American Association of Physics Teachers
PHYSICSB*O*WL 2010

2010 PhysicsBowl Results

Dear Physics Teacher,

Thank you for having your students participate in this year's AAPT PHYSICSBOWL contest.

This year there were almost 4500 students participating from 200+ schools across the United States and Canada as well as schools in China and the Republic of Korea. Enclosed are lists of the first and second place schools in each division and the first and second place students in each division by region. Several placings were determined by tie-breakers. For students, the answers were compared from the end of the test forward until the tie was resolved. For schools, the tie was broken by comparing the highest scoring students for each team. Unfortunately, we received many answer sheets which did not properly fill in the required information… which resulted in the student's score being disqualified for consideration of either individual prizes or for the team score. This is an unfortunate necessity because of the amount of data that must be analyzed and the large amount of time it takes to analyze.

This year, the following prizes are awarded:
- To schools:
    - $50 Vernier gift certificate awarded to the schools placing first *and second* in each region and division from Vernier Software & Technology
    - $25 AAPT Store gift certificate awarded to the schools placing first and second in each region and division.
- To students:
    - TI-30 XS MultiView Scientific Calculator awarded to the students placing first and second in each region and division from Texas Instruments.
    - T-shirts awarded to the five top students in the top scoring school in each region from AAPT.

A copy of this year's test along with solutions, as well as individual and team winners can be found at the following web site:

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http://www.delta.edu/michaelfaleski/PhysicsBowl

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We look forward to having you participate in next year's contest… and please let your colleagues at schools near you know about the contest! We are considering how to expand the contest to include more schools and students next year as well as making some more changes with the contest to improve it.

Thank you for participating,

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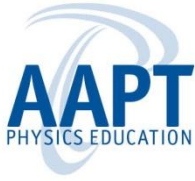
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This year, instructors can obtain the scores of their students from the aapt website and that link will be provided to you. Please realize that we were able to retrieve some scores (we are using a new data analysis system) that were disqualified for improperly recording the required information, but this was done after-the-fact. If the information was not encoded correctly, the student was immediately disqualified from winning prizes even though we may be able to link that student to your code now. Some students provided no codes, the wrong regions, etc. There are a lot of records and we cannot go back and fill in missing information. While it is unfortunate to disqualify anyone, these are the rules of the contest. If you still are missing a student's score... please email michaelfaleski@delta.edu with student information (CEEB, teacher codes, etc.) and we can try to find the information.

Statistics for exam
Average Score for Division I = **16.7** with a standard deviation of 5.6
Average Score for Division II = **16.4** with a standard deviation of 5.7
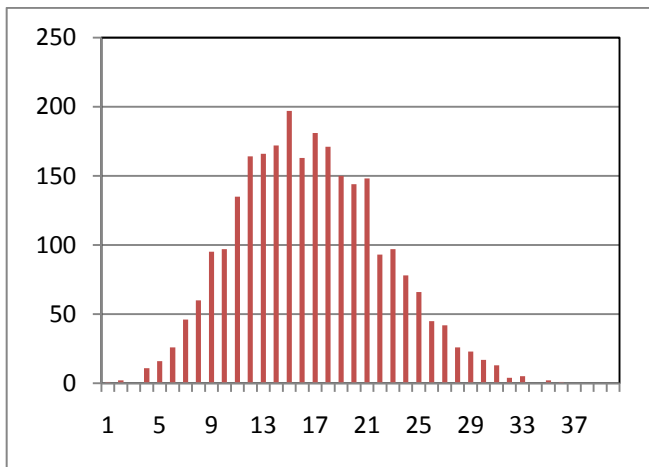

Figure 1. Division 01... # students vs. Score

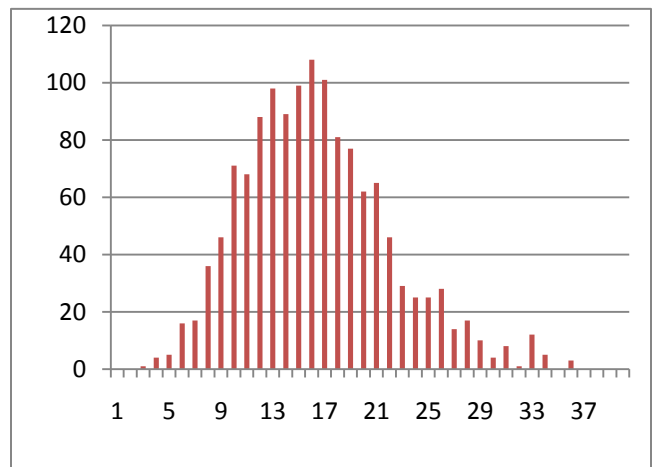Figure 2. Division 02... # students vs. Score

**** The production of a challenging contest of only 40 questions so that scores are not concentrated at the upper end of the scale is an enormous task. This exam was of comparable difficulty to previous exams and had a higher average than last year's contest.

