

OUT DL: deny laughing DMTRF: dominant minds think in parallel gutters DWTDRK: but what the heck do I know C&G: chuckle & grin CID: crying in disgrace CUL: see you later **YOU DON'T KNOW WHAT YOUR KIDS ARE SAYING ONLINE.** CYO: see you online DBA: doing business as usual DL: dead link DLTBBB: don't let the bed bugs bite DIKU: do I know you? EMFBI: excuse me for butting in F2F: face to face FC: fingers crossed FISH: first in, still here FMTYEWTK: far more than you ever wanted to know FOMCI: falling off my chair laughing ETROMH: from the bottom of my heart FIID:



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Space Exploration

Great Hero Yang By James R. Hansen [1](#) [2](#) [3](#) { [4](#) } [5](#) [Font Size](#) [Email articles](#) [Print](#)

With two Shenzhou flights accomplished and more to follow, it seems likely that other Chinese youth of Ningkong's generation will do exactly that—and perhaps someday reach the moon and Mars. Judging from the public reaction to Yang's flight, the Chinese people are excited by their prospects in space—and by the man who led the way.

INSIDE SHENZHOU CENTRAL

by Leroy Chiao

It appeared to be just another fortified complex in the suburbs of Beijing, except that the white stone walls were immaculately clean. The chauffeur pulled our car to a stop at the gate, where two young soldiers stood at ramrod attention, wearing the green uniform of the People's Liberation Army. I was about to become the first American allowed inside China's astronaut training center, and the first U.S. astronaut to meet Yang Liwei, their Yuri Gagarin.

Because of my Chinese heritage, I had more than the usual interest in China's space program. As teenagers, my parents had both fled from China to Taiwan after World War II, in front of Mao's advancing communist army. During their university studies in Taiwan, my parents met and married. My older sister was born there.

I also hold the distinction of being the first astronaut of Chinese descent to walk in space and to command a space mission, two of the highlights of my 15 years with NASA. So when, through a web of contacts, I met Shangguan Chen, the director of the Astronaut Research and Training Center of China, last year, I jumped at his offer to visit the center.

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Flying in to the Beijing airport last September, I noted that the air was extraordinarily clear. In all my previous visits to China, the sky had been dark with smog, the sign of a country running at full steam to industrialize. I took this as a good omen. Clearing customs, I walked through automatic glass doors and immediately found myself facing a huge Starbucks. I had to smile at how far China has come since my first visit in 1988.

As promised, a car arrived at eight sharp the next morning to take me to the center. The campus is quite new—it was completed only in 1998 — and seemed to me a newer, more modern version of Russia's Star City, where I've trained on several occasions. The center is self-contained, with living quarters for about 1,000 employees, including all dozen or so Chinese astronauts, as well as buildings for training, research, and even manufacturing. One surprise was that the street signs were printed in English as well as in Mandarin. Clearly, the leadership anticipates cooperating with the West.

At the training building, Chen and his deputies, along with Yang and Fei Junlong (the commander of China's second, two-man space mission), greeted me warmly. I was flattered to hear that the entire Chinese astronaut corps was out on survival training, while the three of them had returned early to meet with me. I noted with amusement that Yang, Fei, and I were all dressed in dark suits and maroon ties. Do all astronauts of Chinese heritage think and dress alike?

We were ushered into a meeting room, where we had a chance to sit and converse in Mandarin. Yang thanked me for the congratulatory note and photo I had sent three years earlier after his Shenzhou flight. He and Fei seemed as thrilled as I was at our meeting, and complimented me on my own accomplishments in space, including three shuttle missions and a stay on the International Space Station.

My tour of the center began at the training simulator for the Shenzhou spacecraft. The simulator looks brand-new, and large backlit photographs from China's first two missions and survival training line the wall. I was allowed to look inside the simulator, although Chen declined to let me photograph the interior. The Shenzhou strikes me as a new and modernized version of the Russian Soyuz spacecraft, which carried me to the International Space Station in 2004. The Shenzhou is about 25 percent larger than the Soyuz and has a glass cockpit. Life support equipment is mounted around the periphery, and the launch/entry couches for the astronauts look remarkably similar to the Kazbek seats in the Soyuz. During my visit the simulator was configured for a crew of two (Fei's mission), but my understanding is that the next flight (which has slipped from this year to late 2008) will have a crew of three, and will include China's first spacewalk.

We then proceeded to a mockup of a space station that resembles a Soviet-era Salyut-class station. The Chinese had just finished a 62-day simulation inside the facility to evaluate closed-loop life support systems. It's no secret that China intends to build and operate a modern space station. In fact, Russian sources have told me that the docking mechanism of the Shenzhou was purchased from Russia. If true, this means that the Shenzhou could dock with the International Space Station.



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After the morning tour, it was off to a private dining room, where a large round table was spread with a banquet setting. Over a delicious lunch of delicacies, including thousand-year-old eggs, jellyfish, and pig ears, we had the chance to talk in depth. Yang and Fei are both keen to return to space, although Yang spoke with less certainty on the subject than Fei. I suspect that since Yang is a national hero, the Chinese equivalent of Yuri Gagarin or John Glenn, the leadership may prefer to keep him safely on the ground.

As we ate we compared notes on adapting to space, on food, on photography from orbit. Yang is mostly serious and reserved; he rarely smiles. I asked him about his impressions of space. He replied that he was most impressed with the fact that from space, Earth shows no political borders. Fei, who is more animated and gregarious, talked of the home planet's beauty.

In the afternoon I gave a presentation about my space station mission, with lots of photographs from orbit. There was a gasp when I showed a detailed photo of the still-mostly-secret Chinese launch complex near Jiuquan, in the Gobi desert. Fei commented that on his mission, the camera equipment was crude, and that he and crewmate Nie Haisheng were unable to shoot such detailed photos.

For the caper to my talk, I showed them a picture of the Great Wall of China that I took from orbit with an 180-millimeter lens. I had shot the first verified astronaut photograph of the wall. (Some Apollo astronauts claimed to have seen it with the naked eye, but I challenge anyone to discern which line is the wall, which is a riverbed, and which is a road or ridgeline.)

The end of the day had come rather quickly, and it was time to say goodbye. Chen presented me with several gifts, including a beautifully detailed model of the Shenzhou spacecraft, and Fei Junlong gave me a framed mission patch from his flight. Both are wonderful gifts that I will treasure.

LEROY CHIAO



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