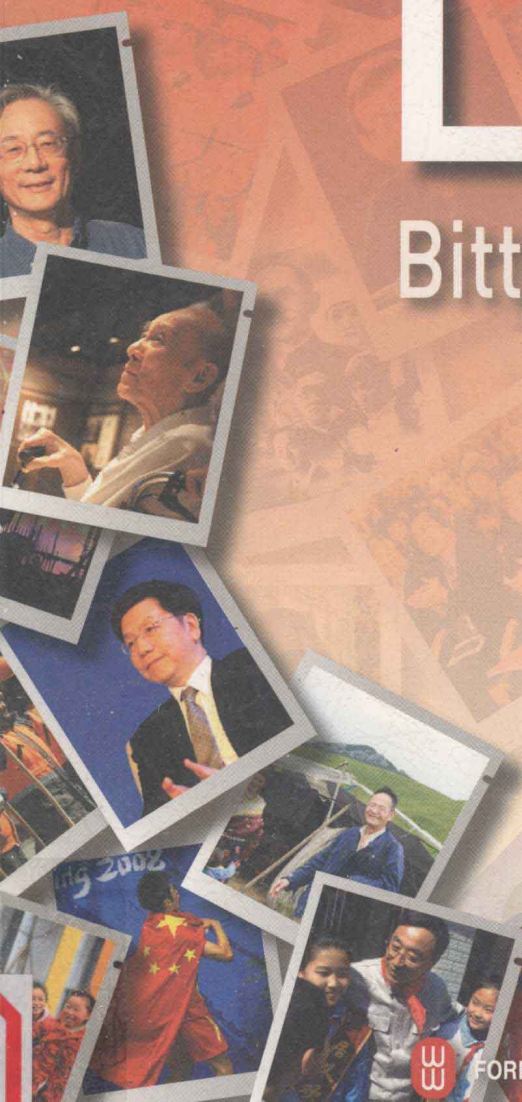
Chinese Life

Bitter-Sweet Portraits

2011
CHINESE LIFE



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Preface

The Communist Party of China celebrated its 90th birthday on July 1, 2011. Through 90 years of tremendous changes, China has transformed itself from a poor and weak country into a powerful country in the East. China's pace of development has startled the world. This is the result of continuous exploration of the Chinese people under the leadership of the Communist Party of China.

President HU Jintao once said, "Development is for the people, development depends on the people, and the fruits of development will be shared by the people." On the occasion of the 90th birthday of the Communist Party of China, in the first year of the Twelfth Five-Year Plan(2011-2015), we feel a far-reaching implication when we reflect on these words. China's development is inseparable from the Chinese people. It is the people of China who have promoted China's development. It is also the people of China who are enjoying the fruits of China's development.

From 2010 through the first half of 2011, we chose 20 Chinese people and recorded their glory and dreams, laughter and tears in this book. They cannot represent all Chinese people, but in this year, the events they have experienced, what they thought, and what they did attracted media attention.

There really is such a curator - XU Hubin. "Welcome to China Pavilion!" - This is the discourse that the curator of the China Pavilion

said most during the Shanghai Expo. During that time, he got up at 6 a.m. and left the China Pavilion after 11 p.m. every day. In front of the crowds of visitors, he always maintained a warm smile.

There really is such a pioneer of reform - YUAN Geng. He founded China's first open industrial zone - Shekou Industrial Zone of Shenzhen, known as "the Special Zone in Shenzhen Special Zone." He conducted a series of bold advanced experiments in Shekou, which have provided useful experiences and examples for China's reform and opening-up.

There really is such a miner - GUO Mingyi. He has donated 60 liters of blood over the past two decades - equal to 10 times his total blood volume. Since 1994, he has donated more than 120,000 yuan to Project Hope, his co-workers and people in disaster-stricken areas, and he has supported 180 poor students, though he himself is very poor.

There really is such a soldier - WANG Wei. On the evening of August 7, 2010, when the debris flow hit Zhouqu, Gansu Province, he rushed to the debris field and worked with his fellow soldiers for more than 20 hours searching for and rescuing survivors. They saved 23 lives with their bare hands, although tragically his pregnant wife and her parents perished in the debris flow.

