

# New ASTRON director aims to set the tracks for the next decades

## *'How to keep ahead of the game as a small partner in huge global endeavours?'*

Jessica Dempsey spent her childhood at a remote cattle station in the Australian desert. Growing up in the bush gave her a love of the quiet life, she says. Not a bad asset for a radio astronomer, since telescopes also need vast and quiet open spaces. Despite some headwind earlier in her career as a woman in astronomy, she reached leadership positions. So here she is: a fresh and sparkling star in Dutch astronomy: Jessica Dempsey, the new director of ASTRON. Inside NWO-I asked her about her past experiences and her plans for the future.

## You came from Hawaii, a tropical island, to the North of the Netherlands. Cold shock?

'Actually, no. I've felt incredibly welcome and wanted. And the culture at ASTRON feels familiar to the one at the East Asian Observatory, where I come from. This is no coincidence, since the ideas for the telescope there partly originated at ASTRON in the seventies, and quite a few Dutch staff members are working there. So ASTRON's values are very much interwoven in the fabric of the East Asian Observatory and formed my own opinions. As for the climate, after having spent a full winter at the South Pole, I find the Dutch weather very tolerable.'

*'In the arctic winter, you're more accessible on a space station than on the South Pole.'*

## You were the first Australian woman to set foot on the South Pole and one of the very few people who spent a winter there. How did this happen and what was it like?

'I was offered the opportunity to go down to Antarctica for my honours master's thesis in astrophysics. I was barely twenty then, so very young. They needed someone to build an instrument to test the suitability of the South Pole for a submillimetre telescope. Perhaps they chose me because I grew up in the Australian bush where you have to be a practical kid. You must learn how to fix things and solve problems as they come. I think I had that as a natural instinct. It's certainly what you need, building these crazy instruments in such a crazy environment. It felt like a great opportunity, so I took it. And that is the reason I stayed in astrophysics. I was hooked. Later I did my PhD thesis on the South Pole as well, building an actual telescope, and then I stayed for 13 months. In the arctic winter, you're more accessible on a space station than on the South Pole, so that's an interesting feeling.'

## You just mentioned the typical ASTRON culture, that is similar to that at the East Asian Observatory. How would you describe it, and what will be your own role?

'Like the East Asian Observatory, ASTRON feels like a family, very supportive and closely knit. My deepest value is, that if you take care of the people, the science takes care of itself. I've met so many talented people here and there is such a deep love for the work, and for the instrumentation, and pride in the science. My job, as I see it, is to make sure that they want to turn up to work every day and to enable them to do what they need to do. Also, of course, to provide vision and focus. But I'm not here to wrench Dutch astronomy into a new path. Right now, there are some wonderful opportunities that I want to learn about and make the most of.'

## What will this focus be? What do you see as opportunities and challenges for ASTRON?

'I have never come across a community that has so diverse and deep a footprint in astronomy as the Netherlands and I intend to make sure this continues, not just in the next few years. I want to set the tracks that lead the Dutch train into the next decades. As we enter into a world of globally owned telescopes like the Square Kilometre Array (SKA), how do you keep up and ahead of the game as a small partner in such huge endeavours? That is the real challenge. I'm sure we'll find a solution, given all the talent and dedication I've seen. For the short term, I think the renewed LOFAR telescope provides tremendously exciting opportunities. It will help us to get a glimpse of the universe that we've never seen before, and it can do this faster, deeper and more fine-grained than before. The more we observe, the more likely we are able to find something unexpected. Another opportunity of a different character is to join forces with other institutes and universities, for instance in dealing with data. Everyone's data is getting to crazy amounts, so we all need storage space and processing power. And I think the groundwork for collaboration has already been perfectly laid in the Netherlands, unlike anywhere else in the world.'

*'It's about creating a respectful environment where different perspectives are welcome. Then diversity happens naturally.'*

## Creating an inclusive work environment is a goal you feel strongly about. Does that have anything to do with your own experiences as a woman in a strongly male-dominated corner of science?

'Yes, certainly. I don't want anyone else to have to experience the poor treatment and higher performance standards required of me as a woman in astronomy and that we now know all under-represented people endure. I was fortunate to have some champions in my career, who helped me go forward. Without them, I would have belonged to the 95 per cent of women that we lose before they get to leadership positions in astronomy. Now, the word that matters to me first and foremost is "inclusion". If you bring diverse candidates into your institute, but they then are isolated and do not feel welcome, they will leave and we have added to

the problem, not solved it. So for me, it's about creating a respectful environment where different perspectives are welcome. Then diversity happens naturally.'

## Your career spans the whole globe. How do you manage to keep some kind of personal life with family and friends?

'That's a very good question and I will let you know when I've figured it out. Luckily, in the Netherlands the importance of a work-life balance is well understood. That was in fact one of the incentives for me to come here. I love meeting new people, I love travelling and having half of the world at my doorstep. I love to go running and I used to be a blues and jazz singer. It would be great to find opportunities to do that again. I'm sure it's going to be fun.'

## Who is Jessica Dempsey?

Jessica Tui Dempsey (1978) studied both theatre & film science and astrophysics at the University of New South Wales in Sydney, Australia. She was a professional actress until her early twenties, but a research internship in Antarctica made her lose her heart to telescopes instead of the stage. Dempsey joined the East Asian Observatory in Hawaii as an instrument scientist in 2007 and worked her way up to head of operations and finally deputy director. On 1 May 2022, she was appointed director of the NWO Institute ASTRON, after an international recruitment procedure.

Text: Mariette Huisjes

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## Images

**Jessica Dempsey**

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