**FURTHER TOGETHER: THE ORAU PODCAST**

**Nicky Fox, Associate Administrator, NASA Science Directorate**

00:03.30

michaelholtz

Welcome to Further Together: The ORAU Podcast. As ever, it's me your host, Michael Holtz, from the Communications and Marketing Department at ORAU, and we have a really exciting conversation today. Matthew I'm so excited. Um I love talking about Nasa anyway and we have a very special guest to give us some even more insight into all things Nasa and life at the agency and the postdoctoral fellowship program that we manage. So it should be a great conversation.

00:38.82

Matthew Underwood

Um, yeah Michael I'm really excited. You know it's always amazing. You know all the programs that we manage and all the you know places that we get to touch and deal with and you know I'm excited for this conversation and we always have interesting guests too which is a fun part of this and I'm excited to speak to another one today

00:52.69

michaelholtz

Absolutely so without further ado let me bring to the table. Dr Nicola “Nicky” Fox, who is the associate administrator for NASA Science Mission Directorate at NASA headquarters Dr. Fox welcome to Further Together. So glad to have you. Um, if you would talk about um what it means to be the associate administrator for the for the science mission director that Nasa.

01:11.23

Nicky

Thank you so much. Thanks for having me.

01:28.65

michaelholtz

It sounds like a ginormous job and I have to imagine that it is and would love to hear more about what you do.

01:37.32

Nicky

Um, yes, it is a huge job. Um I usually describe it as the best job on and off the planet um because it literally is like being the head of science for Nasa um, you know that's kind of the short title is head of science for Nasa which honestly, when I say it still kind of blows my mind I still have that even though I've been been in the job for for a year now um I still have that wow is that me wow that's me kind of moment when um, when I when I say it. But yeah, it's it's I'm in charge of um, all of the. Science missions. So basically everything that is not human. Um you know human missions um comes under the science mission directorate and so you know we have I think it's ah it's ah it's just north of 150 missions or experiments um in space right now or or in development I should be fair, Some some of them are still probably powerpoint charts. Um, and but you know we we take everything from um, like this is a newly proposed mission that's been selected and we're just starting to get going on that.

02:32.99

michaelholtz

Um, gotcha.

02:45.00

Nicky

All the way up to the voyages that have been in space for 47 years and so you know and and in the same way we've got all different kind of stages of development. Um, we also have all different sizes of missions. So we have things like you know little cubesats that are doing really critical work. Um, allowing us to. Predict track and monitor hurricanes and tornadoes and extreme weather events up to the James Webb Telescope um so you know and everything in between um and so that's that's the sort of the kind of the hardware portfolio and then of course we have a very vibrant research. Um. Ah, groups teams all through the portfolio um taking taking all that amazing data. All the observations we make with our Nasa missionss and doing the science behind them. So it's ah it's a very varied um job that I have.

03:34.71

michaelholtz

It sounds really exciting and really interesting. How did you get here? What's the trajectory for the person who becomes the associate administrator for the Science Mission director.

03:47.75

Nicky

Say you know I get asked this question a lot and I I always feel like I should have some magic answer. Um because ah yeah, you know I mean if I say I have no idea. Um because I you know it's one of those things that you don't wake up one morning and think oh you know what am I going to do today I'll be the head of science for Nasa you know and and so you kind of have this you you know I don't know I think I've just been very lucky I've always really enjoyed every job I've had and I've enjoyed kind of I mean everyone has challenges everyone has stresses everyone has things that go wrong, but um, you know I've I've always been very lucky that once I.

04:14.44

michaelholtz

Um, okay sure.

04:25.90

Nicky

Once I got into the career path I Just really loved every job I had and I would almost say everyone was the best job I've ever had you know, um, and and I really enjoyed my my postdoc and that um you know I moved quickly into sort of more like Science management. Um, and I loved being a project scientist so being in charge of the science for missions and making sure the missions could achieve the science and I find that really exciting and I loved working with the engineering teams to actually make the mission a reality.

And then I loved launching them and then you know doing the science behind them and um and I think you know I just sort of the the roles just for me kept getting better and better. Um, and so after after doing parker solar probe um, which is definitely you know the mission closest to my heart. Although I love all of my 150 plus missions equally. Ah.

Um, solar probe is really close to my heart. Um, and then I went down to Nasa headquarters to be the director of the heliophysics division and so looking after all the missions that do everything everything involving the sun and the sun's influence. Um on the on the on the universe actually work really on our solar system. Um, and. That that one really prepared me. Um because that was then you know it's a whole division. You are looking after research and missions and and also you're a supervisor and you're looking after your workforce and you're looking. You're basically looking after a community um, in my case, it was the heliophysics community.

