

The tomb of Emperor Sui Yangdi at Caozhuang in Yangzhou City, Jiangsu

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Abstract

In March 2012, two brick-chamber tombs (numbered as 2013YCM1 and 2013YCM2) of the Sui and Tang Dynasties were found at Caozhuang Section of Situ Village in Xihu Town, Hanjiang District, Yangzhou City, Jiangsu. From March through November of that year, a joint archaeological team conducted detection and excavation to these tombs and the surrounding area, but no traces of graveyard were found. In M1, a stone epitaph with text of “Epitaph of the late Emperor Sui Yangdi” and so on was unearthed, the legible contents of which generally match the records in the historic literature. From the two tombs, the *diexie* belt decorated with 13 sets of jade plaques and gold plates, gilt bronze *pushou*-doorknockers, jade *zhang*-scepter, bronze chime bells and chime music stones and crown with phoenix design and other high-ranking and high quality grave goods were unearthed, as well as large amounts of elaborately and true-to-life made pottery human and animal figurines. The discoveries of the stone epitaph and the high-ranking and high quality grave goods fully proved that these two brick-chamber tombs found in Caozhuang are the final graves of Emperor Yangdi and Empress Xiao of the Sui Dynasty.

Keywords: China—kings and rulers—burials; epitaphs; imperial burials—Sui and Tang Dynasties; Sui Yangdi (emperor of China, 569–618 CE)

Introduction

The tomb of Emperor Sui Yangdi is located on the top of the west peak of Shu Ridge, the Caozhuang section of Situ Village in Xihu Town, Hanjiang District, Yangzhou City, Jiangsu. The elevation of the summit of the west hill is 24.7m above sea level. To its south lies the Xifeng (West Peak) Ecological Park and it is 1.8km east of the southwestern corner of the *zicheng* (administrative city) of the Tang Yangzhou City Site (Figure 1).

In December 2012, field workers of the Yangzhou Municipal Institute of Cultural Relics and Archaeology found some ancient gray bricks on the construction site a residential neighborhood. They immediately halted the construction for cultural conservation. In February of the following year, coring test on where the gray bricks

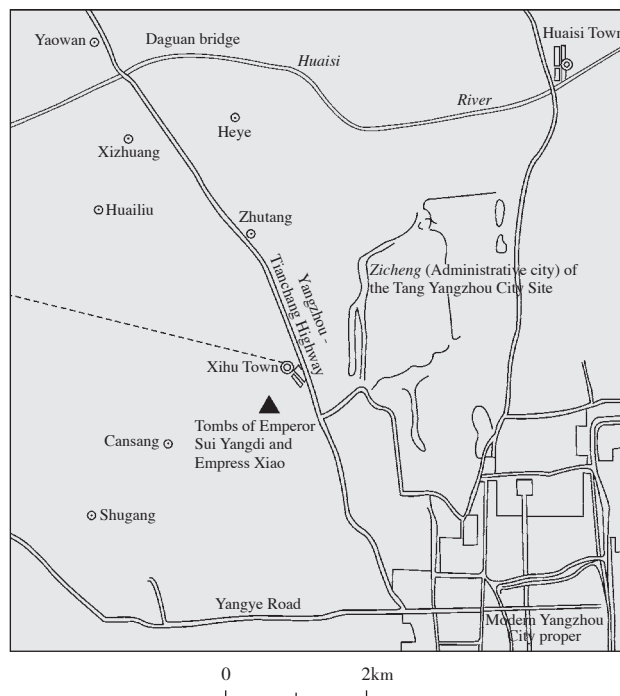


Figure 1 The location of the tombs of Emperor Sui Yangdi and Empress Xiao.

exposed indicated that they were parts of two brick-chamber tombs (numbered 2013YCM1 and 2013YCM2 respectively). Excavation of the tombs began in March. By mid April, M1 yielded a stone epitaph inscribed with title “隨 (with the 亠) 故煬帝墓誌 (Epitaph of the late Emperor Sui Yangdi).” Following the directions of the State Administration of Cultural Heritage, the Jiangsu Provincial Bureau of Cultural Relics and experts of historical archaeology, a joint archaeological team organized by the Nanjing Museum, Yangzhou Municipal Institute of Cultural Relics and Archaeology and Suzhou Municipal Institute of Archaeology was formed. With the permission of the State Administration of Cultural Heritage, the joint archaeological team conducted systematic sub-surface reconnaissance of the general area and excavated the tombs. The campaign yielded important archaeological findings.

