

“物理杯”美国高中物理竞赛

"PhysicsBowl" American High Physics Contest

全美最具影响力的高中物理竞赛
权威的美国物理教师协会(AAPT) 主办

11 个国家超过500 所学校参加、全球统一成绩排名
优胜者将获邀请参加全球顶级科学竞赛与科研项目
主办方: 美国物理教师协会(AAPT: www.aapt.org)

A popular high school physics contest

Hosted by the American Association of Physics Teachers - the World's leading science community

Over 500 schools from 11 countries ranked together

Outstanding students are invited to more advanced science programs

Organizer: American Association of Physics Teachers
(AAPT: www.aapt.org)

一、比赛简介 **Introduction**

“美国物理教师协会”成立于1930年，是美国唯一专注于普及与提升物理教育的学术机构。该协会旗下有8000名注册物理老师，其中一半成员是美国各名牌大学物理教授，约三分之一成员是美国高中的有经验的物理老师。协会每年都会通过会议、论坛、杂志、竞赛等方式为美国大学与高中物理教育提供最新的物理前沿思想与更丰富的物理教育资源。

“物理杯”高中物理竞赛由“美国物理教师协会”AAPT 主办，试题由协会注册的大学物理教授和教学经验丰富的高中物理老师组成理事会进行出题和评审。该项赛事是美国最具影响力的高中物理竞赛，每年全球11个国家超过500 所著名高中参加。在比赛中获得高分者备受美国名校欢迎，过去9 年仅1 名高中生在该竞赛中得到满分。

2015 年，中国引进“物理杯”竞赛后，成为全球第15、16、17、18、19 赛区。全国总共192 所国际学校和重点中学的4300 名考生参加了此次考试。中国地区的学校和学生在此次比赛中获得了极为优异的成绩。其中Division 2组考试，南京外国语学校获得中国地区第一名，以及全球第二名的成绩。Division 1 组考试，西安高新一中获得了中国地区第一名，以及全球第一名的成绩。

2016 年全国来自203 所国际学校和重点高中的4000 多名同学参加了“物理杯”，其中南京外国语学校取得了Division 2组全球团体总分第一、全国团体总分第一的优异成绩。

2017 年全国来自281 所国际学校和重点高中的4000 多名同学参加了“物理杯”，江苏省梁丰高级中学和北京新东方扬州外国语学校分别获得Division 1, Division 2 的团队总分第一的优异成绩。

American Association of Physics Teachers (AAPT) was created in 1930 with the aim of improving physics education. The association has 8,000 registered physics teachers; half of these are professors from famous universities, whilst a third are experienced high school teachers. The association provides the latest physics methodologies and rich educational resources through meetings, forums, magazines, contests and so on. PhysicsBowl is an annual physics contest held

by the American Association of Physics Teachers (AAPT). Experienced registered physics teachers and professors get together to write the competition problems and judge results. It is the most important physics contest for American high schools, with more than 5,000 participants every year. Most US students with high grades from the PhysicsBowl are also invited to join Physics Camps and Olympiads. The contest challenges students, with only one student in the past 8 years obtaining a full score. Region 15-19 in PhysicsBowl are designated to represent the East, South, West, North and Central regions of China. Around 4000 students from more than 200 schools in China each year have participated and achieved outstanding grades globally. In 2015, Xi'an GaoXin No.1 high school won first place both in China and the world in Division 1, Nanjing Foreign Language School won first place in China and second in the world in Division 2. In 2016, Nanjing Foreign Language School again won first place as a team globally and nationally in both Division 1 and 2. In 2017, Jiangsu Provincial Liangfeng Senior Middle School won first place as a team globally and nationally in Division 1, Beijing New Oriental Foreign Language School at Yangzhou won first place as a team globally and nationally in Division 2.

二、比赛规则

1. 比赛语言：英文
2. 比赛时间：2018 年3 月31 日（周六）下午14:00 - 14:45（45 分钟）
3. 参与方式：个人报名参赛
4. 比赛方式：个人比赛，试卷笔试
5. 参赛同学：任意年级高中生
6. 考试难度：考题分为两套，高一学生（IB10 年级， A-Level的G1 年级部分优秀学生和G2 年级）建议选择Division1 考题，高二，高三学生（IB11-12 年级， A-Level 年级）选择Division2 考题。Division2 难度大于Division1
7. 比赛地点：各大城市考点学校
8. 比赛内容：40道单选题，持续45 分钟

Competition Rules

Language: English

Date: 31st March, 2018 (Saturday), 14:00-14:45 pm (45min)

Format: Individual written test (no experiment)

Participants: High school students

Exam problems: Two sets of problems arranged as Division 1 and 2; Division 2 is more difficult. (IB Grade10, A-Level G2 students and excellent G1 students), Division 2 is suitable for Grade 11 and 12 students (IB Grade 11-12, A-Level).

Exam locations: Exam Centers across China

Contest questions: 40 multiple-choice questions, 45 minutes.

三、奖项设置：

1. 个人奖
 - 全球个人奖：全球排名前100 位
 - 全国个人奖：全国前10 名(Division 1, Division 2)
 - 赛区个人奖：赛区前10 名(Division 1, Division 2)

- 物理优秀奖：全国排名前30%(Division1, Division2)
2. 团队奖（每个参赛学校无论人数多少，取本校个人成绩前5名加总为团体总分；若不足5人，则所有参赛选手得分加总为团体分）
- 全球获胜团队奖：全球排名前50位
 - 全国获胜团队奖：全国前10名(Division1, Division2)
 - 赛区获胜团队奖：赛区前10名(Division1, Division2)

Awards

Individual award

- Global top 100 (Division 1, 2)
- National top 10 (Division 1, 2)
- Regional top 10 (Division 1, 2)
- Honorable award: National top 30% (Division1, Division 2)

Team award

The top 5 scores from a school in a particular region/division are added together to give the team score

- Regional top 10 (Division 1,2)
- National top 10 (Division 1,2)
- Global top 50 (Divison 1, 2))

四、赛区划分

- 华东赛区（全球第15 赛区）：上海、浙江、江苏
- 华南赛区（全球第16 赛区）：广东、广西、福建、海南、香港、澳门
- 华西赛区（全球第17 赛区）：重庆、四川、云南、贵州、陕西、甘肃、青海、西藏、宁夏、新疆
- 华北赛区（全球第18 赛区）：北京、天津、黑龙江、吉林、辽宁、河北、内蒙、山西、山东
- 华中赛区（全球第19 赛区）：湖南、湖北、安徽、江西、河南

Competition regional division:

- **Eastern China:** Shanghai, Zhejiang, Jiangsu
- **Southern China:** Guangdong, Guangxi, Fujian, Hainan, HongKong, Macao
- **Western China:** Chongqing, Sichuan, Yunnan, Guizhou, Shaanxi, Gansu, Qinghai, Tibet, Ningxia, Xinjiang
- **Northern China:** Beijing, Tianjin, Heilongjiang, Jilin, Liaoning, Hebei, Inner Mongolia, Shanxi, Shandong
- **Central China:** Hunan, Hubei, Anhui, Jiangxi, Henan