Um, and so taking the next step to the associate administrator role was just amazing because I you know then then I've got all of the divisions and I'm looking after all of the science in all of the communities and making sure that we set them up for success. Um, and so. I Think the heliophysics division director was the one that gave me this skill set that you know it kind of gave you a taste in sort of a it was almost like being in a small pool before I dived into the ocean.

06:22.19

michaelholtz

Um, okay I love that analogy that sounds great.

06:26.81

Matthew Underwood

That's awesome. So you talk about you know all the steps you've had to get where you are have you always had an interest in stem careers. Where did that begin.

06:35.42

Nicky

I Always loved Science. Um I have to say from a young child I Loved this You know science in general just the sort of the even the scientific method of you know here's a problem here's a question find the Answer. Do an experiment get the data you you know that was just something I Always really liked I like logic. Um and it's it's bad if I say I I just wasn't really interested in in some of the other subjects. Um, and you know the writing long essays and all that kind of thing I just like oh give me some problems I'd much rather decent problems. So I just really really enjoyed science and the the idea that you can always find out. More about the world or the universe around you. Um, you know so every time you ask a question you get an answer and that answer usually you know, kicks off 10 new questions and and that's that so I I always was I just really did love science.

07:36.26

michaelholtz

Awesome and you're from as we learned in the prediscussion before we started, you're from liverpool so how does how does one go from Liverpool to you know, head of science at Nasa you know is. Nasa something that you thought about as a kid or you know was it even on your radar at that point or is that that something that sort of just came along as your career developed.

08:02.31

Nicky

Yeah, so my my parents were actually from liverpool they moved um down south um, ah, fairly close to London before I was born so I'm I'm actually from a small market town. Um in in the set in sort of southeast england um, called Hitchin which I'm very proud of.

Hitch in hertfordshire. Um, and so same same idea. But um, you know I I come from an even smaller bubble than the liverpool would be um, but I my dad was fascinated by everything Nasa um, he was absolutely fascinated by by you know the idea of space travel, of you know, walking on the moon. Um, you know I'm I always always and telling the story that when I was eight months old um Neil Armstrong landed on the moon and it was you know he took me out of my crib and propped me up in front of the Tv and gave me a running commentary and you know to this day would say.

That's why I am doing what I'm doing um and you know even though that's kind of a nice story. Um he he was just he would always talk about you know, go outside and look at the stars go outside and look at the planets and and he was oh I am terrible at being able to pick out constellations in the sky.

You know I mean if if you look at it on ah on the you know a picture and they put the the thing behind it and I'm like oh okay, yeah I can find that but I'm I'm hopeless. It's like a you know? ah I could probably never find waldo either. But I really can't see can't see the constellations in this guy.

09:25.30

Matthew Underwood

And.

09:25.64

michaelholtz

Ah, now I can. Ah.

09:30.72

michaelholtz

Um, but.

09:35.74

Nicky

Um, and he could and he would always be saying to me, you know, like like a Ryan I can remember like standing outside and basically lying that I could see Orion's belt because I was cold and I was tired and I really wanted to go back inside and he would be pointing at things and say but surely you can see it. No I can't um but hes.

09:52.18

michaelholtz

Ah, ah.

09:54.21

Nicky

He was very um, just just he would actually say can you imagine a better job than working for Nasa you know the excitement and and he worked for for general motors and so he was an engineer and he had you know the the obviously they you know they built cars. Um, and he very much appreciated the beauty of a car engine and you know the aerodynamic design and how you make them better and all that kind of thing but his his dream job would have been building rockets.

10:18.73

michaelholtz

Right.

10:27.90

michaelholtz

very interesting very cool um and I actually have to tell you I have a similar um Neil Armstrong landing on the moon story because my mom tells me that she did the same thing but she propped me up in front of I was four months old

10:39.74

Nicky

Um, and.

10:42.86

michaelholtz

Um, when the moonlighting happened you know, proppped me in front of the tv to make sure that you know I witnessed this historical event whether I understood it or not and here I am you know at almost fifty five working for a scientific organization. So maybe something stuck right.

10:43.30

Matthew Underwood

I.

10:47.91

Nicky

Um, yeah, right? um.

10:58.28

Nicky

Well yes, and I think it was for my dad it was that I wouldn't you know when people say you always remember where you were when X happened you know and that he wanted me to know where I was when this big thing happened. Yeah.

11:05.39

michaelholtz

Yeah, right.

11:14.40

michaelholtz

I Love that I love that So that's yeah, that's an instant connection I Love that it's amazing. Um, are there elements of Stem um of science in general that you find to be the most empowering.

11:24.43

Nicky

Um.

11:32.50

michaelholtz

For you or for the scientists that you work with.