Features of the graveyard

The archaeological team conducted intensive coring test to the scope of the neighborhood construction project that extended about 300m from east to west and 400m from north to south, an area of about 12ha. A total of 136

burials, two rammed-earth features, two ditches, one brick foundation, five wells, and 29 pits (ponds) were found. It also excavated 2000sq m of the site.

The burial mound where the tombs were found was known to the locals as “Houtou Shan (Rear Hill)”. Its terrain was higher than the surrounding area. In the 1980s, villagers built their dwellings on the mound and right above the tombs. Presently, the mound rises more than 1m above the surrounding landscape. It runs 49m from east to west and 48m from north to south. Take the stratigraphy of the north wall of the trial trench TG2 (T2827), which marks the east bound of the burial mound, as an example. Stratum 1, 0–10cm thick, is the surface layer comprising dark gray clay tempered with modern brick fragments. Stratum 2, 5–26cm deep and 0–26cm thick, is the Ming–Qing deposition. It comprises of loose, fine, brownish-gray clay tempered with large amount of charcoal and burned clay nodules. Stratum 3 of the Ming times is absent from this wall. Stratum 4, 20–95cm deep and 5–75cm thick, is a layer of Song–Yuan deposition comprises of pure, loose, bluish-yellow fine clay. Underneath stratum 4 is the deposition of the earthen mound.

The earthen mound was built on a ground lined with a layer of pure fine light gray soil 10–30cm thick that effectively leveled the surface. The earthen mound was built like a layered cake with compact rammed layers of 5–15cm that comprised of few inclusions of sherds of celadon, red pottery, gray pottery, and brick. The eastern edge of the rammed earth gently sloped down. Its upper part was overlaid with debris of the collapsed mound.

The heap earth that covered the rammed mound was

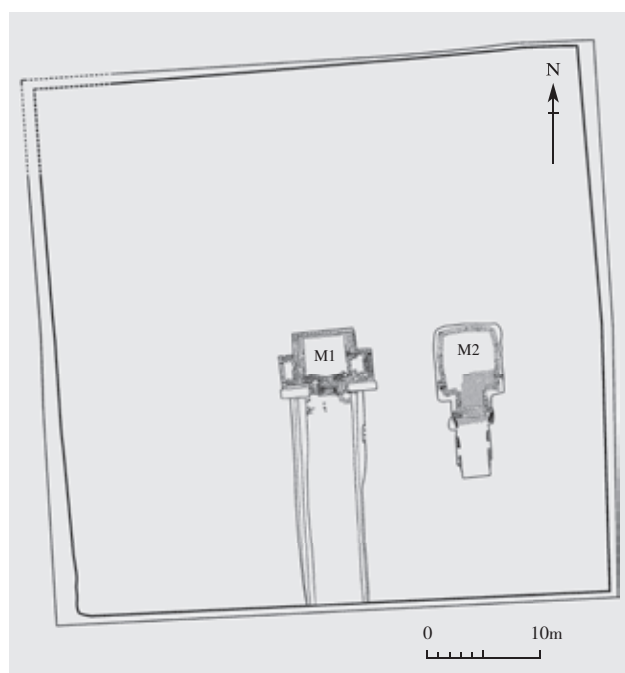


Figure 2 The general plan of the tombs of Emperor Sui Yangdi and Empress Xiaojiao.

basically destroyed (mounds in the southern country were rammed at the bottom. After the mound reached a certain height, earth was piled but no longer rammed. This layer of earth is called heap earth). Remains of heap earth could only be seen on the wall of the ramp passage and the filling of the passage of M1. Modern structures were built in the center of the earthen mound. M1 and M2 are superimposed by the modern deposition. M1 was located in the center of the mound; wherein M2 was located in the southeastern quarter of the mound (Figure 2).

