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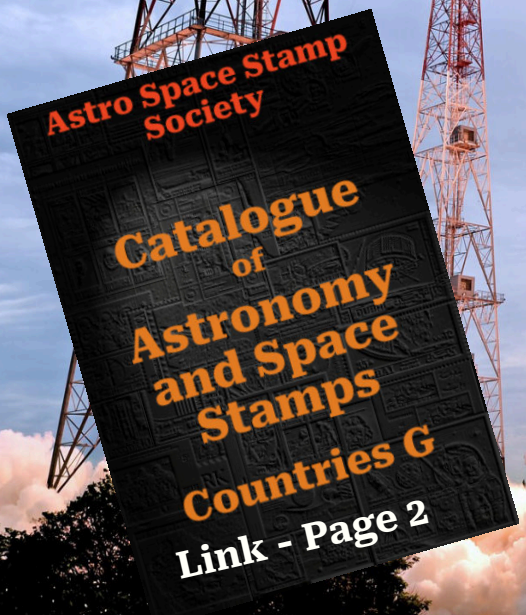

Space Mail from Chinese Shenzhou 8 Unmanned Spacecraft

by Lin Da An

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The Shenzhou 8 unmanned spacecraft is the eighth in China's Shenzhou series. It is an improved manned spacecraft, continuing to use the three-cabin structure consisting of an orbital capsule, re-entry capsule, and propellant capsule. The automatic docking mechanism is installed in the front end of the spacecraft orbital capsule, with both automatic and manual rendezvous/docking functions. The spacecraft has a size of 9 m (length) by 2.8 m (maximum cabin diameter) and a mass of 8,082 kg at takeoff. This spacecraft was equipped with microwave radar, laser radar, CCD sensor, and other rendezvous measurement equipment.

The Shenzhou 8 unmanned spacecraft was launched on 1 November 2011 at 5:58 a.m., from Jiuquan Satellite Launch Centre by an LM-2F/Y8 modified rocket, 58.3 m high, with a take-off mass of 497 tonnes and a carrying capacity of 8,130 kg. Unlike previous spacecraft launches, the rendezvous and docking mission required a "zero window" launch (with a pre-calculated exact launch time that did not allow any delay or change).

On 3 November 2011 at 1:30 a.m., two days after its launch, the Shenzhou 8 spacecraft completed its first space rendezvous and docking with Tiangong 1, a previously launched target spacecraft. The docking happened over China's Gansu and Shaanxi provinces, thus forming a small Space Station and marking a major step in China's space rendezvous and docking technology and an important milestone in the development of China's manned space programme.


公　证　书

中华人民共和国北京市方圆公证处

Fig. 1 - Notary Certificate

12 days after the docking of the Shenzhou 8 spacecraft and Tiangong 1 space Lab, the Shenzhou 8 spacecraft was undocked from Tiangong 1 on November 14 for a second space rendezvous and docking test. This marks that China has successfully made breakthroughs in a series of key technologies such as space rendezvous and docking and combined space flight.

At 18:30 on 16 November 2011, the Shenzhou 8 spacecraft successfully separated from the Tiangong 1 target, and the re-entry capsule returned to the main landing site of the spacecraft located in the A-Mu-Gu-Lang Grassland west of Sunite Right Banner in the Inner Mongolia Autonomous Region where it landed on 17 November 2011 at 19:36.

On the Shenzhou 8 unmanned spacecraft flew many items. Each of them is accompanied by a notary certificate from the Beijing Fang-Yuan Public Notary Office (Fig. 1) and is impressed with the steel seal of the Notary Office.

Fig. 2 - RSCMC flown cover

Fig. 3 - RSCMC flown cover with two additional Qian Xuesen stamps.

The RSCMC (Relay Satellite Control and Management Centre) provided a total of 28 covers (numbered from 001 to 028) with the commemorative stamp "2011-14 Scientists of Modern China" issued by the China Philatelic Corporation and put them into the Shenzhou 8 unmanned spacecraft (Fig. 2).

An additional pair of stamps with the portrait of Chinese rocket scientist Qian Xuesen was affixed only on two covers (Fig. 3).

The front side of the cover has the "flown-proof" postmark of "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 10. 02. 20. (2 Oct. 2011 8:00 p.m.), loaded in the cabin of spacecraft", and a launch day postmark: "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 11. 01. 06. (1 Nov. 2011 6:00 a.m.)".

There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1, this postmark is: "China Post 2011.11.03.02. (3 Nov. 2011 2:00 a.m.) Space Post Office 1". On the FDC was an atomic pattern first day cancellation: "Scientists of Modern China (V) 2011.5.25 China". The cover was sealed with the dry seal of "Beijing Fang-Yuan Public Notary Office".

