentioned there is a pulsar search at Yerkes where some teachers can get professional development credit and students can search for pulsars. www.Starsatyerkes.net

He then took out a small plastic spring stretched between two of us. When he pushed the spring from the middle slightly towards one end the wavelength in that direction got smaller and larger in the opposite direction, like the Doppler effect (kind of). He had springs for all of us.



Thanks to our friends at OPRFHS for hosting a phun gathering. I'm always surprised at what I learn at these meetings. Be sure to join us at DePaul in December.

Submitted by Pete Insley

ISPP on the web at http://www.ispp.info/

To get to DePaul University:

From the north and northwest

From the Kennedy Expressway (I-90/I-94) exit at Fullerton Avenue and turn left (east.) The Lincoln Park campus is approximately two mile from the expressway on Fullerton Avenue at Kenmore Avenue.

From the west

From the Eisenhower Expressway (I-290), turn onto the Kennedy Expressway (I-90/I-94) heading toward Wisconsin. From the Kennedy Expressway (I-90/I-94) exit at Fullerton Avenue and turn right (east.). The Lincoln Park campus is approximately two miles from the expressway on Fullerton Avenue at Kenmore Avenue.

From the south

From the Dan Ryan Expressway (I-90/I-94) continue as the expressway becomes the Kennedy Expressway (I-90/I-94). Exit at Fullerton Avenue and turn right (east.) The Lincoln Park campus is approximately two miles from the expressway on Fullerton Avenue at Kenmore Avenue.

From Lake Shore Drive (north or south)

Exit Lake Shore Drive at Fullerton Avenue. Head west for approximately three miles. The Lincoln Park campus is located at Fullerton Avenue at Kenmore Avenue.

Parking

The lot just north of Byrne hall is not available for parking. Evening on-street parking in much of the area is restricted. If you cannot find on-street parking, use the high-rise building indicated on the map. We will give you forms at the meeting to avoid parking fees.