

Video 3

Inka: What would you say like the biggest challenges were, that you faced during your current research or research that you've done in the past and just in general was like the most difficult thing about what you do?

Josh: Successes are few and far between [laughing]

Devyani: You have to motivate yourself every day, like actually taking time to look after your mental health is really important in actually being able to do your PhD

Mark: You know, in order to actually get to the point where we can do the exciting work like going on field trips or doing exciting experiments, we have to apply for money, we have to jump through certain paperwork hoops, you know, things that actually are quite tedious on the day-to-day. You know, it's part of the what gets us to the point of being able to do the more exciting stuff.

Inka: What would you say is the most interesting thing that you've found out from your research? You know what, what is the most, you know, the coolest thing you've found out?

Devyani: It's quite cool that space technologies are absolutely everywhere and I didn't really think about it before my PhD but we use them all the time we're using it right now to communicate because that's where telecommunications satellites so our internet comes from satellites, mobile phones come from satellites, even like the food we eat, so agriculture - that relies on Earth observation satellites, our weather predictions about whether it's going to rain today relies on satellites, everything relies on satellites, and I found that very cool because I hadn't really thought about that a lot before

Annie: One thing in this frame that's quite interesting, is this crater here which I really excitingly got to name just very recently, so that was that was a big moment for me. I named this crater the Nairne crater that's after lady Carolina Nairne who was a Scottish poet and songwriter who in her lifetime, because she was a lady, was never allowed to publish under her own name, because it wasn't thought of as being proper at that time and so it wasn't until after she died that one of her relatives published most of her work under her own name and so now to have her represented on Mercury is quite special.

Mark: Often the places I go to are quite remote because we, you know, I'm interested in cold processes. So we tend to go to the Arctic or high latitude cold environments that are quite remote and these have access challenges, you know, it's hard to get to these places. A good example is the Canadian high Arctic, which I went to in 2017 actually was the last time, and to get up there for our field deployment. We would be transported up there by these Twin Otter aircrafts, these are these small red planes that you might see in videos from things like the Antarctic as well, it's the same kind of aircraft they transport scientists, teams of scientists around the Arctic. They can land, you know, anywhere really, anywhere you have a bit of flat ground these things will land and take off. So this would fly us about 700 kilometers from our nearest point of civilisation up into that high Arctic island I went to and it's amazing, you know, you just that feeling of looking out the window of this aircraft and

seeing the glaciers and the sea ice and there's this completely wild environment out below you. And then, you know, they drop you off, you unload all your gear and the plane turns around and it takes off and flies off south and just leaves you, and your team, isolated in this incredibly remote place

Taff: So I spent 10 years working on building a machine to go to a comet and also to Mars to look for life on Mars, and that was called Beagle 2 and the comet mission was called Rosetta. So Rosetta was a great success, sadly Beagle didn't land safely and so we didn't get any data back but for the last 10 years I've been working as I say on translating the lessons we learned from building space machines into how could we then use that know-how back here on Earth.