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DISC BARROWS (HENDGES) OF THE LOWER DON

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Abstract: The disc barrows of Eurasia attract the attention of researchers due to the bright discoveries during the study of the famous Stonehenge. This paper is the first to publish data on the presence, location and features of disc barrows on the Lower Don. Several sites have been partially or completely excavated. The poverty or lack of finds showed that the disc barrows should be preserved for future generations of researchers. For the Semikarakorsk complex of four objects, their location is close to the latitudinal and meridional. This indicates with a high degree of probability, that they are used to determine the key dates of the annual cycle. The wide distribution of ring ditch-sanctuaries of the Early Iron Age in the steppe territory of Eastern Europe is described.

Keywords: the Lower Don, disc barrows, henge, sanctuary, archeoastronomy, relief, steppe

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КОЛЬЦЕВЫЕ КУРГАНЫ (ХЕНДЖИ) НИЖНЕГО ПОДОНЬЯ

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Резюме: Кольцевые курганы Евразии привлекают к себе пристальное внимание исследователей благодаря ярким открытиям при исследовании знаменитого Стоунхенджа. Данный тип объектов широко распространен в Западной и Центральной Европе. В работе впервые публикуются данные о наличии, расположении и особенностях кольцевых курганов на Нижнем Дону. Несколько объектов были частично или полностью раскопаны. Бедность или отсутствие находок показали, что кольцевые курганы должны быть сохранены для будущих поколений исследователей. Для Семикаракорского комплекса из четырех объектов установлено их расположение, близкое к широтному и меридиональному. Это с высокой степенью вероятности говорит об их использовании для определения ключевых дат годового солнечного цикла. Описано широкое распространение кольцевых валов-святилищ раннего железного века на степной территории Восточной Европы.

Ключевые слова: Нижнее Подонье, кольцевой курган, хендж, святилище, археоастрономия, рельеф, степь

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Introduction

The territory of the Rostov region holds at least 100,000 burial mounds – burial structures erected from the end of the 5th millennium BC until the 14th century AD. They are domed earthen structures with a diameter of 2 to 140 m and a height of up to 16 m. At present, an extensive source base has been created for the mounds which makes it possible to distinguish among them other mounds of earth.

After the discovery of disc structures in the Stavropol Territory [Belinsky, Fassbinder, Reinhold, 2012], the question arose about their distribution in other territories. Purposeful field and archival research allowed the author to identify a series of similar objects in the Lower Don. Some of them were excavated, but the excavation was carried out without taking into account their specificity and uniqueness. The results of the work showed that the disc barrows had not been intended for burials; excavations "for demolition" of such objects should be excluded.

The History of Research

Central Asia and Western Europe hold large series of interesting archaeological sites. They are ring ditches and non-defensive earthworks. In Germany they are known as "ringwall, kreisgrabenanlagen"; in France: "rondela, cromlech". The most famous and numerous structures of this type are found in the British Isles. Accordingly, the UK holds the record for both the number of objects and their names: "henge, circular enclosures, ringditch, roundbarrow, discbarrow, pondbarrow, timber circles, ring monuments, ring enclosures, ring structure, circular rampart". Several typologies have been proposed for the British Archipelago [Gibson, 2012]. The famous Stonehenge consists of a megalithic structure of the Middle Bronze Age and disc ditches and earthworks of the Early Bronze Age [Agafonova et al., 2017: 14].

In Russian science there is no generally accepted name for such structures because they were discovered recently. The following cartographic and folk names were used: round redoubt, settlement, town, Tatar fortress, ground table, fortification, ground rampart, ring ditch, ring rampart, mound-trizna, sanctuary, restalishche, disc barrow. The latter term is used during the excavations of similar objects in the Crimea (Kulikov, 2017: 108). And although in this study the structures turned out to be reservoirs for water, the term seems to be successful, since they are structurally very similar. He describes their main features: a non-defensive, probably ritual purpose, an ground embankment, clearly visible on the ground, the ring shape of ditches and ramparts.