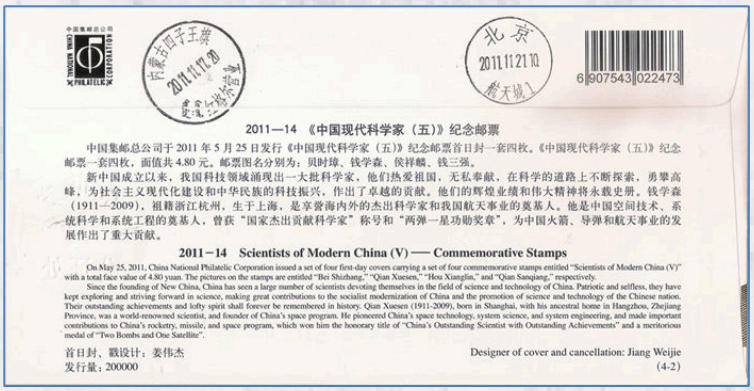


Fig. 4 - RSCMC flown cover - reverse side.

On reverse side of the cover was put the postmark with the date of opening of the cabin of the recovery capsule: "Beijing 2011. 11. 21. 10 (21 Nov. 2011 10:00 a.m.) Space City 1" and the Shenzhou 8 landing day postmark: "Si-Zi-Wang-Qi, Inner Mongolia 2011.11.17.20 (17 Nov. 2011 8:00 p.m.) Hongge'er Business" (Fig. 4).

30 cards prepared by the RSCMC (Relay Satellite Control and Management Centre) were successfully flown on Shenzhou 8 unmanned spacecraft. They are numbered from No. 001 to 030. Among them, numbers No. 001 and 002 were affixed with a pair of horizontal stamps of Chinese rocket scientist Qian Xuesen (Fig. 5).

Fig. 5 - RSCMC flown cards with Qian Xuesen stamps.

The numbers No.003 and 008 were affixed with a pair of vertical Qian Xuesen stamps (Fig. 6).

Numbers No. 004 to 007 and 009 to 015, were franked with only one Qian Xuesen stamp (Fig. 7).

The other RSCMC cards were franked with the Scott 3505 stamp issued in 2006 to commemorate the successful flight of the Chinese Shenzhou 6 spacecraft.

Four cards, from numbers No. 016 to 019, were franked with a pair of Shenzhou 6 stamps (Fig. 8). From numbers No. 020 to 030, the cards were affixed only one Shenzhou 6 stamp (Fig. 9). The

Fig. 6 - RSCMC flown cards with Qian Xuesen stamps.

Fig. 7 - RSCMC flown cards with Qian Xuesen stamp.

Fig. 8 - RSCMC flown cards with Shenzhou stamps.

Fig. 9 - RSCMC flown cards with Shenzhou stamps.

Fig. 10 - postmarks on the reverse of the RSCMC flown card.

front side of the card has the "flown-proof" postmark of "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 10. 02. 20. (2 Oct. 2011 8:00 p.m.), loaded in the cabin of the spacecraft", and a launch day postmark: "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 11. 01. 06. (1 Nov. 2011 6:00 a.m.)". There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1, this postmark is: "China Post 2011.11.03.02. (3 Nov. 2011 2:00 a.m.) Space Post Office 1". The cards are impressed with the dry seal of "Beijing Fang-Yuan Public Notary Office".

On the reverse side of the card were applied two postmarks: the cancel with the date of the opening of the recovery cabin: "Beijing 2011. 11. 21. 10 (21 Nov. 2011 10:00 a.m.) Space City 1" and the date of the landing: "Si-Zi-Wang-Qi, Inner Mongolia 2011. 11. 17. 20 (17 Nov. 2011 8:00 p.m.) Hongge'er Business" (Fig. 10).

RSCMC also succeeded in loading in the cabin of Shenzhou 8 unmanned spacecraft 150 cover featured in Fig. 11/11A (numbered from 0001 to 0150).

Fig. 11/11A - RSCMC flown cover.

The front side of the card has the "flown-proof" postmark of "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 10. 02. 20. (2 Oct. 2011 8:00 p.m.), loaded in the cabin of spacecraft", and with the launch day postmark: "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 11. 01. 06. (1 Nov. 2011 6:00 a.m.)". There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1, this postmark is: "China Post 2011. 11. 03. 02. (3 Nov. 2011 2:00 a.m.) Space Post Office 1". Also sealed with the steel seal of "Beijing Fang-Yuan Public Notary Office".

Fig. 12/13 - BITTT flown covers.