The cultural deposition surrounding the earthen mound was deepest in the southern quarter, shallow in the other three quarters. It showed human activities from the Song–Yuan to the Ming–Qing eras. Activities were most intensive on the south side. The Sui–Tang occupation floor was the primary soil.

Tomb structure

1. Tomb M1 was situated in the center of the earthen mound. It comprised of five parts: a ramp passage, a corridor, the main chamber, an east side chamber, and a west side chamber (Figure 3).

The ramp passage cut into the primary soil. It measured



Figure 3 Full-view of M1 (N–S).

19.5m long. The ramp was wider on the top and narrower on the base: the top of the northern end measured 6.42m wide, the top of the southern end measured 5.9m wide and its base measured 4.3m wide. The remaining depth was 2m. It sloped gently from the south down to the north. The walls were uneven and bumpy. There was a secondary ledge on each wall of the passage near the bottom. The base and the walls of the ramp showed baking traces. A charred six-rung wood ladder was found in the center south section of the ramp. It measured 4.1m long and 1.2–1.5m wide.

The corridor ran in the center of the southern side of the main chamber. It measured 1.72m from east to west, and 0.85m from north to south. The vaulted ceiling had double crown. There was a 0.08m wide groove in between the corridor and the chamber entrance, suggesting that there was once a wooden door. The chamber entrance was sealed with bricks. Two brick sealing doors were placed in between the ramp passage and the main chamber.

The main chamber had a roughly square plan that measured 3.92m from north to south (inner dimension, same below), 3.84m from east to west, and 2.76m in remaining height. The walls were laid with gray bricks in English garden wall bond (three courses of stretcher per course of header) and English bond (one course of stretcher per course of header). The ceiling of the main chamber no longer existed. A recess was opened into the north, east and west walls, respectively. The bases of the niches were paved with bricks into basket weave

pattern. The west side chamber measured 1.84m from north to south, 1.8m from east to west and 2.58m in inner height. Its brick walls were laid with English garden wall bond and English bond. The south wall of the west side chamber was also the south wall of the main chamber. The opening of the west side chamber did not have a crown on the ceiling. It was speculated that there was once a wooden lintel beam for shoring. The internal of the side chamber had a vaulted ceiling. The structure of the east side chamber resembled that of the west side chamber.

The gray bricks used in the tomb chambers included rectangular bricks in the dimension of $34.5 \times 18 \times 6.5$ cm and beveled bricks in the dimension of $34.5 \times 18.4 \times 7.4$ cm. These kinds of bricks were also used in the walls of the Jiangdu Palace site of the Sui Dynasty, which was also located in Yangzhou.

More than 180 pieces (sets) of grave goods made of pottery, bronze, lacquer, jade, and gold were recovered from M1. The main chamber yielded more than 20 artifacts including a *diexie* belt embellished with 13 jade rings and 13 sets of belt-plaques made of jade and gold (Figure 4), gilt bronze *pushou*-doorknockers (Figure 5), bronze pots, bronze bowls, pottery jars, and a stone epitaph inscribed with the title “Epitaph of the late Emperor Sui Yangdi” (Figure 6).

The east side chamber yielded gray pottery jars, pottery lamps, and lacquer cases (only the lacquer peel survived). The west side chamber yielded more than 130 gray pottery figurines in the forms of civil official,



Figure 4 The *diexie* belt found in M1 in situ.



Figure 5 The gilt bronze *pushou*-doorknocker unearthed from M1.

warrior, horse rider, camel, dog, and bird with double human heads. Some of the figurines showed polychrome painting.

