Monumental Structure from Ceremonial Precinct at Taosi Walled-town in 2003

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Keywords: Taosi walled-town ceremonial precinct monumental structure IIFJT1

In 2003, with the aim of seeking the ceremonial structures of Taosi 陶寺 walled-town, the archaeological team conducted probing test (one kind of traditional Chinese "auger" in half pipe shape) in a very special precinct attached to south of the big town. The test lined out a huge structure under the ground, which was labeled as IIFJT1 (namely the Construction No.1 at the Working Region II). The structure is located 625 m east to the central point of the town, and 662 m south to it, 35°252′55″N in latitude, 111°29′55″E in longitude, about 572 m (Fig. 1) above the sea level. From the back of the southern enclosure of the town, the IIFJT1 orientates southeast. It occupies an area over 1400 sq m. We applied four testing trenches: IITG1, IITG3, IITG4, and IITG5 in order to explore an area of about 636 sq m.

I. Strata

The strata in each trench are approximately the same. Let's take the example of IITG5 to illustrate the layers.

Layer 1 is ploughing layer, soft soil in light yellow color covered the whole trench, ranging from 0.2–0.25 m in thickness.

Layer 2 belongs to contemporary and consists of two sub-layers. Layer 2A is slightly soft soil in light yellow color, 0.1–0.75 m thick, containing fragments of porcelain wares, roof tiles, and bricks. Layer 2B is soft soil in golden red color and 0.1–0.6 m thick, contains potshards, porcelain in black glaze, and roof tiles.

Layer 3 is the soft soil with sandy beige in color and 0.1–0.65 m thick, containing potshards of late Taosi culture. Underlying layer 3, there are several features such as dumps, IIH23, IIHG3, IIM23, IIM24, and some parts of destroyed interface of IIFJT1 as well.

Layer 4, belongs to the late Taosi period, is limited to the southern part of IITG5, which could be divided into two sub-layers. Layer 4A is the soft soil in yellow color with fragments of rammed-clay, 0.05–0.12 m thick, containing few potshards of late Taosi period. Layer 4B is the slightly hard soil in henna color, 0.05–0.25 m thick, containing potshards of the late Taosi period.

The structure IIFJT1 and its rim path underlay this layer. The basement trench of the IIFJT1 cuts into virgin soil.

According to the relative stratigraphic evidence, the structure IIFJT1 might have been constructed and used in the middle Taosi period (2,100–2,000 BCE) until it was damaged in the late Taosi period (2,000–1,900 BCE).

II. Features

During the recovery of IIFJT1 in test trenches, we have unearthed a dump IIH23, a ditch IIHG3, 2 burials IIM23 and IIM24, which are dated to the late Taosi period. This report introduces the features of IIFJT1 and IIHG3.

1. The monumental strcuture IIFJT1

Back of the southern enclosure Q6 of the big town, IIFJT1 is semi-round in shape and orientates to southeast. Based on what have been explored, there are three lines of arch counterfort walls which form three levels of platform. What has been recovered is the surviving foundation of the construction (Figs. 2–6).

1) Foundation of the first level of the platform

The first level of the platform is located in right east of the platform, being composed of the outer counterfort wall and rammed-clay body. It is in crescent shape with 3 m in maximum width. Remnant depth is 1.4 m. Other

