

## Changed Format for the Year 13 BAAO Competitions

### The British Astronomy & Astrophysics Olympiad (BAAO)

The BAAO is run within the BPhO to provide a wider range of opportunities for physics students: the International Olympiad on Astronomy & Astrophysics (IOAA) will be run in Brazil in August 2024. The successful team of five Gold medallists at this summer's IOAA will, we hope, encourage greater school participation.

The competition and selection process for the BAAO is changing this year, to make it more approachable and less a strictly physics route, which, whilst that has been successful, does not necessarily engage more students in participating in the Astro competitions and widening the participation in schools.

The sort of students who do well are good physics problem solvers who have an interest in astronomy, although may have no previous experience! They should be encouraged (but not required) to take the Astro Challenge Paper in September. Good, keen physicists do very well. Few past team members would have considered themselves astronomers in any sense, but they are problem solvers and interested in new ideas. The majority are probably limited to knowing the names of the planets, and little more!

### Changes to BAAO Papers this year:

The academic year 2022-23 was the last year of the original format of papers and competitions. After listening to lots of feedback from teachers at schools that take part regularly some changes have been made – in general, the papers have been pushed back later into the year to allow more students to have covered the relevant material in their A Level courses to be able to successfully engage with a greater selection of questions. The major headlines are:

- Astro Challenge will no longer be a route to Astro Round 2 and will be simplified to increase the number of distinctions. Observational astronomy will be a larger part of the multiple-choice section. It will still be released during September, but the distinction certificate eligibility deadline will be moved to the end of the autumn term and there will no longer be a need for a scan.
  - Past papers are therefore harder than the 2023 onwards papers, so your students should find the new ones more accessible – **please encourage them to have a go.**
  - The number of distinctions, merits and commendations will be recorded in an online form.
- A new competition, **Astro Round 1**, will be launched in late January 2024. It will follow a similar format to the Physics Round 1, with short questions and long questions, and will have paid entry (although some schools will get free entry for some students, like for Physics Round 1)
  - A sample paper will be available soon on the BPhO website to give examples of the sorts of questions faced in Section 1 (short questions) and Section 2 (optional long questions, including an example of the new observational astronomy questions)
- The **BAAO Competition paper** will be rebranded as the **Astro Round 2** and will be available to those that get a Top Gold in either the Physics Round 1 OR Astro Round 1. For Astro Rd 2, there will no longer be a paid entry, nor entry via a Distinction in the Astro Challenge. It will be sat in the week after the February half term, with students notified if they have made the Easter selection camp by the beginning of March.
  - There are no major changes to Astro Round 2 and so all past papers are good preparation for the level of demand required.

All of the papers will pose some challenge to even the brightest students. If there are questions that they find hard or cannot do, that should not put them off from applying their problem-solving skills.

Many of the topics in the syllabus are covered at A Level, but no one specification covers them all and in some cases the material will be in an optional module. However, do not let that put your students off as we have the following accommodations:

- **Many of the formulae will be given in the paper.** Those not given are generally in an A Level equations sheet, which they are also free to use when solving the paper.
- A **detailed syllabus** will soon be released showing exactly what students need to know for each paper.
- Much of the new material is relatively easy to pick up oneself. To help with this, **self-study guides will soon be available on the BPhO website** to help with independent study on any unfamiliar material through several worked examples showing how to apply these formulae / concepts.
  - This includes a **comprehensive guide to the Observational Astronomy knowledge needed** for each paper, and assumes no prior astronomical knowledge so that anyone can learn it.

We are very keen to have as many students as possible have the confidence to take the Astro competitions and we hope they find the changes helpful for improving accessibility.

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