2. Tomb M2 was situated on the southeastern section of the burial mound. It comprised of five architectural components that included a ramp passage, a corridor,

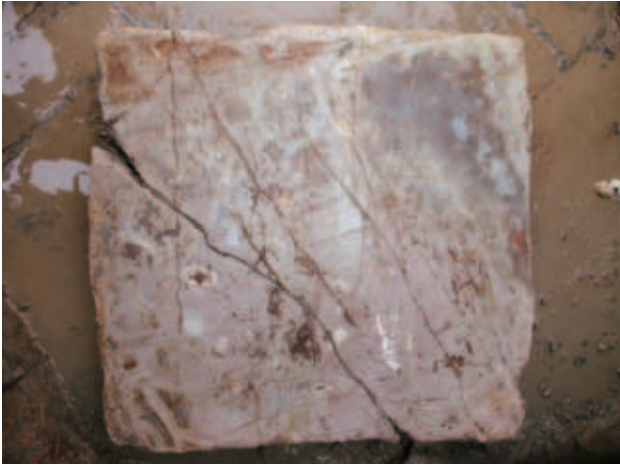


Figure 6 Emperor Sui Yangdi's stone epitaph unearthed from M1.



Figure 7 Full-view of M2 (N-S).

the main chamber, an east side chamber and a west side chamber. The tomb measured 13.6m from end to end (Figure 7).

The ramp passage, 5.25m long, sloped from the south gently down to the north. The south side at the entrance sealing wall was 2.42m wide; wherein the north side at the entrance sealing wall was 3.4m wide. The walls of the ramp alternated between brick-lined section and bare earthen section. The corridor measured 2m long and 2.05m wide. Two recesses were opened into the east and west walls for the placement of animal figurines. A looting tunnel was found in the intersection of the ramp passage and the corridor.

The main chamber was in a spindle-shaped plan. It comprised of a front chamber and a rear chamber. The rear chamber, one flight higher than the front chamber, was where the coffin placed. The main chamber measured 5.97m long and 5.9m wide. The walls were laid with gray bricks in English garden wall bond and common bond (four courses of stretcher per course of header). Recesses were opened into the north, east and west walls. The floor of the main chamber was paved with bricks in basket weave pattern. Rectangular plain bricks were used in the eastern side of the chamber. They measured $30 \times 14.8 \times 4.7$ cm and $29.5 \times 14 \times 5$ cm. A small number of bricks decorated with motifs of dragon and lotus petal were found in the silt deposition of the chamber.

Two side chambers were located on the east and west sides of the southern half of the main chamber. Both side chambers had vaulted ceilings. The side chambers measured 0.98m high, 0.72m wide and 0.68m deep. The ceiling of the west side chamber had some bricks with dragon motif. The side chamber yielded camel figurines. The structure of the east side chamber resembled that of the west side chamber. It yielded pottery lamps, pottery jars and lacquer cases.

More than 600 pieces (sets) of grave goods were recovered from M2. They were made of pottery, porcelain, bronze, lacquered wood, iron, and jade. The pottery wares included gray pottery jar, furnace, bowl, lamp, millstone, and small table. The gray pottery figurine assemblage comprised of ox (Figure 8), horse, pig, chicken, camel,



Figure 8 The pottery oxen found in M2 in situ (W-E).



Figure 9 Pottery warrior figurine unearthed from M2.



Figure 10 Pottery serpent figurine with double human heads unearthed from M2.

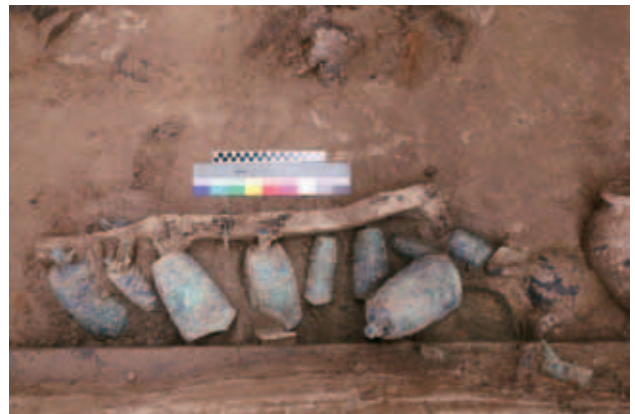


Figure 11 Bronze chime bell found in M2 (top is south).

shield-holding warrior (Figure 9), serpent with two human heads (Figure 10), and civil official. The bronze assemblage comprised of a set of 16-piece chime bells (Figure 11), a set of 20 chime stones, one elaborated headgear ornament, lamp, and pedestal plate. The ceramic assemblage comprised of one celadon *biyong* inkstone (disc-shaped inkstone with a ring of groove along the inner side of the rim) and one small three-color-glazed pottery *biyong* inkstone. The lacquer ware assemblage comprised of case and chest. The jade assemblage comprised of one white jade *zhang*-scepter.