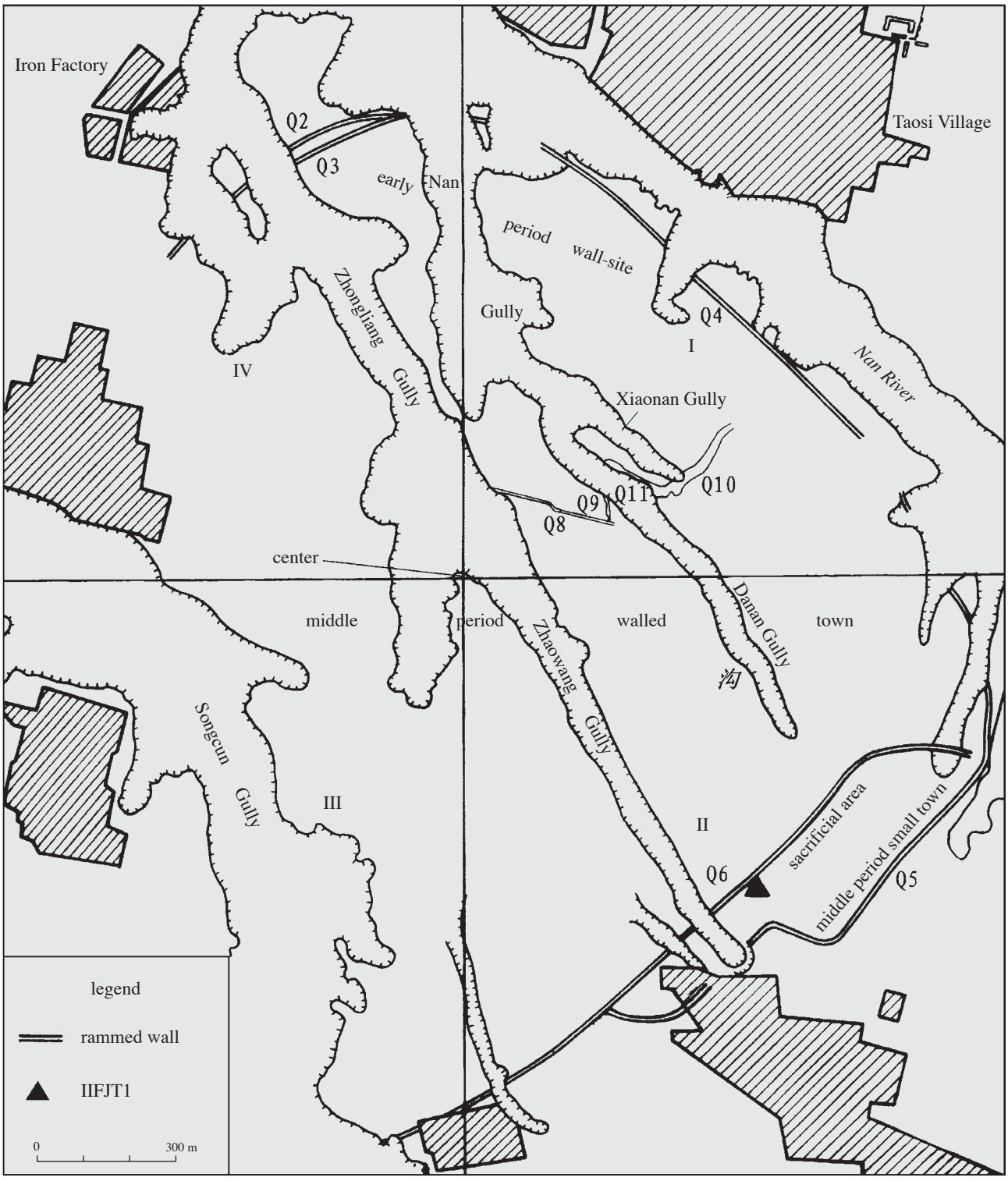

Fig. 1 Location map of the monumental structure IIFJT1
Q2–Q6, Q8–Q11. rammed walls (Q1 is uncertain and Q7 unexcavated)

features such as rammed-clay steps, rim path trench, small pit, and southeastern corner door, connect to the first level of the platform.

Rammed-clay steps are set at right east of the first level of platform. It underlies the layer 3 of the IIHG3. Its stepping surface integrates with one of the rim path. The steps are composed of three individual steps, forming a " 品 " shape on the plan.

