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The accidental astronomer

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I was born and brought up in Indore, Madhya Pradesh. Most middle-class Maharashtrian families prioritized education for their children, and my parents were no different. However, I was very lucky to have parents who did not distinguish between boys and girls when it came to education. Of course, education was not very expensive then. There were excellent highly subsidized municipal schools which most middle class students attended. They had quite good facilities, well-equipped, spacious laboratories, good classrooms and huge playgrounds. We had some very good teachers, and learning in general was an enjoyable experience.

My father, a medical doctor inspired me to take up physics at the college level. He was impressed by the Department of Atomic Energy that had been set up and he wanted me to join it to do research on atomic energy. Physics also interested me very much (along with mathematics), so I went for post-graduation in physics.

The only college in Indore which offered M.Sc. physics course had a good academic atmosphere. Some of the teachers were highly enthusiastic and inspired the students. There was healthy competition among us, and most of us did well at the national level entrance exams conducted by various research

institutes. I was lucky enough to get selected by Bhabha Atomic Research Centre (BARC), Tata Institute of Fundamental Research (TIFR) and Indian Institute of Technology (IIT) Kanpur. In spite of my early ambition to join the atomic energy establishment, I did not join BARC as it seemed too restrictive, TIFR did not have hostel facilities for girl students, so I ended up joining IIT Kanpur. I shifted to TIFR in a few months' time after satisfactory arrangements were made for accommodation.

My choosing astronomy was somewhat accidental. Astronomy was not very popular then, and I was almost unaware of the subject until I joined TIFR. A variety of factors combined to make my Ph.D. a stressful, lengthy process, but I persisted and finally finished in about seven years time. I should mention one thing here. At no time during my entire student career was I ever discouraged from taking up physics or from pursuing a research career, because of my gender. This is in stark contrast to what a budding British woman astronomer told me in the 1980s. She and her fellow girl students were actually discouraged by their teachers from choosing physics or maths, as these subjects were considered beyond woman's capabilities. I must say, we in India are much less prejudiced in this respect. An American graduate student, aspiring to become an astronomer, confided in the 1990s, that in the US, doing physics and maths was considered unwomanly, and girls who took up these subjects found it hard to have boyfriends!

By the time I finished my Ph.D., I was married and followed my husband to Bhubaneswar, where he was a scientist in the Institute of Physics. Thereafter, my struggles started. I had no prospects of getting a job in Bhubaneswar or its vicinity, as astronomy was done at very few places in India then. I did not seriously consider the option of staying as far away as Hyderabad or Mumbai.

Prof. Deo of the Department of Physics at Utkal University who had a keen interest in astronomy encouraged me to frequent the department. To have some sort of affiliation, I actually registered again as a research scholar. This paid dividends when Judith Perry, an astronomer from the Max Planck Institute, visited the department to give some lectures. My interaction with her during her short of few days ended up in my getting a

postdoctoral fellowship at Munich. By the time all the paperwork was completed, I had a three-month-old son. On my request, my mother-in-law immediately agreed to accompany me to Munich with my son. At Munich I really enjoyed doing astronomy, and I am tremendously grateful to Prof. Deo and to Perry for their help when it was crucial for my survival as a physicist.

After returning from Munich, I joined Utkal University again, this time as a pool officer. Eventually I got a lecturership in the same department and am now a professor there. Continuing research in astronomy in Utkal University was not easy. There were no books or journals, and there was nobody to talk to (I was, and still am, the only astronomer in the entire state of Orissa!). I was about to switch fields, when I had to accompany my husband to Chicago for a year and got a chance to work with Don York of the University of Chicago. I have been collaborating with York ever since, for the past 20 years.

The establishment of Inter-University Centre for Astronomy and Astrophysics (IUCAA) in 1988 was a great boon for me. I started visiting IUCAA regularly. The excellent facilities there and the encouragement that I received from IUCAA members boosted my research career. I was also fortunate in getting an excellent student, and together we did some good work. With the internet becoming available, it has now become much easier to pursue astronomy even in a remote place like Orissa.

Finally, I should mention the support and encouragement that I have received from my husband all along. He strongly believes in man-woman equality and has always helped me with housework and in bringing up our children. It is only due to his encouragement that I have continued my research. I have been extremely lucky.

With the modern facilities like big telescopes, satellite-based observatories and huge computational power along with advanced image-processing software, astronomy has become a very interesting subject. A lot of important discoveries are being made and often make newspaper headlines. It is amazing how with only a passive study of the light coming from the distant heavenly objects at our disposal, we have learnt so much about the universe. Hats off to the human spirit.!