Conclusions

1. The occupant and the date of M1.

Tomb M1 is a square brick-chamber burial with a ramp passage and a mound above the ground. To date, this is the first square-chamber tomb ever found in the Yangzhou region. The tomb chambers of the Western Jin, Eastern Jin and Southern Dynasties discovered in this region all have rectangular plans. No square-planned tomb is known. However, square-planned tombs were common in the north, particularly among the tombs of Northern Zhou, Sui and early Tang in the Xi'an area. For examples,

a 1957 excavation in Xi'an yielded a stone coffin tomb (occupant of which was Li Jinxun 李静训, died in 608 CE). Its main chamber was a 4-5m squared earthen pit (Tang 1959). The main chamber of the tomb of Yuwen Jian 宇文俭 of the Northern Zhou Dynasty measured 3.6m from north to south, 3.65m from east to west (Shaanxi Provincial 2001). The plans of the main chambers of the tombs of Li Chongrun 李重润, who was the Prince Yide 懿德 (Tang Tomb Archaeological Team 1972: 26-32), and Li Xian 李贤, who was the Prince Zhanghuai 章怀 (Tang Tomb Archaeological Team 1972: 13-25), both of the early Tang Dynasty were in square plans that measured about 5m on each side. The dimensions of the main chamber of tomb M1 presented here is comparable to that of the above high-ranking tombs, indicating that the occupant of M1 was a special individual when alive. The four large-sized gilt bronze *pushou*-doorknockers apparently are palatial architectural fittings and seemingly exceeded the scale of the tomb. The diameter of the animal mask of the *pushou* measured 26cm, which is similar to the Tang doorknockers yielded from the site of Daming Palace 大明宫 in Xi'an.

More than 100 gray pottery figurines in the forms of civil official, warrior and rider were placed in the

west side chamber in formation. The human figurines are delicate with fine details. They are the diagnostic features of pottery figurines of the Northern Zhou and Sui Dynasties.

Tomb M1 yielded a highly elaborated belt embellished with 13 jade rings and 13 pairs of belt-plaques made of jade and gold. This style of belt was popular in the territories of Northern Dynasties. Nevertheless, the one recovered from M1 was the most prestigious belt apparel of this period.

Two human teeth were yielded near the east side chamber. They were the third upper right molar and the second lower right molar. The teeth were identified to belong to a person of about 50 years old.

The stone epitaph recovered from the main chamber comprised of more than 50 legible characters. They read “隨故煬帝墓誌 惟隨大業十四年太歲.....一日帝崩於揚州江都縣.....於流珠堂其年八月.....西陵荊棘蕪.....永異蒼梧.....貞觀元(九?)年.....朔辛.....葬煬 (Epitaph of the late Emperor Sui Yangdi. In the fourteenth year of the Daye Era [618 CE] of the Sui Dynasty, the Taisui (Jupiter) the [eleventh] day [of the third month], the Emperor died in Jiangdu County, Yangzhou Prefecture.....[buried] in the Hall of Flowing Pearls. In the eighth month of the same year.....the thistles in Xiling 西陵 overgrew.....departed forever, the Cangwu 蒼梧 Mountain.....In the first day of the first (ninth?) year of the Zhenguan Era [627 or 635 CE]buried Yangdi.....)”

To summarize, the occupant of M1 was indisputably Yang Guang 杨广, Emperor Yangdi of the Sui Dynasty. It was the final burial of the emperor. Its date should not be earlier than the first year of Zhenguan 贞观. The archaeological findings were consistent with the written documents.