There really is such a wise negotiator - LONG Yongtu. He is chief representative for the 15-year long negotiations of China's entry to the WTO. He is confident, resolute, calm and wise. He has won people's respect worldwide. In the ten years since China joined the WTO, he has been active in the international arena and has become a symbol of economic globalization with his unique perspective on economics and his personal charm.

There really is such a dedicated doctor - WANG Wanqing. He gave up the bustling city life and worked in the poor and backward Maqu prairie, Gannan Tibetan Autonomous Prefecture of Gansu Province for 43 years. He sees Tibetan villages as his hometown and takes the herdsmen as his family members. People affectionately call him "the prairie *mamba* (good doctor)."

There really is such an innovative construction manager - CHEN Maohui. The Wenchuan earthquake on May 12, 2008 almost paralyzed Wenchuan County. As a director in charge of the Guangdong aid builders for the reconstruction of Wenchuan, CHEN Maohui led a 58-strong aid team and worked there for more than two years. They worked day and night and rebuilt a new beautiful Wenchuan.

There really is such an army veteran - LIU Zhijun. In March 1950, the Eighteenth Corps which was affiliated with the Second Field Army of the Chinese People's Liberation Army pledged to march into Tibet: "We must plant the five-star red flag on 'the roof of the world,' to give light and happiness to Tibet." He enlisted in the army at that time and joined the Eighteenth Corps, dedicating his life to the cause of Tibet's peaceful liberation and to the construction and development of Tibet.

When their faces appear one by one in front of us, their happiness and sorrow, their laughter and tears become clear episodes before us - it is the life that Chinese people have experienced together. Beyond the bittersweet stories, we have witnessed China's development.

Just as ZHANG Baijia, a researcher on the history of the Communist Party of China, said, "By the 100th anniversary of the CPC, China will have reached a higher level of advancement in which a billion-plus people will benefit; by the 100th anniversary of the founding of the PRC, China will have basically realized modernization and become a prosperous, democratic, civilized and harmonious modern socialist country. China will even extend its openness on a greater scale and will make greater contributions to human civilization." This is his expectation, as well as the common vision of all Chinese people.

Contents

(The articles are listed in the Chinese Pinyin alphabetical order of interviewees' surnames.)

CEN Zheng

Dedication to Rocket Science

"It is not hard at all. It is valuable to be engaged in working on the rockets, because China needs them."

—CEN Zheng

Introduction

On the night of the 2010 National Day, the "Chang'e-2" satellite launched smoothly into the designated orbit, propelled by the rocket "Long March-3 C." It was the farthest launch in the history of China's "Long March" rockets. As the chief commander of the project "Flight to the Moon" rocket system, CEN Zheng observed the launch and applauded excitedly. Beginning in 2004, the 40-year-old CEN Zheng began to work as the chief commander of the "Long March-3 A" series of rockets. He led the development of rocket launches and witnessed brilliant achievements, one after another. Every step of progress in the field of aerospace could not have been made without this crucial "first relay" of the rocket-launching relays. From the successful launching of the "Dongfanghong-1" ("The East Is Red") satellite with the "Long March-1" rocket in 1970, the Chinese "Long March" series of rockets has experienced great leaps in technology and has become China's first world-renowned high-tech brand.

Three Years for Thirty Minutes

It is said that if we were to build a ladder to reach the sky, then the ladder from the earth to the moon would have to be 380,000 kilometers long, a distance hard for us to comprehend and a feat impossible to accomplish. Therefore, man can only construct a "sky ladder" – a launching rocket, which can send satellites, manned spacecrafts, space stations and space detectors accurately into their scheduled obits.

In the whole process of "Chang'e" exploration of the moon, rocket launching is crucial because it is directly concerned with whether satellites can be successfully launched into their orbits. Therefore, as the chief commander of the rocket launching system of "Chang'e-2" Lunar Exploration, CEN Zheng felt heavy pressure. Although he had served as the chief commander of the rocket launching system of "Chang'e-1" Lunar Exploration in 2007 and had successfully launched the "Chang'e-1" satellite, the "Chang'e-2" mission in 2010, compared to the "Chang'e-1" mission, required greater propelling force and greater precision on the thrust of satellite orbit. He led a working team of nearly 200 people, responsible for rocket development, production and launching. After lengthy research, they decided to use the "Long March-3 C" as the rocket to propel "Chang'e-2" to the moon.

