## American Association of Physics Teachers

 PHYSICSBOWL 20082008 PhysicsBowl Results

Dear Physics Teacher,
Thank you for having your students participate in this year's AAPT PHYSICSBOWL contest.
This year there were almost 4000 students participating from approximately 175 schools across the United States and Canada as well as schools in Japan and Taiwan. 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 several answer sheets which could not be identified with any school or division which both disqualified the student's result and was therefore not included with the team score. This is very unfortunate as some winning scores had to be disqualified.

This year, the following prizes are awarded:

- First and Second place schools in each region and division receive
- a $\$ 25$ AAPT Store gift certificate
- a $\$ 100$ gift certificate from Frey Scientific
- First and Second Place students (and teacher) in each region and division receive
- a Texas Instruments TI-30 XS MultiView Calculator

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

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 increasing the average score for each division.

Thank you for participating,
Thichail C. Fable
Michael C. Faleski
PhysicsBowl Academic Coordinator
Department of Physics
Delta College
1961 Delta Rd.
University Center, MI 48710
michaelfaleski@delta.edu

##  PHYSICSBOWL 2008

The enclosed sheets give the school's team score and the following information obtained from each student's answer form:

$$
\text { Student Name } \quad \text { School ID Number } \quad \text { Division } \quad \text { Region } \quad \text { Score }
$$

All of the above information was read directly from each student's answer sheet. Errors are the results of improperly filled out forms. For any missing students, please contact Dr. Courtney Willis, Courtney.Willis@unco.edu.

## Statistics for exam

Average Score for Division $\mathrm{I}=\mathbf{1 4 . 0}$ with a standard deviation of 5.5
Average Score for Division II $=\mathbf{1 4 . 6}$ with a standard deviation of 5.1


**** 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. The averages for this year's exam were similar to last year's contest (Division I was 1.0 point lower than last year, while Division II was about 2 points lower), but a bit lower than desired.
** Are you interested in helping to prepare next year's contest?!?!
Ways in which you can help...

1. You can send 5 multiple choice problems that you use on your exams to be considered for use on future contests. The questions can be of any level and topic. Please email them to michaelfaleski@delta.edu .
2. You can participate in the writing/editing of the exam. If you are interested in this task, please contact me at my email michaelfaleski@delta.edu and I'll be happy to discuss the process with you.
3. You can send suggestions about how to improve the PhysicsBowl. The PhysicsBowl Advisory Group will be meeting to discuss the future of the exam at the summer AAPT meeting. We already have several things that we are considering, but we'd love your ideas.

# AAPT <br> American Association of Plysics Teachers PHYSICSBOWL 2008 

Top Division I student

1437 ZHANG, ZHIFAN University HS - Irvine Irvine CA

| Reg | Score | Student | School | City | State |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02 | 27 | HOFFMAN, MARCUS L | The Wheeler School | Providence | RI |
| 03 | 36 | WANG, JIXUAN | Don Mills Collegiate | Toronto | ON |
| 04 | 36* | LEH, STEPHEN W | Millburn HS | Millburn | NJ |
| 05 | 34 | LIANG, JONATHAN J | Thomas S. Wootton HS | Rockville | MD |
| 06 | 30 | LERNER, DAVID M | Walton HS | Marietta | GA |
| 07 | 30 | HU, DAVID C | North Royalton HS | North Royalton | OH |
| 08** | 24 | REUM, ERIC D | Ludington HS | Ludington | MI |
| 09 | 28 | NELSON, CLIFFORD | Vernon Hills HS | Vernon Hills | IL |
| 10 | 28 | ZHANG, LUCY | Edina Senior HS | Edina | MN |
| 11 | 29 | LIU, XINRAN | Oak Ridge HS | Oak Ridge | TN |
| 12 | 28 | ONEILL, MICHAEL S | St. Louis Univ. HS | St. Louis | MO |
| 13 | 32 | ZHANG, MARK A | William P Clements HS | Sugar Land | TX |
| 14 | 37 | ZHANG, ZHIFAN | University HS - Irvine | Irvine | CA |
| 15 | 32 | KIM, SEUNGSOO | Mountain View HS | Vancouver | WA |
| 20 | 29* | LI, DANIEL | Thomas Jefferson HS | Alexandria | VA |