The corner door is located in southeastern corner of the first level of the platform. It is consisted of post bases

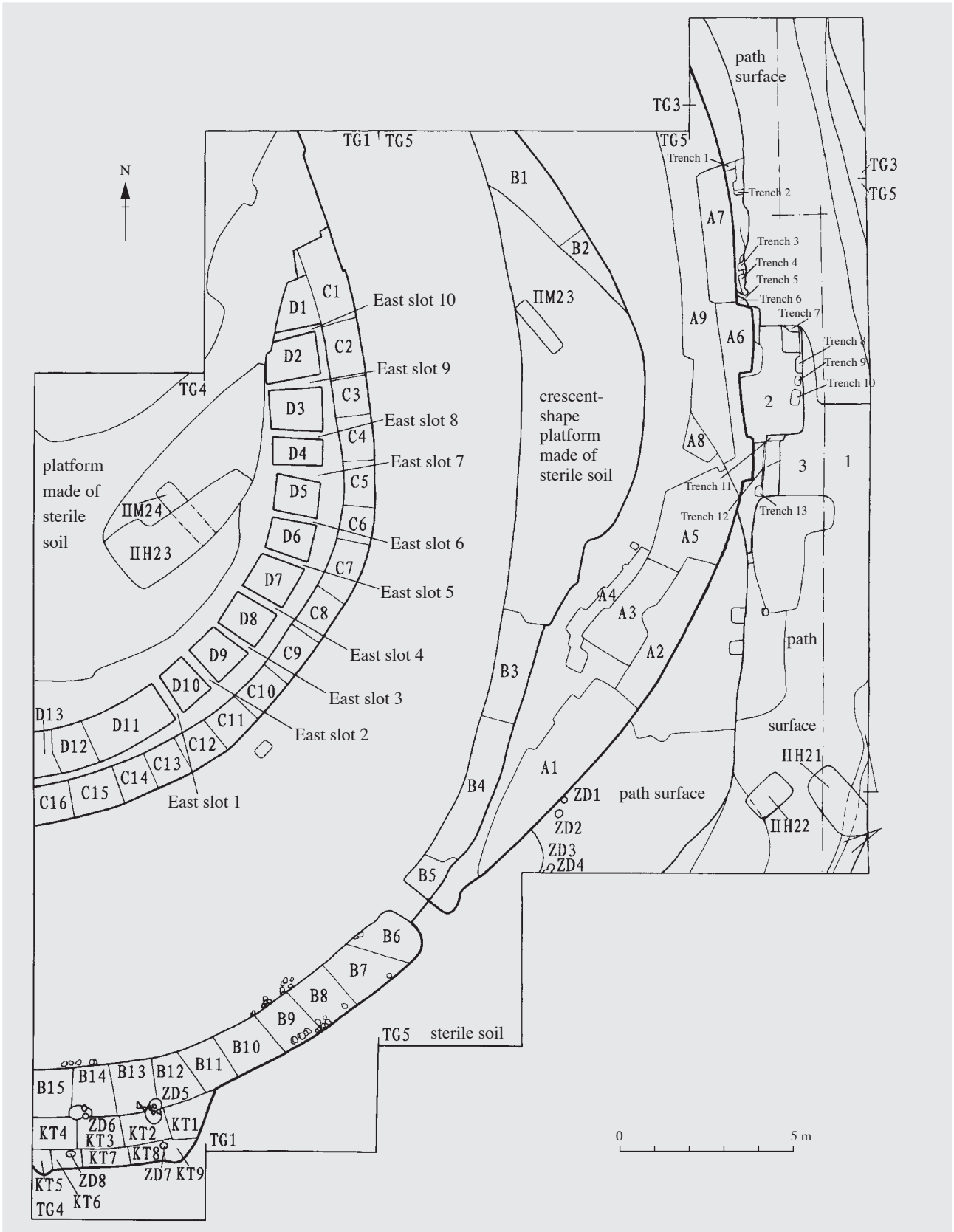

Fig. 2 Plan and cross-section of IIFJT1

1. foundation of the first level of the platform
2. foundation of the second level of the platform
3. foundation of the third level of the platform