A similar structure in Moldova near the village of Ungheni has not yet been put into scientific circulation yet. It is called the "The Ground Table of Peter the Great" and has a diameter of 150 m. On the territory of Russia, they were found in the vicinity of the city of Pyatigorsk [Belinsky, Fassbinder, Reinhold, 2012]. The total number of such objects in the area of the Caucasian Mineral Waters can reach 30. The largest of the detected objects — Tamlyk — has a diameter of 200 m. Magnetometric survey [Fassbinder, 2019] made it possible to establish the initial depth of the ditches, to find out the presence of stone structures inside. The excavations of the disc structure (Maryinskaya-1, diameter 145 m) damaged by the bank washout showed that it was built by the bearers of the Maikop culture in the Early Bronze Age (the 4th millennium BC).

As for the for European disc barrows and henges, it has long been established that at least some of them were used as near-horizon observatories to determine the main stages of the solar annual cycle. Observation of the sun and determination of the date requires minimal skills and tools. Their calendar purpose is especially clearly reflected in the construction of the Neolithic Goseck circle in Germany, where the entrances are precisely directed along the lines of sunrise and sunset on the day of the winter solstice [Bertemes, Northe, 2007: 145]. The same purpose is assumed for the North Caucasian disc barrows [Belinsky, Fassbinder, Reinhold, 2012: 30].

On the territory of the Volgograd region, a similar object called the "Sanctuary at the Trehostrovskaya Village" (Fig. 1.-*6*) was investigated [Demkin et al., 2001]. It is a ditch with a diameter of 200 m, 2.5 m deep and 20 m wide (Fig. 2). The outer part of the ditch is surrounded by low earthworks, increasing the diameter of the structure up to 210 m. The soil from the ditch is piled inside the formed site, forming a mound of earth of 1 m height (Fig. 3). The section from center to edge showed that the mound of earth consists of a mixture of charcoal and overheated stone weighing up to 2.5 thousand tons. The dating of coal gave the interval of the 16th – 14th centuries BC in calibrated values. It is assumed that it was a place of the conditional "temple of fire" where a large wooden structure was covered with a layer of stone and burned.

Fig. 1. Map of the location of the discbarrows: 1 – Sidorov II; 2 – Nikolaevsky III; 3 – Sambek settlement (Round Redoubt); 4 – Cheryumkin discbarrow; 5 – Semikarakorsky complex; 6 – Trekhostrovskoye sanctuary

Рис. 1. Карта расположения кольцевых курганов: 1 – Сидоров II; 2 – Николаевский III; 3 – Самбекское городище (Круглый редут); 4 – Кольцевой курган Черюмкин; 5 – Семикаракорский комплекс; 6 – Трехостровское святилище

Fig. 2. Photo of the discbarrow Trekhostrovskoye sanctuary. View from the west. Author: Sergey Fomin
Рис. 2. Фото кольцевого кургана Трехостровское святилище. Вид с запада. Автор: Сергей Фомин

Fig. 3. Photo of the discbarrow Trekhostrovskoe sanctuary. View from the west. Author: Oleg Dimitrov
Рис. 3. Фото кольцевого кургана Трехостровское святилище. Вид с запада. Автор: Олег Димитров

Research Methods

All objects were examined by the author, lifting material was collected or its absence was established. The survey was carried out using a DJI Mavic 2 Pro drone from a height of 35 m, the processing of the survey and the creation of digital terrain models were made in the Agisoft Metashape software. The models are presented only for objects well expressed in the relief. The dense vegetation covering the surface of the objects was not excluded from the relief picture and is given "as it is". The mapping of the objects made it possible to establish their special geographic relationship. Some of the objects were investigated by stationary excavations in previous years. The data obtained did not make it possible to reliably date the disc barrows.

Description of Sites

The Sidorov II Burial mound, mound 2 (Fig. 4) was identified by P. A. Larenok during the inventory in the early 1990s. It is located on the middle part of the slope of the watershed upland formed from by the Sarmatskaya river in the east, the Nosov balka in the west, by the Sidorov balka in the west of the headwaters. At the same time, it remains completely unclear what brought the researcher to this area of the terrain, since neither mounds nor settlements are found on such slopes. It is ring earthwork with a modern diameter of 45 m, 10–14 m wide, 0.15 m high. In the center there is a flat area without earthworks badly damaged by plowing. Some fragments of ceramics from the Saltov-Mayatskaya culture (the 8th — 10th centuries AD) were found around the object.

