
Main: Space
Shuttle launch.

StarMAN

Mamoru Mohri: Asia's first Space Shuttle astronaut





“In space, there are no borders.”



“In space, there are no borders.” These were the spontaneous words of Japanese astronaut Mamoru Mohri when put on the spot by reporters following his virgin space flight aboard US Space Shuttle *Endeavour* when it returned to Earth after more than a week in space in the autumn of 1992. *Endeavour's* flight, the 50th of NASA's Space Shuttle programme, marked the first joint mission with Japan, and Mohri's off-the-cuff remark of the irrelevance, as he perceived it, of national identities aboard a spacecraft made headlines in Japan and the US. Mamoru “Mark” Mohri had just made history as the first Japanese to fly aboard a NASA spacecraft, fulfilling a childhood ambition to go into space.

Dissolve to April 1961. Russian Yuri Gagarin had just become the first man in space, and the footage of his epic journey was broadcast around the world, including the small town of Yoichi on the island of Hokkaido, Japan. Fourteen-year-old Mamoru Mohri was spellbound by the images he was seeing on the television set.

“Gagarin said, ‘The Earth is blue... it is amazing.’ I saw it on the TV news, but at that time, of course, television was black and white, no colour,” recalls Mohri. “So I wanted to see the real thing for myself. From that moment, I wanted to be an astronaut.”

At the time, Japan was still a rather poor country and not involved in space exploration. It was not until 1985 that Japan became a vested participant in the

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Mamoru Mohri



space age when JAXA, the country's space agency, signed on for the International Space Station programme, a joint project with the space agencies of the US, Russia, Canada and Europe, to launch a

habitable artificial satellite in Earth's orbit. Mohri, then aged 35, was an associate professor at Hokkaido University, teaching and doing research in materials science. JAXA announced it was recruiting astronauts and Mohri says he “simply applied”. He was one of more than 500 applicants.

“It was very competitive, so I didn't imagine I would be selected,” recalls Mohri. “The selection process took

Opposite page:
Dr. Mohri in
1992.



PHẨM TUÂN
First Vietnamese in space



JÜGDERDEMIĐIIN GÜRRAGCHAA
First Mongolian in space



TAYLOR GUN-JIN WANG (AMERICAN)
First ethnic Chinese in space



TOYOHIRO “SPACE JOURNALIST” AKIYAMA
First Japanese in space



EUGENE TRINH
Vietnam





Stocktrek/Corbis



“Gagarin said, ‘The Earth is blue... it is amazing.’ From that moment, I wanted to be an astronaut.”

Mamoru Mohri



Right: Yuri Gagarin.
Opposite page: Space Shuttle with cargo bay doors open.

almost two years and there were four stages, and every time I didn't believe I would be selected. Then, at the final stage, seven remained, and we were sent to NASA in Houston for final interviews. At that time, I was the most senior of the seven. So only at that time did I feel there might be a possibility I could be selected.”

This year marks the 20th anniversary of Mohri's debut space flight. He was not the first Japanese in space – that honour was held by Toyohiro Akiyama, a journalist sponsored by a Japanese television network, who flew on a Soviet spacecraft and spent more than

a week on the Mir space station in 1990 – but he was the first trained astronaut from Japan to go into space. Mohri recalls his feelings regarding that historic flight.

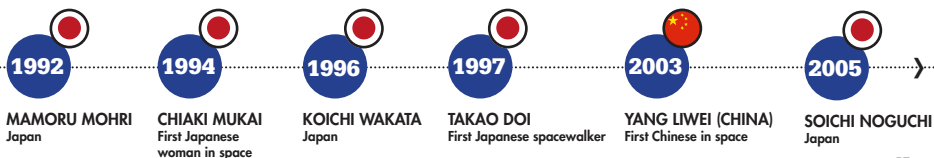
“There were several feelings I had. The first, just like an Olympic athlete, my shoulders were very heavy because I had been carrying the national flag all the time. Many people in the world watched me, so I felt my responsibility, and particularly the first mission was to conduct experiments proposed by Japanese scientists that they had spent a long time preparing and that our government had invested huge amounts of money in. So if I missed pushing even one of the buttons on the experiment tools, it might cause a lot of damage for Japan.”

Mohri conducted 43 experiments, including one involving two koi to study the effects of weightlessness on a fish's gravity-sensing organ, which is very similar to the same organ in humans. He also held a “Space Classroom” for children, which became a nationwide event when it was televised across Japan. The mission was an unqualified success and Mohri became a poster boy for Japanese-American relations, at a time when most Americans knew post-war Japan only through multinational conglomerates like Sony.