11:36.53

Nicky

Um, I mean obviously I'm going to be sort of parochial and say anything that Nasa does is inspiring. Um, but I I can say it sort of glibly. But I do think it's true. Um, you know we are always doing first of a kind cutting edge. Um, missions. We're doing cutting edge science. You know the models we develop are always you know, sort of really moving moving disciplines forward. Um, and we do hard things and I think the inspiring thing for me is really an empowering is really being.

12:07.36

michaelholtz

Um, money.

12:12.10

Nicky

Part of these incredibly highper performing teams and you know I I can't give enough love to the team that built well designed thought ah of inspired you know, but the Parker solar Probe Ah mission. Um, just because they were an amazing. Group of individuals both as people as well as professionals and um, you know when you have to get together and you've got a hard problem and and you know it's It's like this is a hard problem. Everyone in a room ran a table. You know we got to solve this problem and so it it.

12:38.31

michaelholtz

Listen.

12:49.51

Nicky

Conflict is rare because you you all have this big shared goal and Nasa as an agency has shared goals which is you know to unlock the secrets of the universe. You know those little tiny things like unlocking the secrets of the universe searching for life elsewhere. Protecting life and society here on earth you know.

13:04.00

michaelholtz

Ah, you know.

13:08.98

Nicky

I Mean they're big goals and and I think it really is the everyone feels that the work they do matters and the work they do is is towards really? um, achieving these big goals and so that's something I find both personally empowering I think it's it's It's always. Great to be able to empower particularly early career and younger scientists and engineers and and you know give them their own challenges as part of these really big missions and see them grow as they you know, get more and more successes within the framework of a very um, supportive. Team.

13:50.57

michaelholtz

You talked a couple of times about the Parker solar Probe Um, talk a little bit more about you know what? what is that project to help people understand it.

14:00.89

Nicky

So part so there's the ah, a solar probe mission was first um, proposed in 59 um and it was one of the missions as um, as as Nasa was forming as a new agency a sort of high level.

14:07.57

michaelholtz

Um, okay.

14:18.38

Nicky

Panel committee was put together to provide guidance and and goals for newly forming agencies and so that was Nasa it was also the national science foundation and the department of defense you know we we discovered space was interesting. James Van Allen had launched Explorer one. And discovered that space had stuff in it. You know at the time we knew there was radiation but it was interesting and then um, you know what now now we you know we want to do these big missions. You need an agency. You can't just do it with one 1 institution. You need a big agency and a framework to do it.

14:41.65

michaelholtz

Um.

14:56.79

Nicky

And ah, they they um, recommended many missions but 1 of them was a probe to go into the sun's atmosphere into the corona and it was inspired by a paper that was written by Dr Eugene Parker then an early fairly early career scientist.

15:04.42

michaelholtz

Um, okay.

15:14.96

Nicky

Who wrote a paper where he predicted essentially that the atmosphere of the sun would get accelerated and would be propelled away from the sun so it would be continually changing. It wasn't just like a static atmosphere but it was continually changing. It would bathe all of the planets and he called it The solar wind.

15:31.12

michaelholtz

Um, okay.

15:33.90

Nicky

It was a controversial paper at the time. Um a lot of people lot a lot of people did thought he was crazy. Um and but but whether whether he was crazy whether he was right whether he was wrong. It's a really interesting problem and the only way to so really start sort of proving this problem and.

15:36.10

michaelholtz

And.

15:46.40

michaelholtz

Are.

15:52.34

Nicky

Finding out how our star works is to go close to it so it was proposed in 1958 it was launched in 2018 um and a lot of that was you have to hone technology and it's a hard place to go. It's a very unforgiving environment as you can imagine. It's hot. She said screamingly obvious it's hot.

15:57.41

michaelholtz

Wow.

16:08.57

michaelholtz

Rights.

16:10.76

Nicky

Um, there's a lot of radiation. You're really close to that radiation source and there's a lot of dust. There's like you know there's a lot of stuff around the sun and it's also a hard place to go to you don't want to fall into it. You want to orbit around it. It's actually a hard problem to get close to the Sun. Um, and so it it took. Many many iterations many proposals to to actually get the mission um to to ah a design that could be implemented um for ah, a budget that was sustainable. Um, and so it was also the first mission that Nasa named after a living individual.

16:37.84

michaelholtz

Um, god.

16:48.63

Nicky

And so um, that was a a very big deal because Eugene um came to the launch with us and so he is the only person to ever witness the launch of a mission bearing. You know that the the person's name. Um, and so there was you know it was it was just.

16:56.57

michaelholtz

Um, cool.

17:01.38

michaelholtz

His name. Wow.

