

Starman an interview with Rakesh Sharma

Just over 27 years ago, on April 5, 1984, the Soyuz T-11 spaceflight was launched out of the Russian Baikonur Cosmodrome, the world's first working spaceport in Kazakhstan. This was the sixth expedition by cosmonauts to the Soviet space station Salyut 7. On board the rocket were three passengers, two of whom were Russians: Commander Yuri Malyshev and Flight Engineer Gennady Strekalov. The third cosmonaut was a young Indian Air Force Squadron Leader named Rakesh Sharma who, with this launch, became the first Indian to travel into space. Mr Sharma, now a retired Wing Commander and an Ashok Chakra awardee, spoke to BRAINWAVE about his fantastic voyage.

How did you get picked to visit the Salyut 7?

This was in 1982, at a time when ISRO wasn't interested in manned space flights, because they were too busy working on launching satellites. So the assignment was handed to the Indian Air Force by (Prime Minister) Indira Gandhi. The Air Force, in turn, shortlisted 30 to 40 guys for the programme, including me, based on our fitness levels. Stringent medical tests were conducted to determine our physical fitness and psychological profiles. Then we were asked to volunteer. All of us did. Eventually, after more tests, I was picked.

What did the Soyuz T-11 launch feel like?

At the start of the launch, we were seated facing the sky at the height of a 15-storey building. Our capsule was encased in a protective metal shroud that reduced the drag when we lifted off, so we couldn't see out the windows. It was completely dark, and we could only see our electronic monitors. And then there were various noises and a deep rumbling came from below us when the launch sequence was initiated. At lift off, we were pressed hard against our seats because of the force with which we climbed. Finally, when we were in the upper atmosphere, the

The launch of the Soyuz T-11



Research Cosmonaut
Rakesh Sharma



metal shroud that covered us fell off. By then, we were surrounded by space, so everything was still dark, but now we could look out of the windows.

So what was that like, seeing space for the first time?

The biggest difference was that the stars were no longer little twinkling points of light. That's how you see them through the haze of the Earth's atmosphere. In space, they are a lot clearer.

And then there are the physiological changes that are caused by the lack of gravity. Many people experience space sickness, which is a lot like sea sickness. The blood collects in your head, and you experience nausea and a poor sense of balance. Thankfully, I was in good shape, so I didn't go through any of this.

You were at the space station for, what, a week?

Eight days.

Wow. How did you keep yourself occupied during all that time?

There was a lot to do. We conducted various experiments. We carried out remote sensing, like multi-spectral photography with special cameras that capture many different wavelengths of light. With them, we could figure out the density of forests, minerals, metals and other resources on Earth, each of which appears as a different colour in multi-spectral images. Then there was a lot of observation work, medical tests, exercises, interviews with the media and so on.

Speaking of exercising, we hear that you are the first human to do yoga in zero gravity.

That's right. One of the objectives of the mission was to try out yoga as a means of combating the effects of zero gravity on the human body. I tried three or four exercises on a regular basis. There was, let me see, the



The Salyut-7 space station

Ustrasana (the camel pose), the Sithilikarana Vyayama (a set of loosening exercises), some Pranayama (breathing exercises) and one other exercise that I don't recall right now.

How about your down time? What did you do for fun, when you weren't working?

There was hardly any spare time, so we were never really bored. I had carried a large collection of music on board – classical, jazz, Hindustani, and instrumental music – so I listened to that when I did get a little time to myself.

Can you describe your re-entry for us?

Well, this time there was no shroud, so we could look out the window. The re-entry was a fiery one. The entire capsule was enveloped in flames. And there were strong g-forces acting on us, as Earth's gravity pulled us in. We all blacked out briefly as we entered Earth. Then, at around 30,000 feet, a parachute opened up, slowing our descent.



The crew goof off in zero gravity

By then, there were helicopters from the spaceport that had spotted us and were flying along with us. We landed at a place called Arkylik in Kazakhstan.

Who came to meet you when you landed?

First there was a group of doctors, along with a lot of press. After this, we were sent to quarantine for a week, during which we were put through various tests to check if we were okay.

Now I'd like to change the subject a little, Mr. Sharma. Do you believe in aliens?

Yes, I do, but I prefer not to call them aliens. The word 'alien' carries an unwelcome connotation of fear and misunderstanding. I prefer to call it a kind of extra-terrestrial intelligence. And yes, there's bound to be intelligent life out in the cosmos. We live in a huge universe, with mind boggling possibilities, and it would be silly of us to presume that we were the only form of intelligent life.

What is the future of space exploration? And why is it important?

A lot is going to happen in the future. We've achieved so much in the past fifty years, and we will achieve a lot more very soon. There are many benefits to space exploration. Planet Earth, we now know, is critically ill. It will be unable to support us for all time. So we need a fall-back option. We need to first start trawling resource-rich places in our solar system to make our life sustainable. We need to find other sources of energy, minerals, etc. The next step is to start colonizing other planets, which will, and should, happen within the next fifty years. The next big trip to the moon will have to colonize it, to set up a launch facility there.

What about the future of Indian space exploration?

You see, space travel is fantastically expensive, both resource and money-wise, so it would be unwise of each country to think of doing all of this on its own. So there's a case for sharing and collaboration. There should ideally be a consortium of countries contributing to humankind's collective space effort.

Sort of like the Federation in *Star Trek*.

That's right. Here's the thing to remember. There was a time, back in the days of Columbus, when much of Earth was unexplored, and there was a lot of excitement in travelling and finding new places. It's the same thing again, now, with space. This is why young people should think of working in this area and take it up as a profession. Why remain comfortable travelling on Earth, which has already been mostly discovered, when there's so much that is still to be explored in Space? ●

Interview by Vinayak Varma