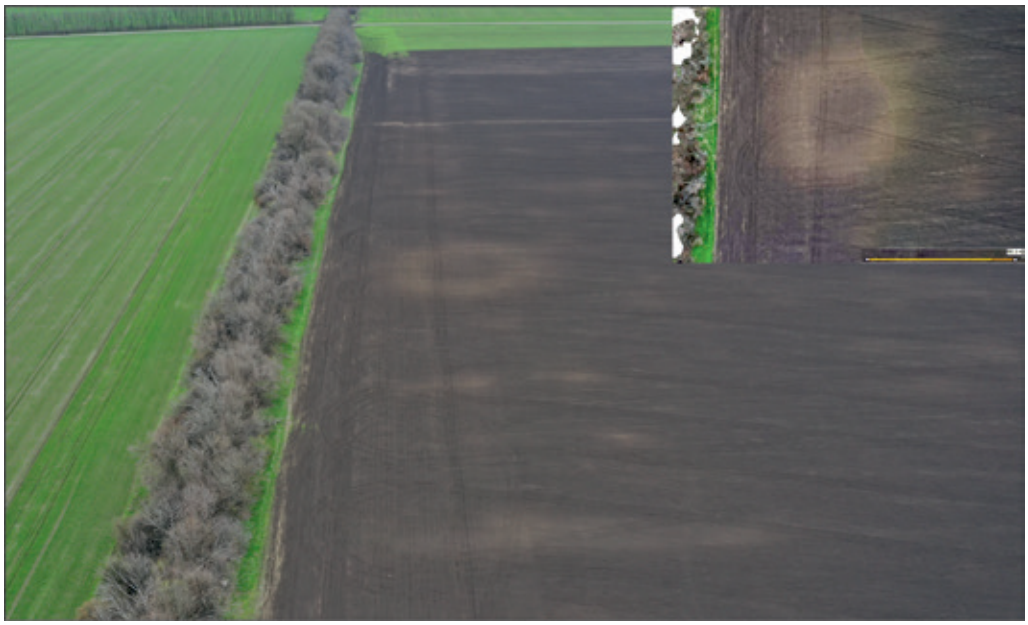

Fig. 4. Photo of the discbarrow Sidorov II. View from the south
Рис. 4. Фото кольцевого кургана Сидоров II. Вид с юга

The Sambek settlement (Round redoubt) is located on an elevated section of the rock terrace of the Sambek river, half destroyed by the collapse of the coast of the Taganrog Bay

of the Azov Sea (Fig. 5). The settlement was discovered in 1926 by A. A. Miller. In 1961 I. S. Kamenetsky laid a pit on the site which did not allow reliable dating of the object. The 1975–1979 expedition led by P. A. Larenok carried out excavations along the brink of the coast (Fig. 6). "The fortifications of the 1st settlement are made up of earthworks (ridge diameter 84 m, height 1 m), with a wide passage of 2 m left in the northeastern part. Behind the earthworks there is a ditch, which is separated from the earthworks by an circular platform 9 m wide. The ditch is 15,4 m wide, 1–1.4 m deep. The ditch encircles the "citadel" — a platform with a diameter of 28.6 m. The citadel is connected to a circular earthen bridge left in the northern part of the ditch. The southern part of the settlement (about a third) was destroyed by the rocks of the cliff" [Larenok, 1983: 125–126]. The area of 540 sq. m. has been investigated. The research was done into an extensive dugout of the 18th century located in the center of the ring structure which actually destroyed the entire central part of the object. The author of the excavations dated the upper horizon of the cultural layer of the settlement, the ditch and the earthworks to the second half of the 18th century. The lower cultural layer is represented by ceramics of the Saltovo-Mayatskaya culture and a significant number of flint flakes, blades and tools of the Upper Paleolithic and Eneolithic appearance. 2 medieval dugouts have been investigated. Such a chronological attribution cannot but raise objections, since the use of a structure from the outer earthworks and the inner ditch as a defensive one is impossible. There is no documentary evidence of the construction of this structure in the 18th century. Large-scale destruction and digging (Fig. 7), the lack of information about the disc barrows of Europe at that time did not allow classifying this site as a ritual one. In the center of the structure one can see squares of an excavation and a dump (Fig. 6), a ditch around the dump, and at a distance of 15 m from the edge of the ditch, earthwork up to 0.8 m high, extending into the dacha development. A large pavilion is installed on the eastern part of the earthworks.