17:07.32

Nicky

It was steeped in history. It was doing this amazing science. Um, you know first of a kind cutting edge visiting a place. We've never been to before um, unlocking the secrets of a star and how it works and the important thing. For for me now as the head of science is well now you know now we're starting to understand how our star works. You know we we maybe brush off the importance of our sun by calling it an average star but it is an average star which means there are many other stars like it. And to date. It's the only average star or the only you know extraordinary star that we know that sustains life on a planet. So as we look for life or signs of life or traces of life in you know, other stalar systems understanding how our star works helps us understand how other stars. Work and so you know as we look for a rocky planet in the habitable zone that has an atmosphere. You know it's really important that we understand our star so you know it's a very um, it's a very cool story around the mission and then of course being. Being able to be working with this incredible engineering team that actually built and operate it and being so tightly coupled with them. Um, it's it and it was you know the big mission I worked on I worked on it for many many years and um it's it's always going to be that one that.

18:40.13

Nicky

Yeah, it it gets you. You know whenever you talk about it. It's like that. That's if I say that's my mission. It makes it sound like I'm taking credit for it and of course it with an enormous high performing team. But you know deep down it's It's like it's part of me. Um I had a tremendous tremendous separation anxiety when the spacecraft launched.

18:41.71

michaelholtz

Rhyme.

18:49.20

michaelholtz

Um.

18:51.85

michaelholtz

Right? right.

18:59.12

Nicky

Um, because again you you, you're in the clean room and the spacecraft being built and you I mean I used to get excited just by being by the spacecraft. It's like oh my God that's solar probe. You know how cool? Um, and um I am a geek but um.

19:09.39

michaelholtz

Are.

19:16.73

Nicky

It it almost becomes it's like it becomes a team member. You know it is part of the team and so this is the the team member that's actually going on the expedition. You know it's like preparing for you know climbing Everest you put all your gear together. You do everything you get it and then then one of you goes and does the the journey.

19:17.29

Matthew Underwood

Um.

19:20.15

michaelholtz

Um, yeah.

19:34.54

michaelholtz

By.

19:36.66

Nicky

And that's kind of how it felt with that and and the feeling that never going to see that spacecraft again. It's gone. So.

19:42.60

michaelholtz

Um, yeah, yeah, yeah, that's I totally see how that how you would have that feeling for your your team member totally get totally get up.

19:51.22

Matthew Underwood

So yeah, that's an amazing story too. Just all the way back to the person and it's just a great story and overall mission that was done so you spoke a little bit earlier about you know you've loved every job that got you to where you are now. But you said of course there are some obstacles that have come along the way.

19:51.55

Nicky

Um, so.

20:10.17

Matthew Underwood

Can you share a story about you know one of those obstacles and how you overcome it.

20:12.44

Nicky

Yeah, you know I but I was I was thinking about this because I I had taken a peek at a couple of your questions and and um, you know there are there are different ways that you can attack this I mean obviously there are technical problems that um, you you get together and you pull together a team and so.

20:19.32

michaelholtz

Um.

20:30.29

Nicky

You know for going back to Parka solar pro We had literally right before we were about to ship to um, down to the cape down to Cape canaveral. Um, ah the senses the thermal sensors on the spacecraft that basically tell you whether or not, you're looking at the sun which is very important for us.

20:40.72

Matthew Underwood

So.

20:50.50

Nicky

Um, where they had some anomalies and you know that was a big one where well what do we do? Do you ship to the cape and fix it. There. What if you don't fix it. Do We have a problem you know so that was ah sort of a big technical um problem where everybody got together and we. Did come up with a solution and we did implement it and it launched on time so that was good. Um, you know and then I had obviously I I I say obviously. But um I did have um in my my career an obstacle that was personal which was I definitely was crippled with imposter syndrome. Um, for quite a while. Um and it's I think it's something I talk about a lot now because I want people to know most people have it and and at the time when you're dealing with it. You think you're the only person that has it and so you don't speak up and you don't ask questions and you don't. And and it can be. You know it. It really can be a terrible thing when you just are terrified to ask a question because you think everyone is going to think you're stupid where actually I've now found later. Everyone is really relieved when you asked the question because everybody wanted to ask that Question. You know so it's it's It's not about it's. So that was something I had to learn to deal with um and and and actually being in a group that is really supportive and collaborative as opposed to a group that is highly competitive.

22:19.36

Nicky

Um, is is ah is some way that I think you can really deal with your impotor syndrome because you feel that you're in a group where you can almost say okay I'm going to ask this really dumb question and I probably should know the answer. But um, you know why is the sun important or whatever your question is you know.

22:32.38

michaelholtz

Are.