Second Highest Scoring Division I Students in each Region

| Reg | Score | Student | School | City | State |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 02 | 24* | CANNELLA, ANDREW B | Ellington High School | Ellington | CT |
| 03 | 27* | YEVICK, AARON | Yeshiva Univ. HS for Boys | New York | NY |
| 04 | 36 | ZHU, MICHAEL H | Ridge HS | Basking Ridge | NJ |
| 05 | 25 | AMBLR, MATTHEW T | Maury HS | Norfolk | VA |
| 06 | 25 | NEUMAN, TOM M | Walton HS | Marietta | GA |
| 07 | 29 | EMMERTARONSON, JACOB | Revere HS | Richfield | OH |
| 08** | 22 | PIEDMONTE, DANIEL T | Carmel HS | Carmel | IN |
| 09 | 27* | NI, ALLEN Z | Vernon Hills HS | Vernon Hills | IL |
| 10 | 24* | VERHULST, BEN C | Heritage Christian HS | Milwaukee | WI |
| 11 | 27 | YAN, WEI | Vestavia Hills HS | Vestavia Hills | AL |
| 12 | 26 | WRIGHT, KEVIN A | St Louis Univ. HS | Saint Louis | MO |
| 13 | 30 | HUNG, JESSICA | Catalina Foothills HS | Tucson | AZ |
| 14 | 33 | LI, PATRICIA Z | Lynbrook High School | San Jose | CA |
| 15 | 31* | SU, CULLEN | Mountain View HS | Vancouver | WA |
| 20 | 29 | HAN, FRANK | Oklahoma Sci/Math | Oklahoma City | OK |

# AAPT American Association of Physics Teachers PHYSICSBOWL 2008 

## Top Division II student

Glebe Collegiate Institute Ottawa

|  | Highest Scoring Division II Students in each Region |  |  |  |  |
| :---: | :---: | :--- | :--- | :--- | :--- |
| Reg | Score |  | Student | $\underline{\text { School }}$ | $\underline{\text { City }}$ |

Second Highest Scoring Division II Students in each Region

| Reg | $\frac{\text { Score }}{}$ | Student | School | $\frac{\text { City }}{\text { Branford }}$ | $\frac{\text { State }}{\text { CT }}$ |
| :---: | :---: | :--- | :--- | :--- | :---: |
| 02 | 23 | PHADKE, AJAY A | Branford HS | NY |  |
| 03 | 28 | PUTTERMAN, ELI | Yeshiva Univ. HS for Boys | New York | PA |
| 04 | 29 | NAM, YOON JAE | Mercersburg Academy | Mercersburg | NC |
| 05 | $27^{*}$ | ADAMS, MATTHEW B | Myers Park HS | Charlotte | NC |
| 06 | 27 | KILGORE, DAVID C | Brookwood High School | Snellville | GA |
| 07 | $24^{*}$ | KROMER, MATTHEW A | Lakota East HS | Middletown | OH |
| 08 | 27 | LI, JIMMY J | Northville HS | Northville | MI |
| 09 | $28^{*}$ | YAN, FRANK C | Libertyville High School | Libertyville | IL |
| 10 | 25 | SECOR, ETHAN B | Stillwater Area HS | Stillwater | MN |
| 11 | 23 | SMITH, LANDON C | Oak Ridge HS | Oak Ridge | TN |
| 12 | 28 | ORLAND, PAUL M | Clayton HS | Clayton | MO |
| 13 | 29 | HU, KENNETH | William P Clements HS | Sugar Land | TX |
| 14 | $25^{*}$ | OUYANG, DEREK | Arcadia HS | Arcadia | CA |
| 15 | 25 | TURZILLO, ALEX M | Tigard HS | Portland | OR |
| 20 | 29 | WILSON, KODY A | Oklahoma Sci/Math | Oklahoma City | OK |

