

## Summary of papers

Paper	Experimental Project	A2 Challenge	Astronomy & Astrophysics Challenge (A2)	The British Physics Olympiad BPhO Round 1*	British Astronomy & Astrophysics Olympiad Competition Paper	The British Physics Olympiad BPhO Round 2	GCSE Physics Challenge	AS Challenge
Entry date	w/c 20 <sup>th</sup> June 2016	w/c 12 <sup>th</sup> September 2016	w/c 12 <sup>th</sup> September 2016	Before Wed 9 <sup>th</sup> November 2016 <i>Electronic version is available to order until Wed 16<sup>th</sup> November 2016</i>	Before Mon 16 <sup>th</sup> January 2017 <i>Electronic version is available to order until Thurs 19<sup>th</sup> January 2017</i>	By Invitation only <i>(students who achieve Top Gold only)</i>	Fri 24 <sup>th</sup> February 2017	Fri 3 <sup>rd</sup> March 2017
Test date	<b>Submission date: By Wed 7<sup>th</sup> December 2016</b>	<b>Certificate deadline: Mon 5<sup>th</sup> December 2016</b>	<b>Distinction Certificate deadline: Wed 25<sup>th</sup> November 2016</b> <b>Merit Certificate deadline: Wed 25<sup>th</sup> November 2016</b>	<b>Fri 18<sup>th</sup> November 2016</b>	<b>Mon 23<sup>rd</sup> January 2017</b>	<b>Mon 30<sup>th</sup> January 2017</b>	<b>Fri 3<sup>th</sup> March 2017</b>	<b>Fri 10<sup>th</sup> March 2017</b>
Overview	The project gives students hands-on experience of 'How Science Works' - planning and undertaking an open-ended experiments and independent research, working in teams where appropriate, and communicating their findings.	The paper develops students' interest in problem solving. It prepares them for questions which require analysis of information to work out not only the answer, but also what route to take in order to obtain it.	A mix of astronomy and physics to allow students to analyse observational data through to a conclusion. Physics ideas applied to the wider universe in a problem solving context. Based on core physics, with extra detail being supplied in the question.	Our flagship competition, the British Physics Olympiad has run for over 25 years. The competition has a dual purpose: to challenge and reward the best physicists in British schools and to select the UK Team for the IPhO.	Similar to the Astro Challenge Paper but taking the ideas a little further. Based on core physics and extending the ideas mathematically and analytically. Extra syllabus material is given in the question. Focused on both physicists and students interested in astronomy.	A paper about problem solving through setting up models, making predictions and explaining real world effects.	The paper has a refreshing mathematical style and includes multiple-choice and short answer sections. It is suitable for students who are predicted to achieve an A* or A for either dual award science or physics as a separate subject.	Stretches lateral thinking skills and encourages students to apply fundamental principles to novel situations. Provides an excellent tool to assess and challenge students.
Length of exam	<b>Open ended</b>	<b>1 hour</b>	<b>1 hour</b>	<b>2 hrs 40 min (can be sat in 2 sections)</b>	<b>3 hour</b>	<b>3 hours</b>	<b>1 hour</b>	<b>1 hour</b>
Marked	Teachers select their best entries to submit for each age group, to be judged nationally by the BPhO team	In school, mark scheme provided	In school, mark scheme provided.	By the BPhO team Deadline for returning papers <b>Fri 25<sup>th</sup> November 2016</b>	By the BAAO team Deadline for returning papers <b>Mon 30<sup>th</sup> January 2017</b>	By the BPhO team	In school, mark scheme provided	In school, mark scheme provided
Certificates	Gold, Silver, Bronze, Commendation	<b>Merit:</b> 20 or above <b>Participation:</b> 19 marks or below	<b>Distinction:</b> papers over 60% submitted by <b>9<sup>th</sup> November 2016</b> Merit & Participation: results submission by December	Gold (Top 50), Gold, Silver, Bronze I, Bronze II, Participation	Gold, Silver, Bronze, Participation	15 Distinction 15 Merit 30 Commendations	Gold, Silver, Bronze, Participation	Gold, Silver, Bronze, Participation
Book prizes	Gold award winners and book prize			Gold award winners	Gold award winners	Distinction invited to Royal Society	Gold award winners	Gold award winners
Cost	Free	Free	Free	£18 per paper (two free entries for non-fee paying schools). Entries to Round 2 and 3 are free*	Free	Free	£2 per paper, or available free electronically	£2 per paper, or available free electronically

\*Round 2 and 3 of the British Physics Olympiad are by invitation only and are used to select the UK team for the International Physics Olympiad. Round 3 is open to the top 15 students who are interested in the participating in the IPhO. The paper is sat at the University of Oxford Training Camp.

Papers are designed to favour all exam boards equally. Some of the students achieving the highest results in The British Physics Olympiad, AS Challenge and GCSE Challenge will be invited to a prize giving ceremony at the Royal Society. More information about the competition can be found here: [www.bpho.org.uk](http://www.bpho.org.uk).