22:35.87

Nicky

And um, and and you're going to be in ah in a group where people go. Oh yeah, let me tell you 30 reasons why the sun is important. Glad you asked the question whereas if you're in a competitive environment. No one is going to help you um and so it's it's it's about getting yourself in a supportive inclusive. Environment where you feel that your um contribution is valued is a way of of kind of dealing with the imposter syndrome. Um, and then the the final one I would I would it it mean because it really is the biggest obstacle I've I've had to deal with with my my husband died. Very suddenly. Um, when my children were very young ah like thirteen months and three and a half and so single mother dealing with massive grief dealing with 2 wonderful children. But also at that age there you know they need needed a lot and trying to work.

23:15.47

michaelholtz

Um.

23:32.00

Nicky

And do everything else So that's sort of you know the feeling that I have I have no work-life balance because I feel like I'm I'm paddling just furiously in every area of of of my life and.

23:43.13

michaelholtz

Um, must none.

23:47.50

Nicky

That one the way I dealt with that and it took a long time to stop kind of beating myself up Over. You're not working hard enough and you're not spending enough time with your kids and you don't have energy to see your friends over the weekend and kind of dealing with that was actually just to take a step back and it was It was funny I was talking to a group of of early career women. Um, and somebody asked me how do you deal with worklife balance because you know you're so successful and this that and the other and I I literally said I suck at Worklife balance and um, and and when we talked about it I realized well hey if if I feel like I'm giving 80% at work.

24:10.84

michaelholtz

Brian.

24:23.90

Nicky

And I feel like I'm giving 80% to my kids and I feel like I'm I'm giving you know 40% to my friends you add that up I'm like I'm at 200% so I'm not failing I'm actually killing it you know and I think that you you have to give yourself that.

24:29.87

michaelholtz

Are.

24:36.81

Matthew Underwood

Um, right.

24:41.58

Nicky

You can't compare yourself to to other people and you think well this person's working all the time and they're doing whatever else and I need to be working hard enough. You don't you mean you don't know what again, you don't know what challenges they're they're facing in their life and you shouldn't keep you shouldn't compare yourself to other people. You should just really focus on.

24:42.67

michaelholtz

My.

24:59.79

Nicky

I'm doing the but you know as long as you feel you're doing the best you you can and you are giving you know everything that you want to give that you're really successful.

25:08.14

michaelholtz

I Love that answer and I love that that idea of work life balance is is really what you need it and see it to be so rather than comparing yourself to others and sort of boxing yourself in to you know this is.

25:16.99

Matthew Underwood

So.

25:25.30

Nicky

Um, and then.

25:27.70

michaelholtz

Who I have to be um Dr Fox did you I mean this is obvious you're a woman in science. Um obstacles related to to gender issues at all at any point.

25:41.27

Nicky

Um, um, my undergrad. Um I Definitely definitely had um, not not a lot but it was a and part of it was in my own head I think but you know I came from a small um, private Allg girl school.

25:44.51

michaelholtz

About.

25:48.98

michaelholtz

Okay.

26:01.26

Nicky

Where not a lot of people. Not a lot of the girls did physics and chemistry and maths. Um and then I went to imperial college which was I think 84% male. Um, and I go from you know a physics class that is 6 people to a physics. Class that is 240 people and you know so you go from having almost individual attention to being you know a sort of ah a head in a sea of other heads. Um, and that was it tough. So um.

26:32.43

michaelholtz

Right? and 239 of them are men right? Ah sure.

26:40.40

Nicky

It's it's it That was a tough adjustments. Um I did have a tutor who would say things like can one of you clever lads tell me the answer and you know you have that kind of well I Guess that's not me then um, and.

26:59.80

Nicky

That was that was though so that was but they're isolated um and I I didn't really I didn't I've never had anything other than that um, and and sometimes it's it's personality. Um, and I've always been very lucky to have really great mentors and and people that were very supportive.

27:02.69

michaelholtz

Um, me.

27:05.73

michaelholtz

Um, okay.

27:18.98

Nicky

Um, and so I definitely the undergraduate. But I think part of it was an adjustment from you 2 totally different environments. Um, and again very very competitive environment. Um, where everyone is trying to trying to outdo one another and also.

27:26.41

michaelholtz

Sure.

27:38.60

Nicky

Really in a more old what I would call an old fashioned environment of um, an institution always being almost being proud of how many people fail because their their course is so hard and so you know well thought ah of um that that it that.

27:51.99

michaelholtz

Um, who.

27:57.25

Nicky

Which obviously drives then competitiveness between people and it took a while for me to get a group where again I felt supported and comfortable and I could say okay can we all study on these these problems together because I don't I don't know the do not know how to do these and have people say sure.

28:00.49

michaelholtz

Sore.

28:10.79

michaelholtz

Um, Run and did you pass? excellent.

28:14.33

Nicky

Let me let me help you I did I did.