## AAPT American Association of Physics Teachers PHYSICSBOWL 2008

Highest Scoring Division I School

| 04 | 131 |  | Millburn HS | Millburn |
| :--- | :---: | :---: | :---: | :---: | NJ

Second Highest Scoring Division I Schools in each Region

| Reg | Score | School | City | State |
| :---: | :---: | :---: | :---: | :---: |
| 02 | 86 | Arlington HS | Arlington | MA |
| 03 | 97 | Don Mills Collegiate Inst | Toronto | ON |
| 04 | 113 | Ridge HS | Basking Ridge | NJ |
| 05 | 91 | Woodberry Forest School | Woodberry Forest | VA |
| 06 | 79* | Pine Crest School | Fort Lauderdale | FL |
| 07 | 100 | Hawken School | Gates Mills | OH |
| 08** | 81 | Ludington HS | Ludington | MI |
| 09 | 103 | Libertyville High School | Libertyville | IL |
| 10 | 80 | Heritage Christian HS | Milwaukee | WI |
| 11 | 93 | Vestavia Hills HS | Vestavia Hills | AL |
| 12 | 95 | Helias HS | Jefferson City | MO |
| 13 | 93 | St. Mark's School of Texas | Dallas | TX |
| 14 | 109 | Arcadia HS | Arcadia | CA |
| 15 | 94 | Sir Winston Churchill Secondary | Vancouver | BC |
| 20 | 108 | Bergen County Academies | Hackensack | NJ |
|  |  | * = place determined by tieb |  |  |

## AAPT American Association of Physics Teachers PHYSICSBOWL 2008

Highest Scoring Division II School

| 04 |  | 109 | Millburn HS | Millburn | NJ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| Highest Scoring Division II Schools in each Region |  |  |  |  |  |
| Reg | Score |  | School | City | State |
| 02 | 79 |  | Branford HS | Branford | CT |
| 03 | 91 |  | Don Mills Collegiate | Toronto | ON |
| 04 | 109 |  | Millburn HS | Millburn | NJ |
| 05 | 98 |  | Thomas S. Wootton HS | Rockville | MD |
| 06 | 97 |  | Brookwood High School | Snellville | GA |
| 07 | 81 |  | Hawken School | Gates Mills | OH |
| 08 | 97 |  | Chelsea School | Chelsea | MI |
| 09 | 107 |  | Libertyville HS | Libertyville | IL |
| 10 | 98 |  | Century HS | Rochester | MN |
| 11 | 87 |  | Homewood High School | Homewood | AL |
| 12 | 100 |  | Clayton HS | Clayton | MO |
| 13 | 101 |  | William P Clements HS | Sugar Land | TX |
| 14 | 89 |  | Arcadia HS | Arcadia | CA |
| 15 | 86 |  | Western Canada HS | Calgary | AB |
| 20 | 104 |  | Montgomery Blair HS | Silver Spring | MD |

Second Highest Scoring Division II Schools in each Region

| Reg | Score | School | City | State |
| :---: | :---: | :---: | :---: | :---: |
| 02 | 70 | Newtown HS | Sandy Hook | CT |
| 03 | 89 | Glebe Collegiate Institute | Ottawa | ON |
| 04 | 85 | West Windsor - Plainsboro HS S | Princeton Junction | NJ |
| 05 | 91 | Myers Park HS | Charlotte | NC |
| 06 | 90 | Walton HS | Marietta | GA |
| 07 | 79 | Lakota East HS | Middletown | OH |
| 08 | 86 | West Lafayette Jr/Sr HS | West Lafayette | IN |
| 09 | 85 | Vernon Hills High School | Vernon Hills | IL |
| 10 | 83 | Arrowhead HS | Hartland | WI |
| 11 | 80 | Oak Ridge HS | Oak Ridge | TN |
| 12 | 76 | Blue Valley North HS | Overland Park | KS |
| 13 | 81 | St. Mary's Hall School | San Antonio | TX |
| 14 | 84 | Stevenson School | Pebble Beach | CA |
| 15 | 84 | Sir Winston Churchill Secondary | Vancouver | BC |
| 20 | 101 | Science Academy of S TX | Mercedes | TX |