Fig. 5. Photo of the discbarrow Sidorov II. View from the east
Рис. 5. Фото кольцевого кургана Сидоров II. Вид с востока

Fig. 6. Photo of the discbarrow Sambek settlement. View from the southwest
Рис. 6. Фото кольцевого кургана Самбекское городище. Вид с юго-запада

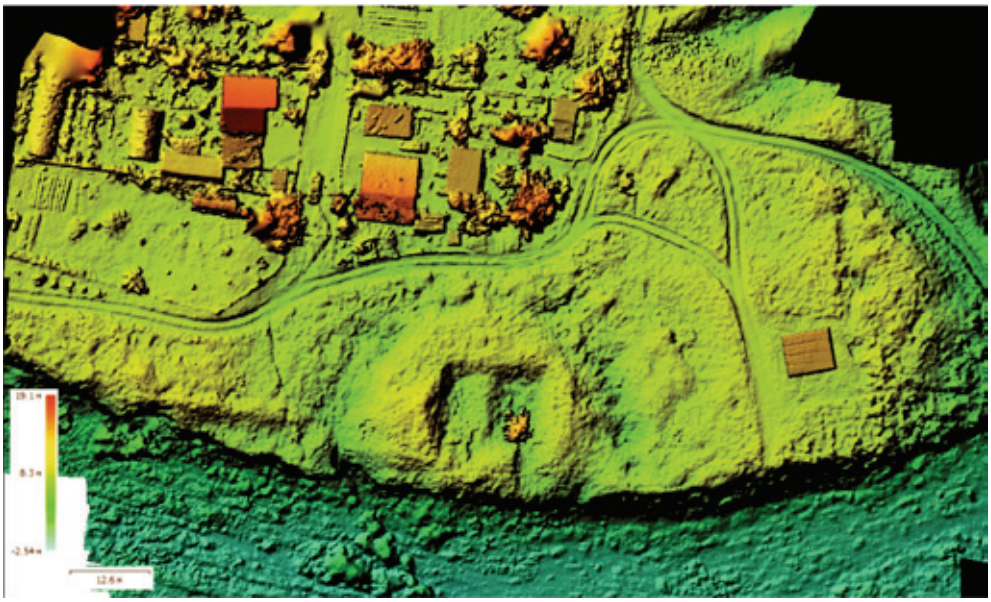

Fig. 7. Digital relief model of the discbarrow Sambek settlement
Рис. 7. Цифровая модель рельефа кольцевого кургана Самбекское городище

The Nikolaevsky III burial mound, mound 14 is located at the top of the watershed of the Mius River and the Volovaya balka, as part of a long chain of mounds of different times

(Fig. 9). Available for ploughing, it was discovered by I.N. Parusimov. It is circular earthwork with a modern diameter of 70 m, 12 m wide, 0.25 m high. In the center there is a flat area without earthworks.