Fig. 3 Full view of the monumental structure IIFJT1

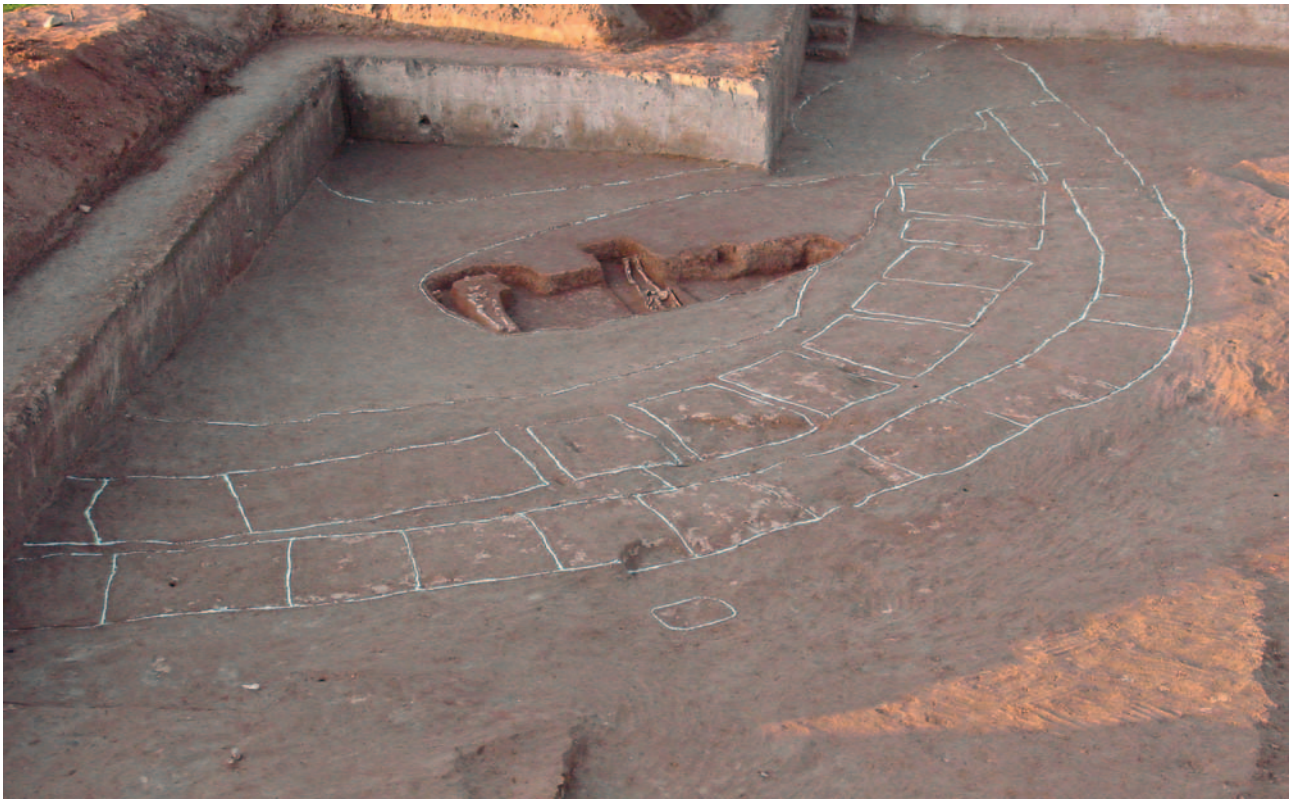

Fig. 4 Northward watching from the slot of the monumental structure IIFJT1

Fig. 5 Eastward watching from the slot of the monumental structure IIFJT1

Fig. 6 Westward watching from the slot of the monumental structure IIFJT1

(in cove or frusta shape) and a path surface. There are a total of four post bases ZD1–ZD4. Underlying layers 4A and 4B, the path surface is located in front of the door and is in a fan shape, about 5 m in length and 3.5 m in width.