28:16.44

Matthew Underwood

Yeah, you know I Love how you talk about those challenges though and the really when the keys getting through that was those mentors that you had what role has you know mentors in your science career. How has that impacted you.

28:33.58

Nicky

Um I can't say enough wonderful things about people that have mentored ah me and and even if even informally or just um, making sure that you're successful or making sure that you're Supported. Um and I've had so many fantastic. People um throughout my career. Um, not so many of them have been women just because you know there were less women when I was coming in as ah, an early career scientist. But um I I cannot say enough how men can be great mentors and role models for women. And I you know I think sometimes we get hung up on Well there aren't any female role models there. There aren't and you know there weren't any females that that were really in a position to support that really doesn't matter a mentor is a mentor and it it. It doesn't matter what their background Race Ethnicity. You know. Anything it just doesn't Matter. It's it's all about whether or not they want to make you you successful and I so I had some incredible ah mentors and different very different Styles. You know So I I had one who was really like supportive of my whole self. Um, and ah, you know he used to jokingly refer to me as his work daughter. Um, and in fact, I'm still in touch with his his daughter now and she she will still call me her work sister. Um, and because he was just so so supportive throughout throughout everything and then I had another ah mentor who was.

29:45.46

michaelholtz

Um, me.

30:04.83

Nicky

Much more of the tough. Love you know? what do you mean?? you can't do it. Of course you can get in there and do it if I if I didn't think you could do it would I have asked you to do it. You know that that kind of um mentorship which can is very powerful when you have the 2 You know I mean you don't want someone who's always going to go Well if you're not comfortable doing it. You don't have to do it. You know you want someone who's going to go for God's sake, stop moaning and get in there and do it um and and so and but literally he wouldn't have his he said I wouldn't have asked you to do it if I didn't think you could do it? Um, and and so you know I've I've had just.

30:22.53

michaelholtz

Um, right.

30:36.84

Nicky

very very supportive um very caring people I mean um once where I went into ah a meeting and it may be a little bit of the imposter syndrome. But you know there was ah a question, a technical question that came up and they wanted the scientist view on it and I I made the absolute worst decision. I could have done which was I guessed at the answer which I I mean and again you learn your lessons. Never do that. But it was basic. It was a yes or yes or no question and and I I gave the wrong answer. So you know it was a fifty fifty shot I gave the wrong answer.

30:59.90

michaelholtz

Ah.

31:09.63

michaelholtz

Um, but.

31:10.23

Nicky

And I came back and I was representing my boss and I came back um to talk to him and I told him what I'd done and of course he went. Oh no, oh no, no, no oh no, oh no and I thought oh great. That's it I'm going to be fired or I'm going to be at least taken off the project or he'll never let me do this again.

31:20.18

michaelholtz

Um, and.

31:25.10

michaelholtz

Right.

31:27.33

Nicky

And instead of that he actually wrote and and he I didn't know who was going to do this but he wrote an email where he said um I'm so sorry in it. Ah I niki was that I we we chat you know nikki came back from the meeting and she said you know this is where it went and I realized I'd given a completely the wrong information. Um, you know I i. Did this and yeah and essentially took the blame for it and said you know I've I've um, I've talked to her and she's so she'll she'll come back next week with all the right information. Um, and so sorry for any inconvenience caused essentially and I remember going to his office and I said why did you do that? Thank you? But why? Why did you do that.

31:48.12

michaelholtz

Um, wow.

32:04.80

michaelholtz

Um.

32:05.14

Nicky

And and he said well they already respect me it doesn't it doesn't matter I need them to respect you and he said if I had done anything else. You would never have been able to walk back into that room again and and and it's that kind of.

32:11.37

michaelholtz

Are right.

32:19.70

michaelholtz

Um, Wow. Absolutely.

32:22.81

Nicky

Of I mean how amazing to do that? Um, and it taught me a lot about protecting your team protecting people that we know, um, but I mean that was a that That was one that was a pivotal moment for me that somebody would be that selfless. Um, and.

32:35.93

michaelholtz

Short.

32:42.50

Nicky

Just say well this is about you not about me was an incredible thing so you know again very very supportive. Um, very ah throat throw down for their people kind of um environment.

32:45.25

michaelholtz

Um.

32:52.10

michaelholtz

Right? How does that translate into how you mentor on your team. Do you have those same feelings for your team in terms of doing whatever it takes to protect them.

33:09.59

Nicky

I I I do um and I've have tried to make sure I don't sound like I've got this huge ego. But um I I I do I try and do things like if you know if somebody's got good news then they should they should share it if someone needs to break bad news then I should do it? um.

33:16.24

michaelholtz

Um, yeah.

33:24.40

michaelholtz

Daughter.

