

This document outlines what ASGARD is, why it is so important, what the benefits of it are, what sponsorship money would be going towards and what you as a sponsor would receive from it if you decide to donate.

What is ASGARD?

ASGARD is a project held in Brussels which sends weather balloons into the stratosphere every year. Students between the ages of 15 and 19 are allowed to design experiments to be placed on these balloons to test them in the stratosphere. These weather balloons travel 20-30 kilometres high into the stratosphere, which allows many observations to be made. This can give very important information about the environment, such as the amount of carbon dioxide that is in the atmosphere, which is very important due to climate change. If you would like to read more about ASGARD please visit: [The ASGARD website](#) for more information.

Our ASGARD projects

Queen Elizabeth's Grammar School is doing two projects at ASGARD in March 2023. Firstly, a Year 12 team will be measuring the correlation between radiation and ozone in the upper atmosphere. We plan to use this to see what effects the ozone layer has on our planet and what levels of radiation could be subjected onto our planet if the ozone layer is depleted anymore. We decided to experiment on this due to growing up hearing about climate change and the hole in the ozone layer. Therefore we chose this to discover and illustrate to others our age how important it is to protect the environment and the lesser known consequences that could occur such as increased levels of skin cancer due to UV radiation or impairing the immune systems of all animals.

The Year 11 team will be investigating how being in the upper atmosphere affects an organism's ability to reproduce. We have decided to do this experiment to be able to find out how feasible the prospect of living above the ground in the upper atmosphere and space would be for even the smallest organisms. Our main starting interest to investigate this was triggered by the constant damaging of our planet through things like climate change and deforestation which could eventually lead to our planet being uninhabitable.

Benefits of ASGARD

ASGARD is an experience for students to experiment their own ideas, with the constructions being their own, given free reign to try out things which normally wouldn't be available to them. It provides an opportunity for young aspiring physicists to make international connections, meet similar minded students they never would get the chance to. The international setting will also help your business, with any sponsors being put on all our project reports, which will be presented and taken to conventions in the future. It's not just a benefit for those participating, on returning we provide presentations for younger years, showing how physics is an interesting and opportunistic path to take into their futures.

How ASGARD affects the lower school

After the ASGARD project, we plan to inform the lower school about our trip in assemblies. Through this we hope to inspire the lower school to become more involved in STEM activities that the school runs such as STEM club, benefiting their education and teaching them useful scientific techniques in the long run.

ASGARD and the environment

The climate crisis is currently the greatest threat to civilisation on Earth, and our projects link in very well with the environment. Our first attempts to measure ozone concentrations in comparison with radiation, which will give us insight to the way the depletion of ozone within our upper atmosphere is impacting radiation levels. Additionally, as a part of our experiment, using our own data of ozone concentrations we will be comparing it to past records, to try to estimate when the ozone will be depleted to a point of no return.

What would your sponsorship be going towards?

Your sponsorship would be going primarily towards the travel to the conference due to the expensive costs associated with travelling to Brussels where the conference is held. Our plan is to take the Eurostar to Brussels either the day before or the morning of the conference and your sponsorship would be extremely crucial to us due to the monumental costs of travel for our two groups.

Benefits of sponsoring this project

The benefits of sponsoring this project are: you would be helping to inspire a whole new generation of potential astrophysicists and climate scientists, you would be allowing our research teams the opportunity to present their work to other like minded individuals and partake in an actual international conference (which unfortunately is not an opportunity provided to nearly enough young scientists). You would also have your logo displayed on our project and on our presentations to the international conference providing advertisement to your business.