Underlying the deposits of IIHG3, the rim path trench passes by the east of the first level of the platform. It is at least 31 m in length, and 2.15–4 m in width. Its rammed-clay foundation is 3.1 m in depth. The smooth path surface is 0.05 m thick. Because the eastern part of the rim path is in trench

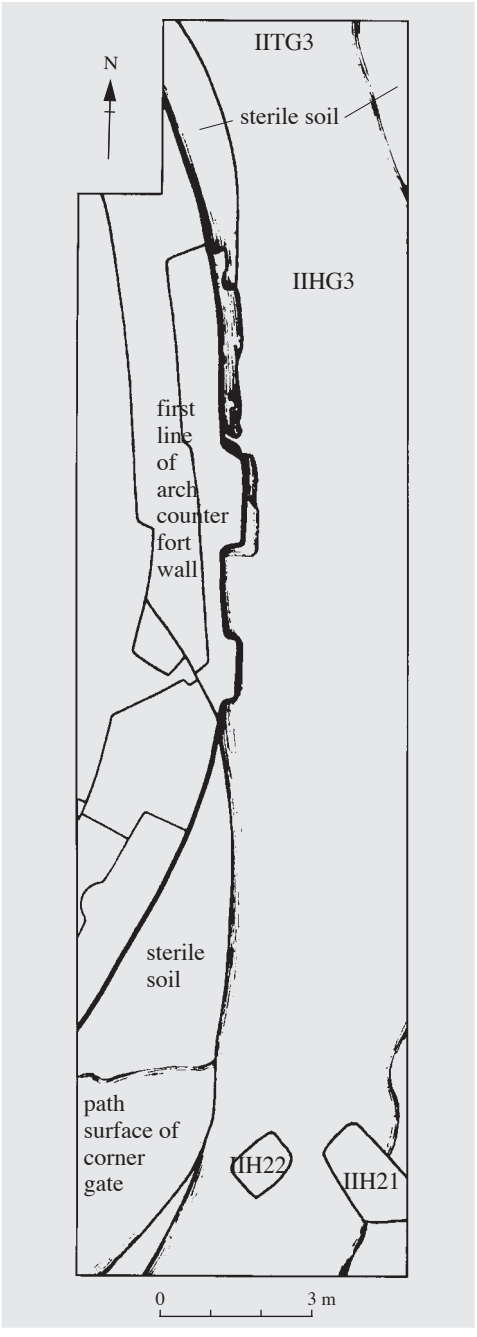

Fig. 7 Plan of IIHG3

form, the ruined deposits from the construction IIFJT1 above ground filled up the rim path trench in the late Taosi period, becoming IIHG3. The rim path trench is another stratigraphic unit differing from IIHG3, although the deposits of IIHG3 cover directly the top of the rim path trench.

2) Foundation of the second level of the platform

It is composed of the second counterfort wall, the crescent zone of undisturbed soil, rammed-clay body, and a trapezia feature. Its surface is in semi-circle form, about 5.8–8 m wide and 7 m deep.

The crescent zone of undisturbed soil is affixed to the right east of the second level of the platform, facing the rammed-clay steps. It is formed with undisturbed soil preconditioned for this particular purpose. It implies that such a zone might have served as ritual precinct.

The trapezia feature is in the south of the second level of the platform. It is composed from a trapez-formed foundation of rammed-clay and four post bases. Its two corners protrude. What function the four post bases in this feature serve is uncertain. We presume that it may have worked as the bridge-head for a bridge connecting the second level of platform to southern part of the rim path.

3) Foundation of the third level of the platform

It is formed from the third counterfort wall, rammed-clay pillars and slots, and undisturbed soil core. It is formed in a semi-circular shape.

Between the third counterfort wall and undisturbed soil core, one rammed clay wall foundation in arch shape is constructed. It is at least 19.5 m long, and 1 m wide. We found 10 slots cut into this foundation, in turn to divide it into 11 pillars D1–D11 in rectangular, triangular, and parallelogram shapes. Most of pillars are 1.3 m long, and 1 m wide. The remaining depth of the foundation is about 2.7 m.

The slots are titled as Slot 1 to Slot 10. The length of the slots ranges from 1.2 to 1.5 m. But Slot 9 is 1.65 m long, and Slot 10 is 1.9 m. Most of slots are 0.15–0.3 m wide, except for Slot 7 is 0.5 m wide on the outer fringe.

