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Space Mail from Shenzhou 3 Unmanned Mission

By Lin Da An

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Shenzhou 3 was launched atop a LM-2F rocket from the Jiuquan Satellite Launch Centre on March 25, 2002 at 10:15 p.m., and landed at Si-zi-wang-qi in Inner Mongolia on April 1, 2002 at 4:51 p.m. The spacecraft orbited at 330-410 km, with an inclination angle of 42.4°, and a orbital period of 92.1 minutes.

The Shenzhou 3 spacecraft was China's second official prototype of manned spacecraft, and its technological configuration was exactly the same of the forthcoming manned spacecraft. It was equipped with a human metabolism simulation device, anthropomorphic physiological signal equipment and a body dummy, which quantitatively simulated the main physiological activity parameters of taikonaut's respiration and blood circulation.

Launch Escape System

Compared with the flight test of Shenzhou 2, the Shenzhou 3 spacecraft had in addition a launch escape system (LES). The LES is a crew safety system allowing to quickly separate the spacecraft from its launch rocket in case of a launch abort emergency. It is typically controlled by a combination of automatic rocket failure detection, or a manual activation from the ground or by the crew commander.

In order to prevent the spacecraft from misjudging, and giving a wrong escape command when the rocket was in normal condition, this escape function had not been added during the test flight of the Shenzhou 2 spacecraft.

Many cards and covers were flown aboard the Shenzhou 3 spacecraft, together with stamp sheets.

Each flown space item is accompanied by a notary certificate (Figure 1) from the Beijing Notary Public Office and bears a steel seal of the Beijing Notary Public Office.

The Chief Designer

Among the most sought after are the flown postal cards issued by the Office of CMSE (China Manned Space Engineering) (Figure 2). They feature the portrait of Dr. Qian Xue-sen (the chief designer of China rocket). Only 9 flown cards exist (numbered from 00002 to 00010). They were autographed by Dr. Qian Xue-sen on Feb. 27 of 2002.