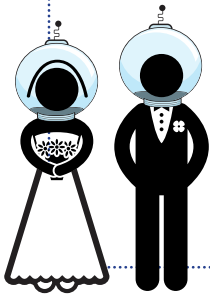
“I think the first thing I enjoyed as the first Japanese astronaut on board a space shuttle was to show Japanese and US astronauts working together. Not just Japanese companies, but also Japanese people; our face was visible to the general public.”

And what was going into space like?

“Although we had a lot of training, assuming emergency situations, and we had a lot of experiences from colleague astronauts, when I went up in space and what I saw, what I experienced, what I felt,



HISTORY IN THE MAKING



Endeavour's 1992 space flight was historic for two other reasons: Mae Jemison became the first African-American woman to fly in space, and Mark Lee and Jan Davis became the first married couple to do so.

was so different from the briefings other colleagues gave me. For example, if I explain what microgravity, weightlessness, is like, it's very hard to explain orally in language. But once you experience the environment of weightlessness, even for a couple of minutes, you can understand everything. Because every sense of your body feels what weightlessness is like."

On a personal level, Mohri says the bond formed with his fellow astronauts was unique.

"We had a very clear mission, targeting clear schedules and all engineers and NASA personnel were supporting that mission to make it a success. Once you are assigned a mission, you work together all the time in the same room and almost every weekend have a get-together, family parties. Such an intimate relationship with the individuals and also their families made us kind of one big family."

Mohri's second space flight, also on *Endeavour*, was in 2000. The mission was to generate the most complete terrain map of the Earth's surface ever published (covering 99 percent of the Earth's surface as opposed to the 80 percent of earlier versions). The

mission made possible 3D mapping that is popularly used by everyday consumers today.

Mohri described how this second space flight compared with the first: "On my debut flight, I experienced everything for the first time, so I was very anxious as to what would happen with my body next. For example, the headaches one gets as part of space sickness. But the second time I knew everything that would happen next, so I felt very relaxed and was able to concentrate on my job. I was very pleased our mission was successful and we contributed a lot to the world."

Did he contemplate a third mission?

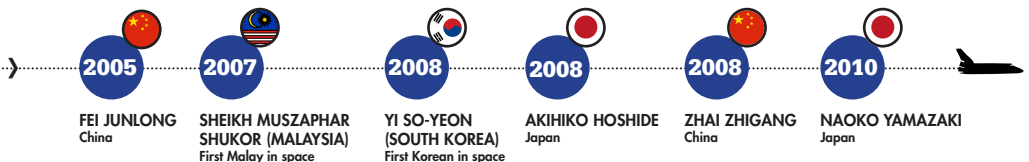
"I was 52-years-old when I completed my second space flight. I thought at that time that there were another five people in the Japanese astronaut corps who hadn't yet experienced space. So rather than go up, I thought I would like them to have the experience of going into space. Going into space is very special; my feeling and their feeling might be very different. So I wanted as many Japanese astronauts as possible to have that experience for the sake of science."

And what is his advice to a young person who, perhaps like him as a young teenager, dreams of going into space?

"Being an astronaut is not a job you target," he says. "Before you apply to become an astronaut you need to be a specialist in some specific science and technology field. So the first thing I suggest to young people is to pursue his or her own field. You can't be selected to be an astronaut without first showing how you excel in your chosen field and how you can contribute to space flight. So if you are a specialist in a specific field, then eventually you might have a chance to go up in space."

"But since I first flew 20 years ago, space exploration

Opposite page:
Endeavour's
flight crew.





has changed. Nowadays, not just astronauts, but ordinary people are travelling into space. And although we lost a Space Shuttle [the *Challenger* disaster of 1986], and the programme is now discontinued, we are developing alternative rockets, which can carry ordinary people into space and to the International Space Station for the experience. So who knows?"

These days, Dr. Mohri continues to inspire the scientists of the future. He is the current president of the Asia Pacific Network of Science & Technology Centres (ASPAC), a member of the Science Council of Japan, a professor at the Tokyo Institute of Technology, and an advisor to the Council for Science and Technology. He continues to write and is the author of more than 20 books and over 100 scientific papers. Following his historic space flight in 1992,

he was honoured with a Special Award from the Prime Minister of Japan, one of several awards for the spaceman in the years that followed. Reflecting on that first space flight, Mohri acknowledges the changes it made to him personally.

"When I came back right after I landed, I didn't feel I had changed, but other people told me I had. They said I had become more assertive, more assured, more confident. But later on, three or four years since I flew that first mission, I recognised myself that I had changed since that flight. I was concerned less with individual things and more with global things."

On Earth, as in space, there were no borders for the spaceman. **TR**

Dr. Mohri was in Singapore for the 2012 ASPAC Conference and Trade Show held at the Science Centre Singapore in April. Thanks to GolinHarris for facilitating this interview.



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