The central part of the third level of the platform is undisturbed soil core formed in an arch shape. Its radius is at least 12.5 m.

2. Trench IIHG3 of the late Taosi period

Underlying layer 3, the trench IIHG3 is located east of the platform, on the top of the surface of the rim path. It extends from a south to north direction. Its bottom interface is just the surface of the rim path trench. It is over 25 m in length, 3.5–4.75 m in width, and 0.3–0.7 m in depth (Fig. 7).

There are 3 deposits within the trench IIHG3, containing some potshards of the late Taosi period, which could be identified as *li*-tripod, vase, flask, bowl, *dou*-stemmed plate,

and the like. Besides which there are a number of potshards of the early and middle Taosi period that was confused with ones of the late period in the deposits. Most of the potshards are less fired, which are prominently distinguished from the ones from residential zones, but parallel to those from the tombs. It suggests that such pottery might have acted as ceremonial vessels displayed on the platform. Based on this, one can estimate that trench IIHG3 might have been formed with the destroyed deposits from remaining platform after the rim path and platform had ceased to be used.

III. Artifacts

The recovery work at IIFJT1 in 2003 has produced very few artifacts, all of which can be sorted into ceramic, lithic, and shell. Most of them are pottery.

1. Ceramic objects

Most potshards could not be reconstructed, except for one plate. Identifiable potshards are mainly unearthed from layer 3 and trench IIHG3, which are dated to the late Taosi period. Many of them are *li*-tripods and pots. A number of them are cauldron-stoves (*fu-zao*), basins, bowls, *dou*-stemmed plates, urns. Very few of them are *jia*-tripods, flasks, jars, and plates.

The matrix of pottery could be categorized into mud and sand. Most of the ceramic objects from here are less-fired like funeral vessels, and the sandy pottery are also poorly manufactured.

The potshards from layer 3 and the trench IIHG3 are confused with the early, middle, and late Taosi period. Among them, the potshards of the early Taosi period comprises about 30%, the middle period about 33.3%, and the late period about 36.4%. The potshards of the late period indicate the destructive date of the structure. Here we will introduce mainly the artifact samples from the late period.

Li-tripod. There are 5 samples in total. IIHG3①:13 is sandy gray pottery, cove sack tip, with cord pattern both inside and outside of it. Its remnant height is 8.4 cm (Fig. 8:4). IIHG3①:20 is sandy gray pottery with one handle. The diameter of the rim is 12 cm (Fig. 8:3). IIHG3②:19 is sandy gray pottery with erective rim. It is 14 cm in diameter (Fig. 8:1). IIHG3②:17, fat tripod, is sandy gray pottery with cord pattern on the rim. It is 34 cm in diameter (Fig. 8:8). IITG5 ③:3, fat tripod, is sandy gray pottery with cord pattern. The diameter is 22 cm (Fig. 8:5).

Pot. There are 2 samples. IIHG3 ①:3, is mud gray pottery. The diameter is 12 cm (Fig. 8:2). IITG5 ③:5, is mud gray pottery with sharp protrude shoulder carved with fine spin pattern, and fine paddle pattern on its abdomen. The diameter of its shoulder is 26 cm (Fig. 8:7).

Basin. There is only one sample. IIHG3①:6, is mud pottery with cord pattern. It is 26 cm in diameter (Fig. 8: 9).

Dou-stemmed plate. There is only one sample. IIHG3 ①:2 is mud gray pottery. It is 20 cm in diameter (Fig. 8: 6).

2. Lithics

The amount of lithics is very few, which are categorized as four different kinds: arrowhead, knife, ring, and disk.