33:27.21

Nicky

Kind of kind of thing. Um, so yeah I can I can be the one who gives the bad news and then my team will come in and provide a solution. Um, and and that can often be ah ah you know I don't want them to have to be the bad guy all the time kind of thing. But um, that's that's something I do I do try and be.

33:40.27

michaelholtz

Store store.

33:47.13

Nicky

Supportive and make sure that they're in an environment where they feel um valued so um, you know, making sure that you actually acknowledge if somebody's done a good job. Um, because ah people always acknowledge if you've done a bad one. Um, do you do you make sure you're acknowledging um a good a good result.

34:00.80

michaelholtz

Um.

34:03.16

michaelholtz

Right.

34:05.33

Nicky

Um, and if if you have if you are having something that's going wrong? Um, making sure that again the team feels that you are there to support them and if necessary you're there to be the one who stands up and says Okay, this is an issue.

34:19.17

michaelholtz

Gotcha um, wanted to turn a little bit and talk about the um Nasa postdoctoral fellowship program if I could um how important is this program to Nasa.

34:26.16

Matthew Underwood

So.

34:31.91

Nicky

I actually think it's it's kind of a jewel um in in Nasa's portfolio um and and a lot of it is just the experience that you get um, it's kind of rare you you you come in as a postdoc and you really are treated as a full Nasa person. Um, you know you you you're working on site with incredible teams. Um, and it you you know you have an opportunity to to do really groundbreaking first of a kind stuff. Um I mean obviously for me personally it was. Super important because they accept overseas students. Um, and so you actually do have an opportunity that would otherwise be absolutely impossible I think to you? Um I didn't even know it existed I was you know at ah at a meeting in Alaska talking excitedly about my work.

35:09.92

michaelholtz

Right.

35:27.37

Nicky

As ah as a you know, still as a graduate student and um, a so scientist from from Nasa's god ad space flight center came up and essentially said would you be interested in applying for a postdoc with me and I had no idea I didn't know I could do that you know.

35:40.16

michaelholtz

Right.

35:44.50

Nicky

Um, and so that that was an amazing opportunity because it brought number one. It brought me to the us which I would never have thought of being able to work in the Us. It brought me to Nasa which was um, sort of this almost mythical magical place that my dad had built up in my head since I was tiny. Um, and it it allowed me to just get into mission teams which turned out to be my passion. Um, but I would never have had an opportunity to work within that kind of really super exciting environment. So um I think that it that it's just an amazing. Program. Um, and you know all the little all the things they do on the side. It builds a community. You know you you work with other um npp that there's there's also that supportive framework that there you know you're not just a postdoc working in ah in a in an institution anywhere.

36:34.19

michaelholtz

He.

36:40.92

Nicky

You know you are part of a larger collective and you are very supported. You know there's the that you you get supported for me, you get supported with the the visa to come over. You know I mean I Honestly I'd never booked a flight before on my own. Um, you know I mean the things that that you you take for granted but um, all the things that there was that sort of.

36:56.16

michaelholtz

Store.

37:00.84

Nicky

There was that support network. So all I really had to do was was focus on being successful as a postdoc rather than dealing with a lot of the the stuff around it. So I you know there was there was just that that framework that that sets you up to be successful.

37:16.26

michaelholtz

Um, amazing. Um.

37:16.85

Matthew Underwood

That's awesome. You know you talk about you know the fellows do come from all around the world. You know what is is ah what is it about Nasa that really draws them in.

37:27.39

Nicky

What is it about Nasa I mean it's it. It's inspiring. It's it's it's you say the word Nasa anywhere in the world and everybody knows what it is um and you know you can sort of be crass and say well. You know the Nasa logo is you know I think it's the most um recognized brand in in the world. Um, but everybody knows Nasa and if you hear um you know our administrator Bill Nelson talking about going. All over the world and people are just mad for Nasa you know they want to know what you're doing they want to ask you questions everybody seems to have a question about something to do with Nasa and um and and so it it is. It is a real poll because it's as soon as you say I work for Nasa. It's very few people go oh yeah.

38:16.20

Matthew Underwood

Right.

38:17.96

michaelholtz

But whatever. Ah.

38:19.30

Nicky

There's always more questions that come out you know and if you um I mean even on the coming back from was flying from Amsterdam to London um, a number of years ago and I just had a Nasa pin on my jacket because I'd come from meetings and I've got my Nas pin on and my god I was all actually on a British Airways flight and I get on and the flight attendant. Said so it's actually somewhat jokingly oh you know you you, you? you know you work for Nasa or you are we going to the moon kind of thing and I and it was not long after we've sort of kicked off the Artemis program and so I said actually I do work for Nasa yes, and you know we're we're working on a um.

38:46.73

michaelholtz

Yeah.