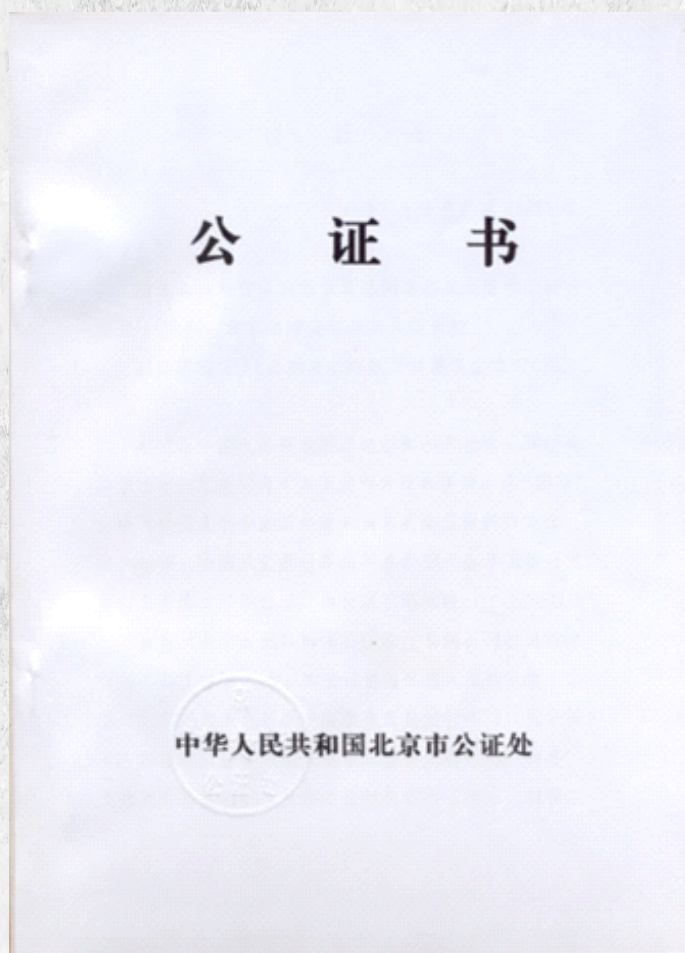


Figure 1 - CoA Certificate of the Beijing Notary Public Office



Figure 2 - Flown card issued by CMSE

The card was imprinted with the “flown-proof” postmark reading “China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2002.3.20.10, loaded in the cabin of spacecraft” (20 March 2002 10:00 AM). For the first time the postmark of “China Jiuquan Satellite Launch Centre Military Post Office, 2002 .3. 20. 10, mail letter loaded in the cabin of spacecraft (exclusively use)” was also employed. The card was then cancelled with the postmark of the date of capsule recovery opening cabin “Beijing 2002.04.04.10. Xibeiwang (delivery) 1”.



Figure 3 - Flown cover issued by CMSE

1000 flown covers (numbered from 0001 to 1000) were embarked on behalf of the Office of China Manned Space Engineering (CMSE) (Figure 3). The covers were cancelled with the red cachet of “Shenzhou 3 spacecraft space flown cover” and all had applied to them a genuine guarantee label. On the reverse side of the cover the postmark with the date of the opening of the recovery capsule cabin “Beijing 2002.04.04.10 Xibeiwang (delivery) 1” was added.



Figure 4 - Flown card issued by JSLC

Office of JSLC

Five flown covers (numbered from 01/05 to 05/05) were issued by the Office of JSLC (China Jiuquan Satellite Launch Center) (Figure 4).

On the reverse side of each cover was applied the postmark with the date of the opening of the cabin of the recovery capsule: “Beijing 2002.04.04.10. Xibeiwang (delivery) 1”.

All 102 flown covers were signed by the 14 first China’s taikonauts:

102 flown covers (numbered from 00001 to 00100, 02001 and 02002) were issued by CISME (China Institute of Space Medical Engineering) (Figure 5), All 102 flown covers were signed by the 14 first China’s taikonauts: Yang Liwei, Fei Juanlong, Nie Haisheng, Zhai Zhigang, Jing Haipeng, Liu Boming, Liu Wang, Zhang Xiaoguang, Wu Jie, Li Qinglong, Deng Qingming, Zhao Chuandong, Pan Zhanchun, Chen Quan.



Figure 5 - Flown card issued by CISME

The reverse side of the cover (Figure 5a) was cancelled with the postmark with the date of the opening of the capsule recovery cabin date: “Beijing 2002.04.04.10. Xibeiwang (delivery) 1”.

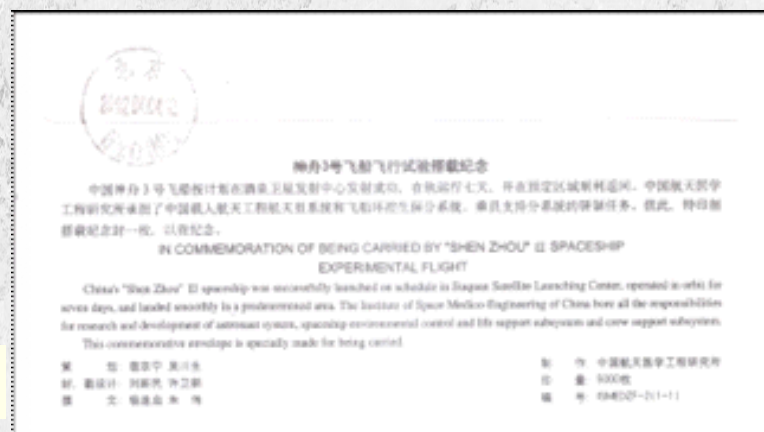


Figure 5a - Back of flown card issued by CISME



Figure 6 - Flown cover issued by BITTT



Figure 6a - Back of flown cover issued by BITTT

25 flown cover (numbered from 00001 to 00025) were issued by BITTT (Beijing Institute of Tracking and Telecommunications Technology) (Figure 6). On the reverse side of the cover (Figure 6a) was added the usual postmark of the capsule recovery opening cabin date “Beijing 2002.04.04.10. Xibeiwang (delivery) 1”.