According to volume four of *Suishu* 隋书 (the Book of Sui), the death and reburial of Emperor Sui Yangdi played out in the following events: the third month of the second year (of Yining 义宁 Era, or the fourteenth year of Daye Era, 618 CE), a group of military, court and palace officials that included Yuwen Huaji 宇文化及, who was 右屯卫将军 (General of the right encampment guard), Sima Dekan 司马德戡 and Yuan Li 元礼, who were 武贲郎将 (Generals of the imperial guards brave as tigers), Pei Qiantong 裴虔通, who was 监门直阁 (Gate guard duty officer), Yuwen Zhiji 宇文智及, who was 将作少监 (Deputy director of the directorate for the palace buildings), and many others plotted a coup in the palace. The Emperor died in the warm quarter at the age of fifty. Empress Xiao directed the palace maids to bury the Emperor in a coffin temporarily assembled with the bed boards and mattresses. After the coup, Chen Leng 陈棱, who was 右御卫将军 (General of the right imperial guard), revered the imperial coffin to Chengxiang Hall, and buried it under the Wugong Terrace. During body preparation for the reburial, everybody was amazed by the lively look of the face and the hair of the deceased emperor. After the Great Tang pacified the Jiangnan

region, the body of Emperor Sui Yangdi was reburied in Leitang (Thunder Pond).

Chapter one, the Annals of Emperor Gaozu of *Jiu Tangshu* 旧唐书 (Old Book of the Tang) read: “on the day of *xinhai* (the second day) of the eighth month of the fifth year of Wude 武德 Era (622 CE)buried Emperor Sui Yangdi in Yangzhou.”

The volume 186 of *Zizhi tongjian* 资治通鉴 (Comprehensive mirror to aid in government) read: “Chen Leng, the prefect of Jiangdu of the Sui, searched and recovered the coffin of Emperor Sui Yangdi. Took the imperial cortege left by Yuwen Huaji, hastily assembled a formation of honor guards in imperial rank and reburied the Emperor under the Wugong Terrace to the west of Jiangdu Palace. Moreover, the graves of the deceased princes and dukes were hierarchically arranged on the sides of the emperor’s burial.”

2. Occupant and time of M2.

Tomb M2 is a spindle-shaped brick-chamber burial. Tombs in spindle-shaped plans started to appear in the Yangzhou region during the early Tang Dynasty. It became popular among the mid-sized brick-chamber tombs regionally throughout the Tang. At the same time small-sized burials were mostly rectangular earthen pit graves. The walls of the passage of the spindle-shaped tomb alternating between sections of bare earthen wall and brick-lined wall seemed to symbolize the ventilating shafts of the high-ranking tombs of the Xi’an region during the Sui and Tang era.

The multi-legged celadon inkstone yielded from M2 is diagnostic to the era of late Sui and early Tang. The number of feet slowly decreased through time. The inkstone of M2 has 19 feet. It is identified to be a product of Hongzhou 洪州 Kiln of the late Sui and early Tang.

A set of 16 bronze chime bells and a set of 20 chime stones were yielded from M1. They were palace musical instruments of the Sui-Tang era. In part two of *Yuezhishi* 乐志 (Treatise on music) of *Suishu* 隋书, it is written that “The next are the chime bell set. It is a set of small bells tuned to the temperament. They are arranged in size and suspended in two rows on a rack. Each row has eight bells making a total of 16 bells.” In volume 29 of *Jiu Tangshu*, it is written that “after the enthronement of Emperor Gaozu, imperial entertainment music followed the rules of the Sui Dynasty that it used the ‘Nine-division music’. Later, it divided the entertainment music into two parts which were standing and sitting divisions.” The chime bells and stones are the only musical artifacts of this kind of the Tang Dynasty ever recovered.