38:56.67

Nicky

Plan to to send people back to the moon and she was like are you kidding and I I said no well they announced on the plane you know, um that that this nat Nasa person and people came up and talked to me. It was only a short flight but people came up and asked me so you went for Nasa what do you do? and and everyone was really interested and.

39:08.59

michaelholtz

Um, ah right.

39:15.70

Nicky

That's from literally wearing a pin on my jacket. Um, and you know mean ah that I think when the flight attendant announced it I think she said something like um so you know today's on today's flight will be flying to the moon courtesy of the person that works for na in row you know 17 c or whatever it was and it was you know it was. It was great and it so.

39:33.27

michaelholtz

Um, awesome.

39:35.70

Nicky

It is something that everybody knows um, it's and it's more than just an institution I mean it's it's it's an inspiration. So I think it's it's it does draw people in.

39:47.32

michaelholtz

Absolutely and I know um I've had the opportunity to talk to a number of fellows over the last couple of years and literally from around the world and I know that the. Selection process is a bit arduous but they come into it really proposing their own research project right? I mean they work with a Nasa mentor to propose some research project that they want to work on What do you say to. Scientists who are thinking about um the Nasa mpp or may not even be aware of it but maybe should be what do you say to them about applying.

40:30.48

Nicky

Um, it sets you up for what you're going to have to do almost for the rest of your life if you if this if this is the career you want because most science particularly if it's if you you're coming in as a scientist which is that that you know most most and npp come in as a scientist. You're going to spend a lot of time writing grant proposals or working on mission proposals and if you are lucky enough to have a Nasa mentor that that is working with you on developing your research. Um, it's again, it's it's a sort of it's a very supportive environment to write that research proposal. Um.

40:52.60

michaelholtz

Um.

41:06.45

Nicky

And it does literate that you That's what's the but that's what you're going to do and it teaches you how to write a proposal. Um and I don't think I don't think now mine was particularly good when I look back on it I mean it was it was It was good enough.

41:20.35

michaelholtz

Um.

41:22.33

Nicky

But you know if I compare it with if I was writing a proposal today how I would write it compared to well this would be nice. Um maybe I'll do this and maybe I'll do that you know maybe you you come in with like these are the questions. This is the hypothesis. This is the you know this is how I'm going to do it? Um, but it really does it. It does set you up. It's it's more than just.

41:23.84

michaelholtz

Score.

41:40.00

Nicky

Doing your resume and sending it off it. It is actually putting thought behind what you want to do and so the the other benefit from that is when you start your postdoc, you've already done that piece. You know you you come in almost you, You're running when you come into it because you've done that.

41:53.20

michaelholtz

Um, yeah.

41:58.92

Nicky

That first piece you already know exactly what you're going to be doing so it isn't like you sit down in somebody's office and they say here's his access to the data set figure out what you you know? off you go you come in with those research questions already developed and so I think for many many reasons. The npp is just setting.

42:08.90

michaelholtz

Right? right.

42:18.61

Nicky

Setting Um, young career scientists on a path to be successful.

42:23.62

michaelholtz

Awesome. Is there anything we have not talked about that you want to make sure you cover.

42:32.30

Nicky

Um, oh golly I don't think so I think I think it was pretty really pretty full. Um, yeah yeah.

42:37.60

michaelholtz

Um, pretty thorough. So last question for you then Dr Fox what brings you joy.

42:47.45

Nicky

What brings me joy my children. My children bring me joy. Um, when you know I mean obviously the teenagers now so spend half your life with them driving you up the wall. But um, they bring me a lot of joy. Um because they they have been a constant.

42:55.76

michaelholtz

Sore.

43:03.57

Nicky

Um, and ah, you know and when when things are difficult when you have challenges you know you you come home and um that they're always there and and you know they're they're very fun kids they're they're very funny and they've got great personalities and um, you know I I actually I just really enjoy. Um, spending a lot of time with my children I I don't spend enough time with my children but I do enjoy the time I spend with them. Um, and then I are on on a Nasa front things that bring me joy ah images from the James Webb Telescope ah

43:33.26

michaelholtz

Ah.

43:35.21

Nicky

But I get those and I look at them and I'm like god yeah, that's like a piece of art. It's just so gorgeous. Um, so ah, ah Nasa art I'll call it um always brings me joy I can stare at it for for hours.

43:39.71

michaelholtz

Um, riot.

43:47.48

michaelholtz

Awesome! Well Dr Fox thank you so much for spending this time with us today I really appreciate it. It's been a pleasure to get to know you and to talk to you about all things Nasa and the Mpp program and. To learn more about who you are. So thank you so much. Awesome I'm going to hit stop and.

44:07.15

Nicky

Um, oh you're welcome. This was This is a very fun podcast. Thanks guys.

44:09.59

Matthew Underwood

Thank you.