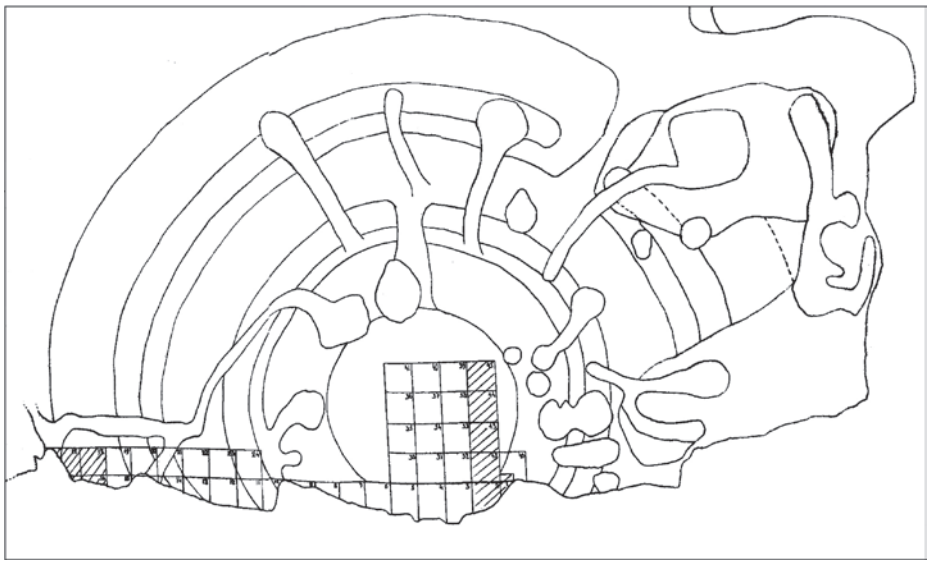

Fig. 8. Excavation plan of the Sambek settlement of P.A. Larenka
Рис. 8. План раскопок Самбекского городища П.А. Ларенка

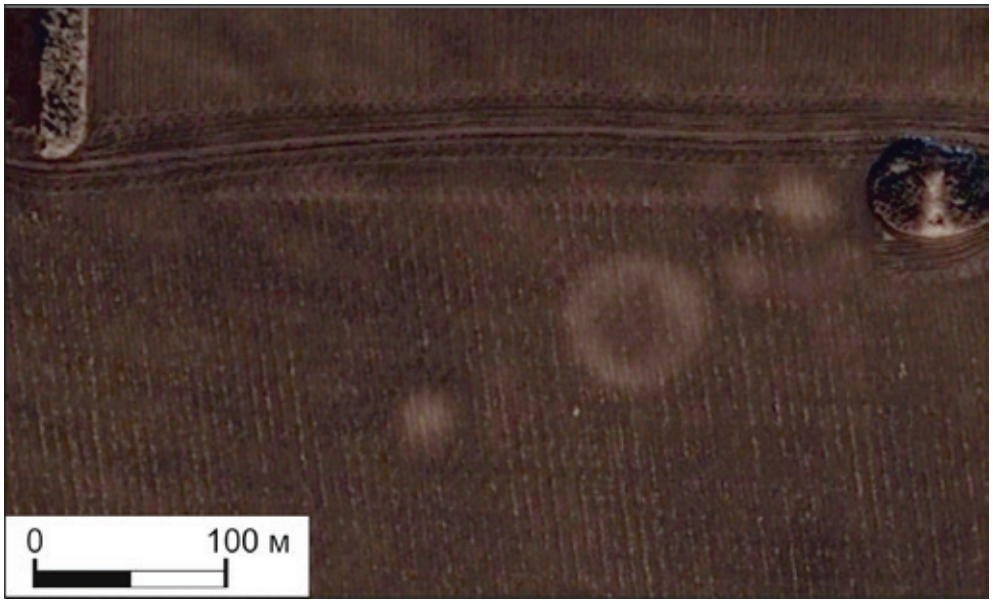

Fig. 9. Satellite image of the discbarrow Nikolaevsky III
Рис. 9. Космоснимок кольцевого кургана Николаевский III

The Cheryumkin disc barrow is a revealed object, located on the first terrace above the Podpolnaya river, an arm of the Don river, discovered by G.E. Bespaly. It is plowed up, damaged from the north and west by irrigation canals (Fig. 10). It is annular earthwork with a modern diameter of 110×100 m, 15 m wide. Inside the earthwork one can see a flooded ditch with a diameter of up to 58 m. The difference in height between the top of the earthworks and the bottom of the ditch is about 1 m. In the center there is a convex area formed as a result of soil displacement into the ditch.