We will continue to write the best contest that we can and hope to make it even better next year!
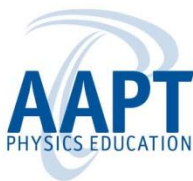
Highest Scoring *Division 01* Students in each Region

Reg	Score	Student	School	City	State
01	35	**Zbarsky, Samuel**	Montgomery Blair High School	Silver Spring	MD
02	33*	**Zhang, Jeffrey**	Guilford High School	Guilford	CT
03	35	**Yang, Franklin**	Don Mills Collegiate Inst.	Toronto	ON
04	31	**Shahidain, Sadik**	Princeton High School	Princeton	NJ
05	32	**Kolb, Brendan**	Maury High School	Norfolk	VA
06	36	**Abid, Abubakar**	Walton High School	Marietta	GA
07	30	**Nainaparampil, Jeff**	Beavercreek High School	Beavercreek	OH
08	28*	**Nalin, Ansel**	Carmel High School	Indianapolis	IN
09	33	**Amdur, Teddy**	Libertyville High School	Libertyville	IL
10	33	**Streich, Caroline**	Homeschool	Platteville	WI
11	28	**Reat, Matthew**	Oak Ridge High School	Oak Ridge	TN
12	26*	**Lumetta, Michael**	St. Louis Univ. High School	Saint Louis	MO
13	33	**Eto, Naoki**	Lamar Academy	McAllen	TX
14	32	**Hu, David**	San Diego Math Circle	San Diego	CA
15	32	**Li, Dan**	Shanghai Normal University	Shanghai	China

Second Highest Scoring *Division 01* Students in each Region

Reg	Score	Student	School	City	State
01	31	**Ilangovan, Diwakaran**	Montgomery Blair High School	Silver Spring	MD
02	33	**Shan, Alan**	Guilford High School	Guilford	CT
03	30	**Bobrow, Eric**	Great Neck South High School	Great Neck	NY
04	30*	**Cohen, Sara**	Millburn High School	Millburn	NJ
05	31	**Zbarsky, David**	Thomas S. Wootton HS	Rockville	MD
06	32	**Martin, Elwin**	Walton High School	Marietta	GA
07	29	**Weber, Andrew**	Beavercreek High School	Beavercreek	OH
08	28	**Liang, Mason**	Troy High School	Troy	MI
09	31	**Kim, David**	Vernon Hills High School	Vernon Hills	IL
10	28*	**Nevins, Thomas**	Chippewa Falls Sr. High School	Chippewa Falls	WI
11	27	**Hill, Ryan**	Montgomery Bell Academy	Nashville	TN
12	26	**Chado, Garrett**	Lakewood High School	Lakewood	CO
13	29	**Jin, Michael**	William P. Clements HS	Sugar Land	TX
14	31*	**Zeng, Samuel**	Arcadia High School	Arcadia	CA
15	31*	**Zhao, Yunting**	Shanghai Normal University	Shanghai	China

* = place determined by tiebreaker
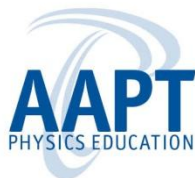
Highest Scoring *Division 02* Students in each Region

Reg	Score	Student	School	City	State
01	34	Oza, Anand	Montgomery Blair High School	Silver Spring	MD
02	33	Jermyn, Adam	Longmeadow High School	Longmeadow	MA
03	36	Zhang, Michael	Crescent School	Toronto	ON
04	29	Zhou, Benjamin	Millburn High School	Millburn	NJ
05	31	Brown, Russell	Thomas S. Wootton HS	Rockville	MD
06	34	Krehbiel, Karl	West Shore Jr/Sr High School	Melbourne	FL
07	31	Mintun, Peter	Hawken School	Gates Mills	OH
08	26	Prabhu, Mihika	West Lafayette Jr/Sr HS	West Lafayette	IN
09	32	Politakis, Alex	Libertyville High School	Libertyville	IL
10	28	Trinh, Minh Tam	Whitefish Bay High School	Whitefish Bay	WI
11	33	Snodgrass, Samuel	Oak Ridge High School	Oak Ridge	TN
12	26	Li, Shuyang	Clayton High School	Clayton	MO
13	28*	Nguyen, Dan	William P. Clements HS	Sugar Land	TX
14	36	Brown, Lucas	San Diego Math Circle	San Diego	CA
15	36	Majdzadeh, Ali	Port Moody Secondary School	Port Moody	BC