Arrowhead. There are 2 samples. IIH23:1 unearthed from the deposit of the dump IIH23, being 4.8 cm long (Fig. 9:5). IIM24:1 is recovered from the left costal

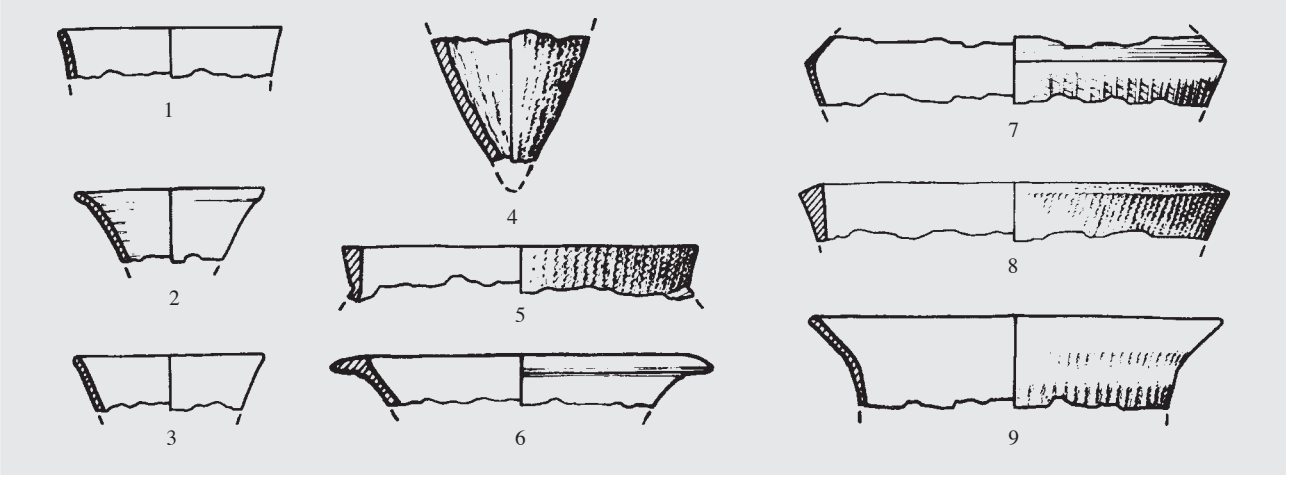

Fig. 8 Ceramic objects of the middle Taosi period

1, 3, 4, 5, 8. *li*-tripods (IIHG3 ②:19 and 20, IIHG3 ①:13, IITG5 ③:3, IIHG3 ②:17) 2, 7. pots (IIHG3 ①:3, IITG5 ③:5) 6. *dou*-stemmed plate (IIHG3 ①:2) 9. basin (IIHG3 ①:6) (scales: 8. c.1/7, the rest c.1/5)