Since it was first used in 2008, the "Long March-3 C" has carried out four launches with a 100% success rate. But when the launch time drew near, CEN Zheng and his colleagues were still nervous, paying attention to every detail before the launch. He said, "We are used to being careful because we do this special job, even if it seems we are a bit obsessive-compulsive. But if we do not examine every link in person, we feel uneasy; only after we examine everything in person will we be more at ease."

On October 1, 2010, the day of launching "Chang'e-2," CEN Zheng was at the command center 60 km from the launch site. He was determining the rocket's flight situation through the data shown on the electronic display screens. He did not leave the launch site and reach the command center until 90 minutes before the launch.

"The success of rocket launching is the first step of Chang'e

Links

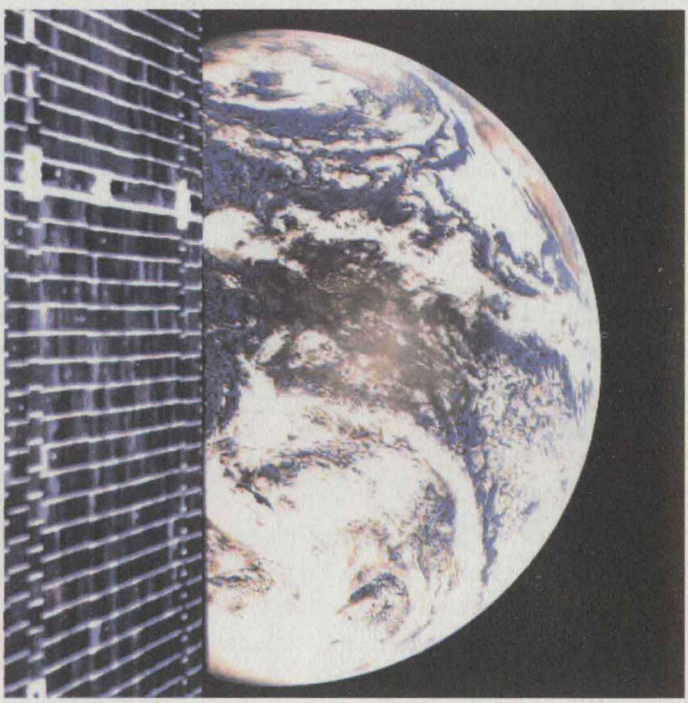
"Long March" Series of Carrier Rockets

Since China's first research institution on rocket missiles, The Fifth Research Institute of the Ministry of National Defense, was established in 1956, generation after generation of researchers have combined their concerted efforts to make the following remarkable achievements in the past 50 years.

On April 24, 1970, the "Long March-1" carrier rocket successfully launched China's first man-made earth satellite, "Dongfanghong-1," into space. Then in November 1975, the "Long March-2" rocket successfully launched China's first returning remote-sensing satellite. In April 1984, the "Long March-3" rocket successfully launched China's first experimental communications satellite. In April 1990, the "Long March-3" rocket successfully launched the commercial communication satellite, "Asia-1," manufactured by Hughes, U.S.A. With this accomplishment, China entered into the commercial launching market which had previously been monopolized by the European and American aerospace powers. In October 2003, the "Long March-2 F" bundled carrier rocket launched the "Shenzhou-5" spacecraft, carrying YANG Liwei aboard, achieving the Chinese nation's dream of manned space flight. On June 1, 2007, the "Long March-3 A" carrier rocket successfully sent the "Xinnuo-3" communication satellite into space, making it the 100th flight of the "Long March" rocket family. China's "Long March" carrier rocket series have become China's first world-renowned high-tech brand.

Especially since 2000, the successful launching rate of

China's carrier rockets ranked first among other countries in the world for the same time period. China's 150th launch will be completed within the next four years. In the Twelfth Five-Year Plan period (2011-2015), China's rocket launch frequency will reach 15 to 25 times a year. This will mark the giant leap of China's carrier rocket's production and launch from experiments, research and production, to application. Chinese aerospace has indeed entered into the industrialized era.