Second Highest Scoring *Division 02* Students in each Region

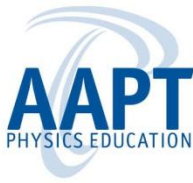| Reg	Score	Student	School	City	State
01	33*	Das Sarma, Andrew	Montgomery Blair High School	Silver Spring	MD
02	30	Turek, Michael	Middlesex School	Concord	MA
03	33	Wang, Jixuan	Don Mills Collegiate Inst.	Toronto	ON
04	28	Rhoads, Erin	The Episcopal Academy	Newtown Square	PA
05	28	Zhu, Alexander	Thomas S. Wootton HS	Rockville	MD
06	30	Silverman, Bradley	Centennial High School	Roswell	GA
07	29	Hu, Colin	Beavercreek High School	Beavercreek	OH
08	25	Foster, Hans	East Lansing High School	East Lansing	MI
09	31	Qiang, Weitao	Libertyville High School	Libertyville	IL
10	27	Stankiewicz, Krzysztof	Edina Center for Academic Exc.	Edina	MN
11	31	Zhang, Leon	Oak Ridge High School	Oak Ridge	TN
12	25*	Katz, Julian	Clayton High School	Clayton	MO
13	28	Chen, Kevin	William P. Clements HS	Sugar Land	TX
14	34*	Jin, Tony	Westlake High School	Westlake Village	CA
15	34	Ryoo, Sunwoo	Chungbuk Science High School	Cheongwongun, Chungcheonbuk-do	Republic of Korea

* = place determined by tiebreaker

Highest Scoring *Division 01* Schools in each Region

Reg	Score	School	City	State
01	136	Science Academy of South Texas	Mercedes	TX
02	156	Guilford High School	Guilford	CT
03	141	Don Mills Collegiate Institute	Toronto	ON
04	143	Millburn High School	Millburn	NJ
05	129	Thomas S. Wootton High School	Rockville	MD
06	157	Walton High School	Marietta	GA
07	131	Beavercreek High School	Beavercreek	OH
08	134	Carmel High School	Indianapolis	IN
09	150	Libertyville High School	Libertyville	IL
10	122	Heritage Christian High School	Milwaukee	WI
11	124	Montgomery Bell Academy	Nashville	TN
12	123	St. Louis Univ. High School	Saint Louis	MO
13	128	William P. Clements High School	Sugar Land	TX
14	150	San Diego Math Circle	San Diego	CA
15	155	Shanghai Normal University	Shanghai	China

Second Highest Scoring *Division 01* Schools in each Region

Reg	Score	School	City	State
01	129	Montgomery Blair High School	Silver Spring	MD
02	126	Arlington High School	Arlington	MA
03	135	Great Neck South High School	Great Neck	NY
04	126	Princeton High School	Princeton	NJ
05	128	Maury High School	Norfolk	VA
06	131	Alpharetta High School	Alpharetta	GA
07	130	Western Reserve Academy	Hudson	OH
08	113	Chelsea School	Chelsea	MI
09	132	Vernon Hills High School	Vernon Hills	IL
10	118	Chippewa Fall Sr. High School	Chippewa Falls	WI
11	113	Oak Ridge High School	Oak Ridge	TN
12	119	Lakewood High School	Lakewood	CO
13	112	Lamar Academy	McAllen	TX
14	141	Arcadia High School	Arcadia	CA
15	146	New Westminster Secondary School	New Westminster	BC

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Highest Scoring *Division 02* Schools in each Region

Reg	Score	School	City	State
01	154	Montgomery Blair High School	Silver Spring	MD
02	118	Longmeadow High School	Longmeadow	MA
03	126	Great Neck South High School	Great Neck	NY
04	122	Millburn High School	Millburn	NJ
05	138	Thomas S. Wootton High School	Rockville	MD
06	125	West Shore Jr/Sr High School	Melbourne	FL
07	129	Hawken School	Gates Mills	OH
08	113	East Lansing High School	East Lansing	MI
09	137	Libertyville High School	Libertyville	IL
10	101	Arrowhead High School	Hartland	WI
11	137	Oak Ridge High School	Oak Ridge	TN
12	121	Clayton High School	Clayton	MO
13	122	William P. Clements High School	Sugar Land	TX
14	148	The Harker School	San Jose	CA
15	166	Chungbuk Science High School	Cheongwongun, Chingcheongbuk-do	Rep. of Korea

Second Highest Scoring *Division 02* Schools in each Region

Reg	Score	School	City	State
01	146	Bergen County Academies	Hackensack	NJ
02	108	Middlesex School	Concord	MA
03	123	Don Mills Collegiate Institute	Toronto	ON
04	120	Princeton High School	Princeton	NJ
05	98	Boonsboro High School	Boonsboro	MD
06	119	Cypress Bay High	Weston	FL
07	114	Beavercreek High School	Beavercreek	OH
08	106	Carmel High School	Indianapolis	IN
09	128	Vernon Hills High School	Vernon Hills	IL
10	99	Marshfield High School	Marshfield	WI
11	66	Jackson Preparatory School	Jackson	MS
12	100	Lakewood High School	Lakewood	CO
13	111	St. Mary's Hall School	San Antonio	TX
14	141	San Diego Math Circle	San Diego	CA
15	128	Western Canada High School	Calgary	AB