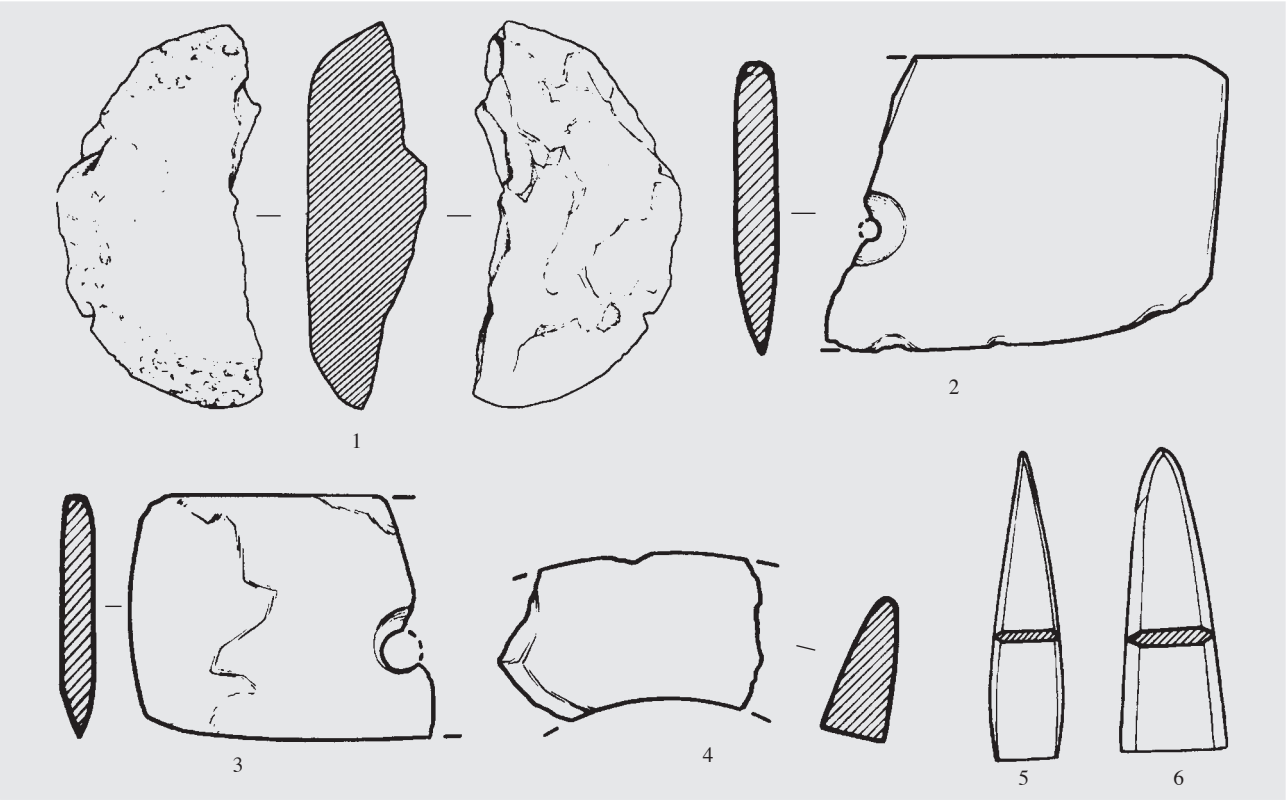

Fig. 9 Unearthed objects

1. stone disk (IIHG3:22) 2, 3. stone knives (IIHG3 ①:1, IIHG3 ③:3) 4. jade ring (gathered from the western IITG1) 5, 6. stone arrowheads (IIH23:1, IIM24:1) (scales: 1. c.1/5, the rest c.9/10)

region of the skeleton from the burial IIM24, being 4.6 cm long (Fig. 9:6).

Knife. There are 2 samples. Both of them are rectangular shape, with two holes close to upper side, and the edges are worn from using. IIHG3 ①:1 remnant is 5.6 cm long (Fig. 9:2). IIHG3 ③:3 remnant is 4.5 cm long, 3.9 cm wide, and 0.5 cm thick (Fig. 9:3).

Jade ring. There is only one sample collected from the western region of IITG1, it is milk white in color. The remnant is about 4 cm (Fig. 9:4).

Disk. There is only one sample from the western bank interface of the Rim Path trench. It is made of green rock, with 23.7 cm in diameter (Fig. 9:1).

3. Shell wares

There is one shell chip. IIHG3 ①:2 is rectangular in shape and is 1.5 cm long.

IV. Conclusion

The construction of the IIFJT1 monument in the ceremonial precinct in the Taosi walled-town has yielded a structure that is huge in scope, unique in form, complex in structure, and is multi-functional. Under all circumstances, its significant function has been acknowledged by most of China's archaeologists. Particularly, the arch pillars and slots foundation is an unprecedented example of architecture in Prehistoric China.

We have noticed that the slots were cut into the arch wall foundation on purpose, thus we are convinced that the slots had served in purpose the building of the upper portion of the pillars with slots as intervals. We suggest that each line of sight through the slot could concentrate on a given point, and that the focusing point is on the Chongfeng Mountain 崇峰.

According to our simulation and observation, we can confidently infer that these slots might have been the astronomic datum lines for observing the sunrise in order to ascertain the solar calendar, namely the observatory of Taosi culture. At the same time, we also postulate that the platform acted also as a ritual altar.

Note: The original report, published in *Kaogu* 考古 2004.7: 9–24, with 15 illustrations and 5 tables, is written by He Nu 何驽. The summary is prepared and English-translated by He Nu.