The ignition in launching the "Chang'e 2" satellite (←)

A photo taken in space by the "Chang'e 2" satellite (→)

going into space," CEN Zheng said. From the second when 01 Commander issued the order of ignition from the command center, to the successful separation of the satellite and the rocket 20 minutes later, it could finally be regarded as a successful rocket launch. But even when this process had been completed, they could not celebrate it immediately. "We will wait for comprehensive data from the command center first, and then we can formally announce it to the world." It took ten minutes to calculate the statistics. However, at the command center, CEN Zheng could determine the rocket launch and operation through a variety of data on the display screens.

To outsiders, the rocket launch was just a short period of 30-some minutes. For this short space of time, the team spent three full years of preparation. During that period, they had tested the "Long March-3 C" numerous times, and whenever any problems occurred, CEN Zheng solved them all in detail.

For the rocket launching, he worked in both Beijing and Xichang for three years, rarely spending time with his own family. He said, "I am not a filial son, but I have no way around this right now." By 2007 before "Chang'e-1" was launched, he had not seen his elderly parents in Hubei for 15 years. Despite missing his parents, he had no time to

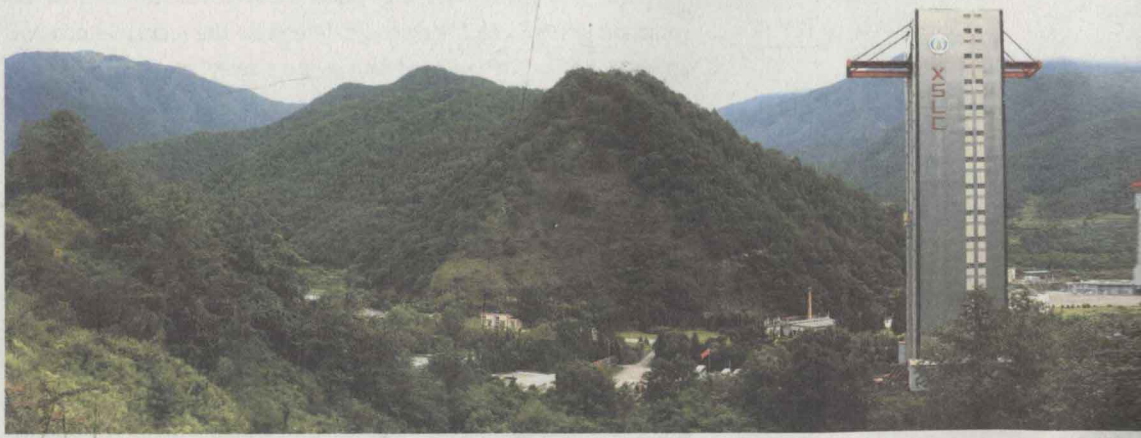
go see them because the aerospace industry was developing quickly, and the annual task of launching was particularly heavy. In 2007, after the "Chang'e-1" was successfully launched, his father fell ill, and he finally returned to his hometown to see his family members. But after that it was another three years that he was away from them.

On the night of the 2010 National Day, in front of TV sets everywhere in China, people witnessed the successful launch of "Chang'e-2" satellite, the 131st flight of the "Long March" series of rockets. It was an occasion for CEN Zheng and his colleagues to revel in their success for a little while, but shortly after that, they went back to concentrating on their busy work again.

Dedication to the Task

There have been five generations in China's aerospace research. The first and second generation of researchers were said to have "calculated missiles with the abacus." The third generation was impacted by the value, "Working on missiles does not make more money than those who sell tea eggs." This is the generation who successfully achieved the first manned flight program, sending YANG Liwei into space in 2003. CEN Zheng belongs to the fourth generation. CEN Zheng said, "Aerospace research is a systematic project, and each generation of researchers has their own advantages. The first generation was passionate; the second generation was fervent; the third generation was rigorous; the fourth generation was pragmatic;

Xichang Satellite Launch Center (↓)



and the fifth generation is innovative. Only when we are united can we ensure success, because aerospace research is a system project."

