

At my all-girls school, where I received 11A\*s and an A in my GCSE exams earlier this year, I am something of an anomaly. I am known as the school physics geek and was crowned 'Most Likely to Live in Space' by my year group - a title of which I am proud.



There is a very simple reason for this: Astronomy and Physics are my passions. They are subjects which continuously take my breath away and make me think about our place in the universe. When I lie in my back garden at 11PM wrapped in a blanket staring at the number of stars I can see under the glare of the city lights it never ceases to amaze me that I can see those specks of light when they are millions and millions of kilometers away. It makes me want to find out where they are in relation to us and the center of our galaxy, and figure out as much about them as I can. Their age, mass and if there are exo-planets orbiting around them.

Saturn is definitely my favourite planet. Earth is fine but what fascinates me about Saturn is that its rings are helping us unlock how the solar system formed. Saturn's moon Enceladus, from which liquid water flies thousands of feet into space, is another source of interest, and if asked for my favourite moon, Enceladus will always be my answer. The fact that liquid water can exist so far outside the Goldilocks zone is incredible, and makes me wonder about what other surprises we will be able to find in our solar system in the future.

This summer I had the immense privilege of spending a week in University College London's astrophysics department. The researchers I was working with showed me how to process telescope images from blue, red, green and H-alpha light as well as luminosity, and then had me doing work on calculating distances using Cepheids. The only downside to the entire experience was that on Friday I had to leave and I hadn't managed to bribe Professor Jay Farihi, my supervisor, to let me come back on Monday. I will have to wait 18 months until I can secure my place at Cambridge University to read astrophysics.

In my search to learn all I can about astronomy I read far and wide, the New Scientist being a favourite. I also attend lectures regularly at the Royal Institution and University College London. My favourite lecture was on Antimatter in the Laboratory and the Universe and was presented by Professor Robert Flack of University College London.

I know that I want to spend my life exploring the universe and discovering what is within it. The fact that we know more about how the universe came to be than what's in the universe right now never ceases to astonish me, and makes me thirst to find out as much as I possibly can about what is out there.

The chance to spend a week at the Astronomical Observatory of the Autonomous Region of the Aosta Valley learning more about our universe would be an incredible

opportunity. I know this camp would boost my confidence and help to expand what I know about our universe.

Thank you for considering my application.