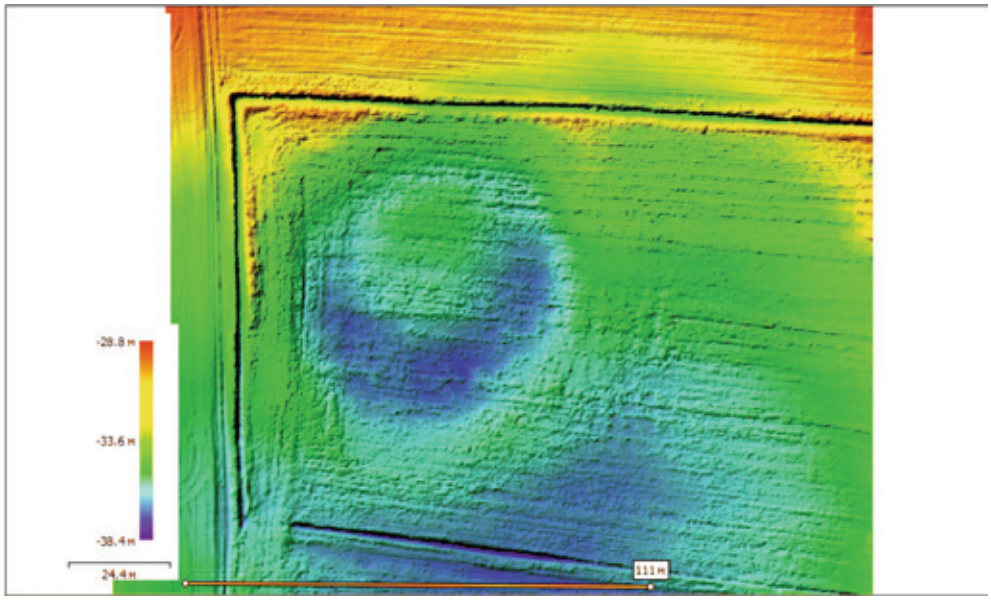

Fig. 10. Digital relief model of the discbarrow Cheryumkin
Рис. 10. Цифровая модель рельефа кольцевого кургана Черюмкин

The Semikarakorsky Complex

The Melikhovsky disc barrow is a revealed object discovered by I.N. Parusimov. It is located on the terrace of the high rocky right bank of the Don river (Fig. 11). Previously it had been plaughed. It is annular earthwork with a modern diameter of 98 m, 18 m wide. Around the rampart, one can see take out of soil for the structure, increasing the diameter of the structure to 110 m. In the earthworks one can see a flooded ditch with a diameter of 65 m and in the ditch there are bushes (Fig. 12), the northern and western parts of the earthworks are heavily plowed up. The difference in height between the top of the earthworks and the bottom of the ditch is about 2.5 m. In the center there is an almost flat platform.

The Semikarakorsky disc barrow is a part of the Semikarakorsk settlement ensemble and was opened together with it. For a long time, it was considered the remains of a defensive structure, such as a tower. As in the case of the Sambek settlement, the meaning of the location of the ditch inside the earthworks remained unclear from a defensive point of view. It is located on the highest floodplain island of the left-bank part of the river Don valley which rises above the surrounding flooded areas by 10 m. It is annular earthwork with a modern diameter of 90

m and 10 m wide (Fig. 13). A flooded ditch with a diameter of 67 m is clearly visible inside the earthworks (Fig. 14). The difference in height between the top of the earthworks and the bottom of the ditch is about 1.3 m. There is a flat area in the center. In the northern part of the rampart, a 4×4 m excavation was laid, however, the time of the object's creation remained unclear [Flerov, 2002, p. 60].