On the reverse side of the cover are the date of the opening recovery cabin "Beijing 2011. 11. 21. 10 (21 Nov. 2011 10:00 a.m.) Space City 1" and the Shenzhou 8 landing day postmark: "Si-Zi- Wang-Qi, Inner Mongolia 2011. 11. 17. 20 (17 Nov. 2011 8:00 p.m.) Hongge'er Business"

BITTT flew 20 covers, numbered from 001 to 020 (Fig. 12). The front side of the cover has the "flown-proof" postmark of JSLC Lanzhou 27th Branch m.p.o., and the launch day postmark. A postmark was also added for the first docking date of Shenzhou 8 with Tiangong 1 "China Post 2011. 11. 03. 02. (3 Nov. 2011 2:00 a.m.) Space Post Office 1". The cover is impressed with the steel seal of "Beijing Fang-Yuan Public Notary Office". On the reverse side of the cover was added the recovery postmark of the capsule opening cabin date: "Beijing 2011. 11. 21. 10 (21 Nov. 2011 10:00 a.m.) Space City 1" and the landing day: "Si-Zi-Wang-Qi, Inner Mongolia 2011.11.17.20 (17 Nov. 2011 8:00 p.m.) Hongge'er Business".

Fig. 14 - PLA's 078 Engineering Command flown cover.

Another set of 52 covers was flown on behalf of BITTT (Fig. 13). They are numbered from 0001 to 0052.

The front side of the card has the "flown-proof" postmark of Lanzhou 27th Branch post office, a JSLC launch day cancel: (1 Nov. 2011), and a China Post Space Post Office cancel with the date of the first docking of Shenzhou 8 with Tiangong 1 (Nov. 3, 2011). The cover is sealed with the steel seal of the Beijing Fang-Yuan Public Notary Office.

The date of China Post November 2 was incorrect. Maybe the staff at the post office accidentally set the wrong date on the cancelling device. This postmark with the wrong date had been in use for some time before the error was discovered and it was discontinued. However, there was no authoritative information on how many flown items used the wrong postmark. As a result, an additional postmark with the correct date was added to some flown items. The correct postmark for this date is: "China Post 2011. 11. 03. 02. Space Post Office 1".
On the reverse side of the cover were put the postmarks with the date of the opening of the cabin of the recovery capsule: "Beijing 2011. 11. 21. 10 (21 Nov. 2011 10:00 a.m,) Space City 1" and the landing day postmark Si-Zi- Wang-Qi November 11.

A total of 50 covers (numbered from 001 to 050) were flown on behalf of the 078 Engineering Command of the General Armament Department of the Chinese People's Liberation Army, which is responsible for the construction and management of the Wenchang Space Launch Site in Hainan, (Fig. 14). The front side of the card has the "flown-proof" postmark Lanzhou 27th Branch post office, 2 Oct. 2011, and a JSLC launch day postmark (November 1, 2011).

There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1 (China Post Space Post Office, 3 November 2011). The cover is sealed with the steel seal of the Beijing Fang-Yuan Public Notary Office.

Fig. 15 - CAST flown cover.

The reverse side of the cover bears the postmark with the date of the opening of the cabin of the recovery capsule and the cancellation of the landing day, Si-Zi-Wang-Qi, 17 Nov. 2011.

CAST (China Aerospace Science and Technology Corporation) succeeded in embarking 50 covers in the cabin of the Shenzhou 8 unmanned spacecraft (Fig. 15). The items are numbered from 01 to 50. The front side of the card has the Lanzhou 27th Branch's "flown-proof" postmark of the date of loading in the cabin (2 Oct. 2011), and with

the launch day postmark (1 Nov. 2011). There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1 /China Post 3 Nov. 2011) and the dry seal of Beijing Fang-Yuan Public Notary Office.

Also, this cover was incorrectly canceled with the postmark China Post on 2 Nov. 2011. Since Shenzhou 8 and Tiangong-1 docked for the first time on November 3, a new correct cancel was added.

On the reverse side, the cover has the postmark with the date of the opening of the return capsule: "Beijing 21 Nov. 2011) and with the postmark of the Shenzhou 8 landing near Si-Zi-Wang-Qi, Inner Mongolia (17 Nov. 2011).

Fig. 16 - SAST flown cover.

A total of 30 covers issued by the Shanghai Academy of Spaceflight Technology (SAST) were flown in the cabin of Shenzhou 8 (Fig. 16); they are numbered from 0001 to 0030. The front side of the cover has the "flown-proof" postmark (2 Oct. 2011), and the launch day postmark (Lanzhou 27th Branch 1 Nov. 2011)". There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1 (China Post Space Post Office 3 Nov. 2011). Also sealed with the steel seal of "Beijing Fang-Yuan Public Notary Office". However, this cover was also incorrectly dated with the wrong postmark China Post Space Post Office November 2.

On the reverse side of the cover was put the postmark of the day of the opening of the capsule cabin and the Shenzhou 8 landing.

Fig. 17/17A - Shenzhou 8 flown cover.