Because aerospace researchers have experienced setbacks and obstacles, they know that each success is not easy to achieve. So far, mankind has carried out lunar exploration more than 100 times, and the success rate is only about fifty percent. Experts say that most of the problems came from the rockets. In the 50-year history of China's aerospace development, there is a memory that aerospace researchers can never forget: on February 15, 1996, the "Long March-3 B" rocket had supported the satellite on the launch pad and was just about to be launched. As people watched, eagerly anticipating a huge success, the rocket hit the slopes near the launch site shortly after its take-off, and both the satellite and the rocket were destroyed, engulfed in flames. But the flames did not burn up the dreams for future successful launches. The aerospace researchers found the cause of the accident: a broken copper wire and a component that had caused an inertial standard change from the debris of the satellite and the rocket. With that knowledge, they then solved the problem for future launches and then continued their research. After CEN Zheng was appointed the chief commander, his first launch task put him through an ordeal. In September 2004, the "Long March-3 A Remote-9" rocket was carried to the target range for testing. When it was in the third day of ground testing, the platform suddenly collapsed. If it had been an actual launch, it would have destroyed both the rocket and the satellite. So CEN Zheng investigated the cause with his colleagues and discovered

it was due to aging equipment that had caused the circuit closer to be unclosed, which then resulted in an instruction error and caused the collapse of the platform. In the process of repeated debugging, testing, correcting, and reviewing, CEN Zheng and his colleagues' sense of obligation and mission increased, along with their ability to design technology in controlling the rockets.

CEN Zheng and his research team are very busy with their work. They usually work 13 or 14 hours a day, and sometimes they work around the clock. Working long hours and having an irregular schedule have caused some health problems for him. "I know that the earth still moves without anyone," he said with a smile, "but for me, whenever I leave my research office, I feel uneasy." It is difficult for ordinary people to understand how his enthusiasm for his work makes it hard for him to leave the office. When we asked him why he works so hard, he said calmly, "It is not hard at all. It is valuable to be engaged in working on the rockets, because China needs them."

A Long March for the "Long March" Series of Rockets

The implication of naming the series of carrier rockets in China's "Long March" is very clear: the cause of China's rockets will be the same as the historic Long March of the Chinese Red Army - overcoming all the difficulties and obstacles and achieving victory in the end.

When the "Long March" rocket series launched for the 100th time, Chinese Premier WEN Jiabao noted, "The 100th launch is a milestone for the development of China's aerospace industry, and it is also a new starting point for China's aerospace industry." For more than 50 years, the production and launching of rockets in China has made great strides. However, there is still a long way to go for the "Long March" rockets.

On December 18, 2010, China used the "Long March-3 A" carrier rocket to successfully launch the 7th Beidou Navigation Satellite (the Plough Navigation Satellite) into its intended aerospace transfer orbit. This is the 136th flight of the "Long March" series carrier rockets. Satellite launching has indeed entered into a high-density phase.

The launch of "Chang'e-2" is a preparation for future manned lunar exploration. Manned lunar exploration requires greater thrust of rockets to complete the task. The current thrust of "Long March-3 C" rocket is 300 tons. In the future, 3,000-ton rockets will be needed. Why do the requirements to the rocket increase so much if only one

Dialogue

Journalist: What is your assessment of your working team?

CEN Zheng: On the whole, everyone is very focused and serious about his/her work. First of all, they all have expertise; secondly, they are very confident in their results because they are good at what they do. Thirdly, they take everything into consideration so they are able to take risks in their work. So whether it's from the perspective of professional quality, team work, or physical conditions, they have all performed admirably. We are called the team of "Gold Medal Rockets."

person is manning the spacecraft? CEN Zheng answered, "It is not as simple as just carrying a man to the moon. The rocket will carry an astronaut to the moon, and he will return to the earth after he accomplishes the task. Therefore, we need another rocket to bring him back." So, the future "big rocket" will also need to carry another rocket into space. Currently, the "big rocket" is still in research and development, and the key technologies are still being studied.

CEN Zheng believes that to strengthen and consolidate China's status in aerospace power, we need to develop a new generation of carrier rockets in order to follow the development goals of "non-toxic, non-polluting, low cost, high reliability, high adaptability, and good security." Liquid hydrogen, liquid oxygen, kerosene and other non-toxic, non-polluting green rocket propellants will be a direction for upgrading rocket design. The future rocket will also reduce vibration and noise to the satellite so that the satellite can be more easily placed in space. In the future, carrier rockets will be designed so that parts of the rockets can be "recyclable, reusable, and 'one rocket to launch more satellites'" in order to improve the rocket's price performance. The engineers of China's aerospace will, as always, continue their efforts to reach new heights.

On July 27, 2011, the ninth Beidou navigation satellite was successfully launched during a lightning storm (↓)