Figure 7 - Flown BITTT signed design proof cover

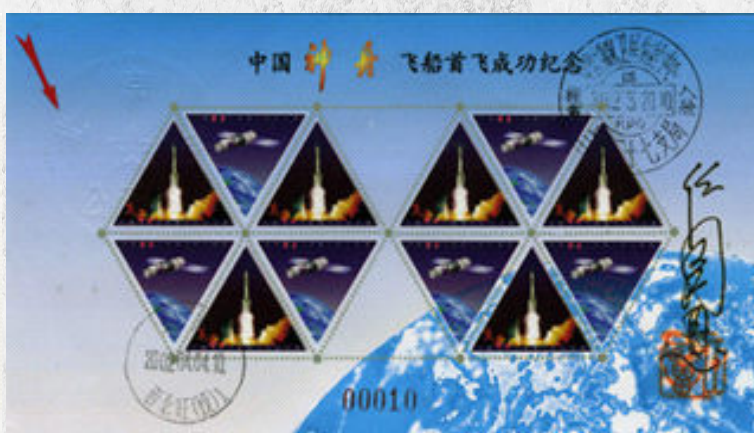


Figure 8 - Flown BITTT signed design proof stamps

On behalf of BITTT 15 design proof covers (numbered from 00000 to 00014) (Figure 7) also were embarked. All those proofs were signed by the stamp designer: Ren Guo-en.

In addition, BITTT also loaded, in the cabin of Shenzhou 3, 15 design proofs of the commemorative stamp sheets issued “in commemoration of the first successful space flight of Shenzhou spacecraft” (Figure 8). Also all those proofs were signed by the stamp designer Ren Guo-en.

99 covers were embarked onboard Shenzhou 3 on behalf of the CATL (China Academy of Launching Technology). They are numbered from DZ200203-01 to DZ200203-99 (Figure 9). On the reverse side of the cover was the usual postmark of the date of the opening of the capsule recovery cabin “Beijing 2002.04.04.10. Xibeiwang (delivery) 1”.



Figure 9 - Flown cover issued by CATL



Figure 10 - Flown cover type 1 issued by CAST (Launch)



Figure 11 - Flown cover type 2 issued by CAST (Flight)

Chinese Academy of Space Technology

150 covers were embarked in the cabin of the Shenzhou 3 spacecraft on behalf of CAST (Chinese Academy of Space Technology). They are numbered from 0203001 to 0203110, The first 20 (numbered from 0203001 to 0203020), were sets, each including 3 covers of different pattern and cachets (launch, (Figure 10) flight (Figure 11) and landing (Figure 12).

On the reverse side of the each cover was the usual postmark “Beijing 2002.04.04.10”.

Also flown onboard the Shenzhou 3 spacecraft, on behalf of the CMSE (Office of China Manned Space Engineering), were 100 sheets (numbered from 00001 to 00100) of the Special 2-2001 stamp issued to commemorate the success of Beijing's bid for the 2008 Olympic Games (Figure 13).

On the lower right corner of the back of the sheet stamp, there is a numbered identification mark with the logo of the Chinese Manned Space Engineering Office (CMSE) numbered from 001 to 100. The identification is divided into two parts. One part is pasted on the back of the sheet stamp, and the other part is kept in the notary office. (Figure 14).

CMSE also embarked 142 sheets (numbered from 02001 to 02142) of the stamp 2000-22 issued to commemorate the first successful flight of China's Shenzhou spacecraft (Figure 15).

Again, on the lower right corner of the back of the sheet stamp, there is a identification mark with the acronym CMSE in light blue letters (numbered from 001 to 142). The identification is divided into two parts. One part is pasted on the back of the sheet stamp, and the other part is kept in the notary office. (Figure 16).

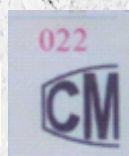


Figure 12 - Flown cover type 3 issued by CAST (landing)



Figure 13 - Flown stamp sheet commemorating Olympic Games.

Figure 14 - stamp sheet identification mark.