The jade *zhang*-scepter yielded from M1 was a ceremonial implement. *Shuowen jiezi* 说文解字 (Explanation and study of principles of composition of characters, by [Han] Xu Shen 许慎) glosses: “半圭为璋 (half *gui*-scepter is a *zhang*).” The *Kaogong ji* 考工记 (Artificers’ record) chapter of *Zhouli* 周礼 (Rites of Zhou) recorded: “the grand *zhang*-scepter and the middle *zhang*-scepter are both nine *cun* in length. The side *zhang*-scepter is seven *cun* in length, and the *she* 射 (beveled top) is four

cun long and one *cun* thick (大璋中璋九寸, 边璋七寸, 射四寸, 厚寸).” Its presence testifies the supreme status of the individual buried in M2.

The chamber yielded a set of highly elaborated headgear ornament that shows extremely fine craftsmanship. It comprises of a façade, gold flowers, hairpins, and wings with gilt components and jewelry inlays. It is a costume ornament for female with strong ceremonial symbolism reserved for individuals of the highest status.

Pottery figurines in the forms of pig, chicken, sheep, horse, oxen, camel, serpent with double human heads, civil official, and warrior with shield comprised an assemblage of more than 100 artifacts. The human figurines show the characteristics of the slender posture of early Tang anthropometric figurines. Serpent with double human heads, civil officials and shield-holding warriors are figurines suggesting the unusual high status of the deceased they honored.

Tomb M2 yielded a human skeleton in poor preservation. Only four teeth were recovered. They included one upper right side incisor, one upper left incisor, one upper left second molar, and one root. Physical examination indicated that the skeleton belonged to an older female over the age of 56 with a stature of about 1.5m.

According to volume 198 of *Zizhi tongjian* (Comprehensive mirror to aid in government), in the third month of the twenty-second year of the Zhenguan Era (648 CE), “on the day of *gengzi* (the 20th), Empress Xiao of the Sui Dynasty passed away. [The Emperor] decreed to reinstate her former title, conferred her the posthumous name of Min 愍, ordered officials of the third rank to direct the funeral, marched with royal guards of honor, accompanied the coffin to Jiangdu to be buried along with Emperor Sui Yangdi.

To summarize, M2 was built in early Tang for a female. It is very likely the burial of Empress Xiao, the imperial spouse of Emperor Sui Yangdi.

3. The relationship between M1 and M2.

The existing surface of the earthen mound does not show obvious line of demarcation, indicating that it was built at one time. Tomb M1 was situated in the center of the mound; wherein tomb M2 was situated in the southeastern quarter of the mound.

Tomb M1 did not show trace of an earthen pit. The rammed earth directly pressed against the exterior of the brick wall of the tomb chamber. Trace of a pit opened underneath the passage in the entrance area suggested the sequence of the construction. It involved first the excavation of a shallow pit of 0.85m into the primary soil, then the building of the tomb chambers with gray bricks, followed by the construction of the mound with rammed earth method. The ramp passage and its opening were preserved and later filled. Finally earth was piled on top of the rammed mound to finish. In contrast, tomb M2 showed the outline of a pit. It located on the southeastern quarter of the mound. All these indicate that the grave

of M2 was dug on the existing mound. Its time was later than that of M1. The archaeological evidence is consistent with the historic literature.

The identification of the burial of Emperor Sui Yangdi at Caozhuang, Yangzhou settles the perennial argument of the final interment of Emperor Sui Yangdi. The structures of M1 and M2 show distinctive difference. The offerings included a *diexie* belt with jade rings and belt-plaques, an apparel popular among the nobilities in the northern China during the eras of the Northern Dynasties to Sui-Tang. The grave goods also included items like the figurines with serpent or bird body and double human heads, a style popular in the southern China. The mixed characteristics was likely attributable to the timings of the burials, or attributable to the influence of the cultures and styles of different regions.

The excavation of the tomb of Emperor Sui Yangdi yielded an assemblage of artifacts that are diagnostic of its time and bear regional characteristics, and a tomb of unique structure. They are invaluable data for the study of practice of high-ranking burials, the evolution of funeral customs, and the cultural interaction between the North and the South. It also provides unprecedented detailed scientific data for the study of the history, politics, economy and culture of the Sui-Tang era.

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Postscript

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