There are also 30 flown covers issued for Shenzhou 8. They are numbered from 01 to 30. Amongst them, the cachet of the covers numbered from 01 to 15 features the LM-2F rocket firing and launching the Shenzhou 8 spacecraft. Another picture on the covers (Fig. 17/17A) numbered from 16 to 30 shows the Shenzhou 8 spacecraft preparing to dock with Tiangong 1.

The front side of the cover has the "flown-proof" postmark of "China Jiuquan Satellite Launch Centre, M.P.O., Lanzhou 27th Branch post office, 2011. 10. 02. 20. (2 Oct. 2011 8:00 p.m.), loaded in the cabin of spacecraft", and the launch day postmark: "China Jiuquan Satellite Launch Centre, M.P.O.,

Fig. 18/18A - HAPRA flown cover.

Lanzhou 27th Branch post office, 2011. 11. 01. 06. (1 Nov. 2011 6:00 a.m.)". There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1, this postmark is: "China Post 2011. 11. 03. 02. (3 Nov. 2011 AM 2:00) Space Post Office 1". Also was sealed with the steel seal of "Beijing Fang-Yuan Public Notary Office". Also, this cover was cancelled with the wrong date (China Post, Space Post Office, 12 Nov. 2011 AM 2:00). The cover was dated November 2, which was incorrect.

The reverse side of the cover has the recovery postmark of the capsule opening cabin date: "Beijing 2011. 11. 21. 10 (21 Nov. 2011 AM 10:00) Space City 1" and the Shenzhou 8 landing day postmark: "Si-Zi- Wang-Qi, Inner Mongolia 2011. 11. 17. 20 (17 Nov. 2011 PM 8:00) Hongge'er Business".

A total of 70 covers (Fig. 18/18A) issued by the Heilongjiang Aerospace Philatelic Research Association (HAPRA) exist (numbered from 0001 to 0070). The front side of the cover was cancelled with the "flown-proof" postmark (2 Oct. 2011) and a launch day postmark (1 Nov. 2011). There is also a postmark of the first docking date of Shenzhou 8 and Tiangong 1 (3 Nov. 2011). It is also sealed with the steel seal of "Beijing Fang-Yuan Public Notary Office". Again this cover bears the cancellation on 2 Nov. 2011 which was incorrect, because, Shenzhou 8 spacecraft and Tiangong-1 space lab docked for the first time on November 3.

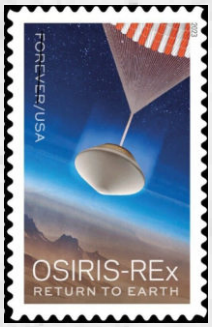
On the reverse side of the cover was added the postmark of the opening of the capsule cabin: "Beijing 21 Nov. 2011 Space City 1" and the Shenzhou 8 landing day postmark: "Si-Zi-Wang-Qi, Inner Mongolia 17 Nov. 2011).

Note by the AD-ASTRA Editor (Umberto Cavallaro)

The new China Post Space Office was opened by the China Post authority to celebrate the country achieving its first-ever docking in space between the unmanned Shenzhou 8 spacecraft and the Tiangong-1 space lab module. It consists of a new on-the-ground branch office inside the Beijing Aerospace Command and Control Center (BACCC), and one "virtual office" aboard the newly established orbital complex.

According to the China Post Group's general manager Li Guohua, in the future, the post office will be able to offer domestic and international delivery from the public to taikonauts, as well as philatelic products.

China Post Space Office - with the new designated postcode "901001" that extends into orbit – is affiliated to China Post Group, and is headed by Yang Liwei (杨利伟), the country's first taikonaut.



OSIRIS-REx Forever Stamp

The United States Postal Services, (USPS), has released a new Forever stamp to commemorate the return of the first samples collected from an asteroid for NASA. Entitled 'OSIRIS-REx Return To Earth', the stamp shows the sample capsule descending under its parachute over the Utah desert. This is the final step in NASA's seven-year mission to study and map the asteroid. The date of issue for the Forever stamp was 22 September 2023. The returning capsule landed at the Utah Test and Training Range on 24 September.

The stamp was issued in a pane of 20 Forever stamps as a presentation panel. The USPS is celebrating NASA's seven-year OSIRIS-REx mission to study and map the asteroid Bennu and return a sample of its surface to Earth. On the left-hand side of the window are four images illustrating key milestones in the OSIRIS-REx mission. The text on the reverse side describes the mission and explains each image.

OSIRIS-REx is an acronym for the mission's objectives: Origins, Spectral Interpretation, Resource Identification and Safety - Regolith Explorer.

Asteroids are time capsules that preserve the earliest history of our Solar System and may contain chemical signatures of the building blocks of life. Scientists from around the world will study the pieces of Bennu.

By Nick Steggall

Images
Above: OSIRIS-REx Forever stamp.

Right: Osiris-Rex Forever stamp presentation panel.

Left: OSIRIS-REx first day cover.