## PHYSICSBOWL 2022

#### **2022 PhysicsBowl Results**

Dear Physics Teachers,

Thank you for encouraging and supporting your students' participation in the AAPT PhysicsBowl contest! This year there were more than 7700 students participating from 286 schools from Australia, Canada, Costa Rica, Germany, Greece, Guam, Indonesia, Malaysia, the Republic of Korea, the Philippines, Singapore, Spain, Turkey, the United Kingdom, and the United States, as well as 672 schools participating from China.

Because of the large number of Chinese schools, the contest is divided into two parts. Students in Regions 00-14 are competing for AAPT, while ASDAN China is coordinating the contest for students in China. As a result, for simplicity in trying to read the long lists, there are three files: the list of top scores in Regions 00-14, the list of top scores in Regions 15-19, and a list of the top students/teams from all regions in both divisions.

Instructors from Regions 00-14 can obtain their students' scores from the AAPT website. That link will be provided to you in an email from the national office. Please realize that we were able to retrieve some scores that were disqualified for improperly recording the required information and this this was done after-the-fact. If the information was not encoded correctly, the student was automatically disqualified even though we may be able to link that student to your code now. Some students provided no codes, the wrong regions, no name, just a last name, 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. Sadly, some high scores were disqualified. If you are still missing a student's score, please email <a href="mailto:jlane@aapt.org">jlane@aapt.org</a> with student information (CEEB, teacher codes, etc.) and we can try to find the information.

Information is being provided to ASDAN China to find scores from Regions 15-19.

We will, as always, be trying to improve the contest and we look forward to your participation again in 2023. If you have suggestions for improvement, kindly email them to us, and we will take them into consideration for future years.

The statistics from this year's contest are as follows.

Division 1 had an average score of 16.8. Statistically, the easiest question was #1 (84.2% correct) while the most difficult question was #38 (13.2% correct). There were 4915 exams scored and 680 teams.

*Division 2* had an average score of 20.6. Statistically, the easiest question was #17 (90.1% correct) while the most difficult question was #38 (17.8% correct). There were 2795 exams scored and 614 teams.

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It is a challenging task to produce a 40-question exam that has a small percentage of very high scores, while still not being overly difficult and remaining fair to the majority of the students that take it. As in previous years, and in an effort to continually improve this opportunity for students, adjustments will be made to future exams.

#### **Statistics for exam**

Average Score for Division 1 = 16.8 with a standard deviation of 6.1

Average Score for Division 2 = 20.6 with a standard deviation of 7.9

We look forward to having you participate in next year's contest! Please spread the word and encourage your colleagues to have their students participate in future contests.

Sincerely,

Jon Anderson

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