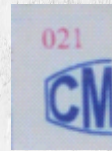
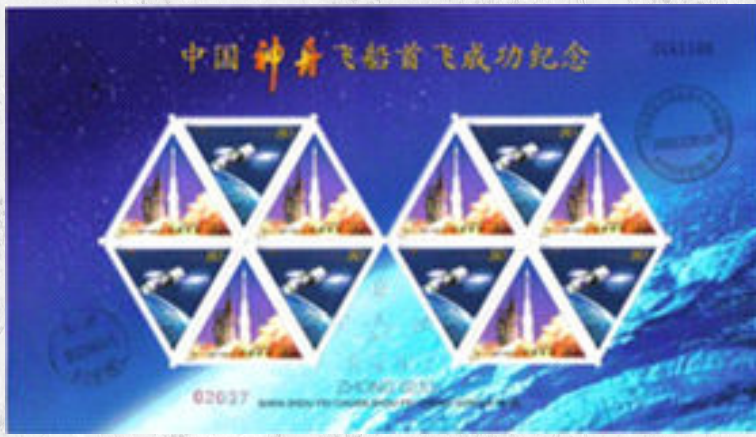


Figure 16 – stamp sheet identification mark.

Figure 15 - Flown stamp sheet commemorating Shenzhou-1

Non-flown cover

Because of the limits of loading weight, 25 covers prepared by BITTT (numbered from 00026 to 00050) could not be embarked. The front side of these non-flown covers (Figure 17) were neither sealed with the steel seal of “Beijing Public Notary Office” nor was applied the genuine guarantee label. The reverse side of the cover (Figure 17a) was not canceled with the recovery postmark.

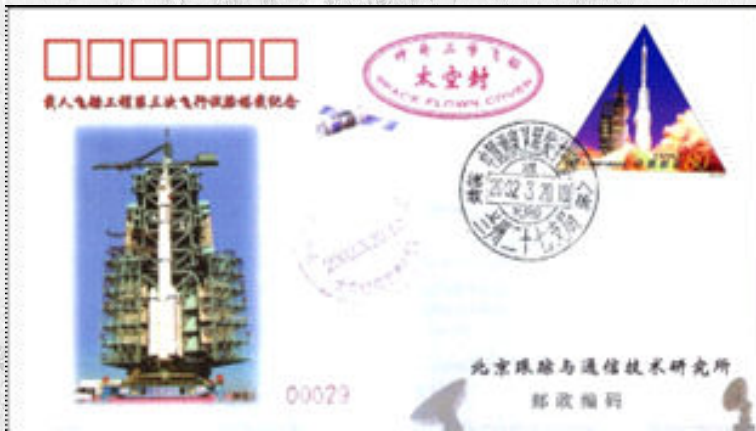


Figure 17 - Front of cover by BITTT.

Figure 17a - Back of cover by BITTT.

Tianwen Tests Its Hover

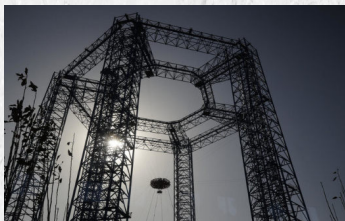
By Nik Steggall

On May 14, 2021, the Tianwen lander with the Zhurong rover successfully touched down on Mars in the Utopia Planitia region. The final part of the landing was to use retro-propulsion to make the soft landing. Long before the landing, the procedures had to be tested to ensure a successful outcome. For this the lander had to make a hovering obstacle-avoidance test on November 14, 2019.

Such was the confidence of the Chinese Space Agency, (CNSA), that they invited some foreign embassies and international organisations to witness the hovering and obstacle-avoidance test for Mars lander of China’s first Mars exploration mission at the extraterrestrial celestial landing test site.

The test was carried out at the largest comprehensive test site for the landing of extraterrestrial objects in Asia, The gravity environment of the lander on Mars was simulated, the acceleration of gravity on Mars is about one third of the Earth’s.

The test site is located in Huailai County, Hebei Province, Northwest of Beijing .



The hover test rig.



The hover test.



Hover drop test under the rig.



Tianwen hover tests cover.