Fig. 11. Photo of the discbarrow Melikhovsky. View from the southeast
Рис. 11. Фото кольцевого кургана Мелиховский. Вид с юго-востока

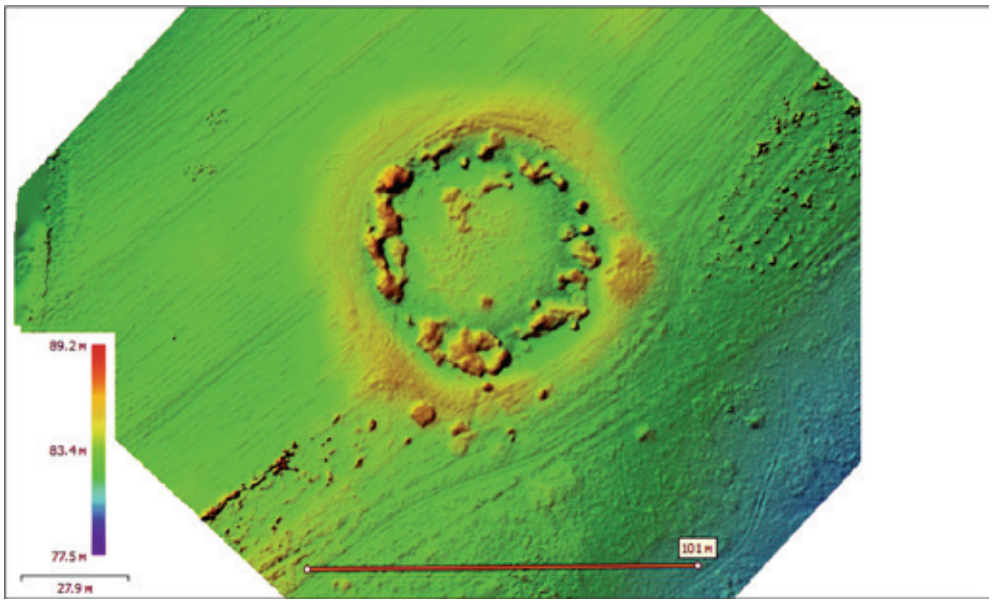

Fig. 12. Digital model of the relief of the discbarrow Melikhovsky
Рис. 12. Цифровая модель рельефа кольцевого кургана Мелиховский

Fig. 13. Photo of the Semikarakorsky discbarrow. View from the north-west
Рис. 13. Фото кольцевого кургана Семикаракорский. Вид с северо-запада

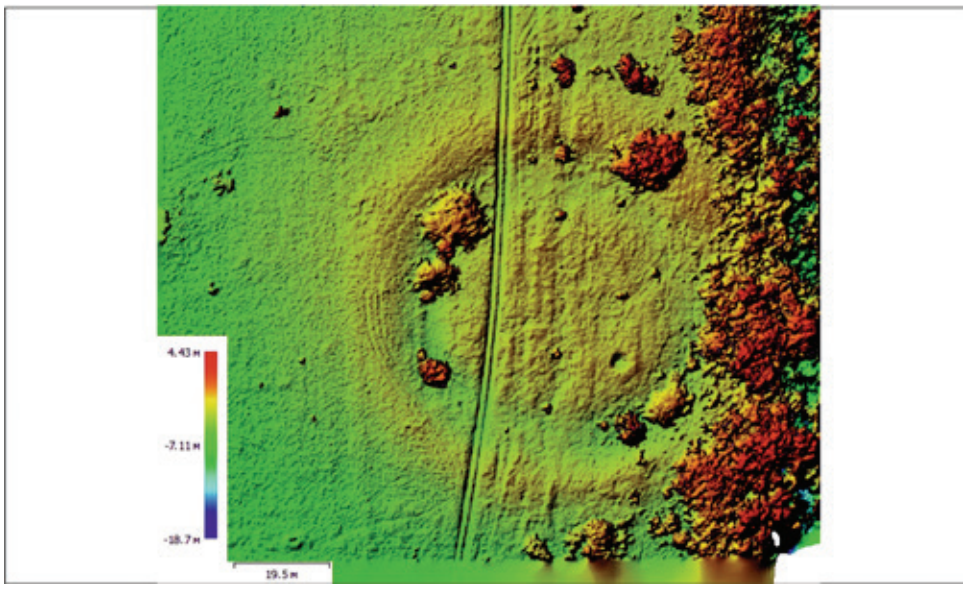

Fig. 14. Digital relief model of the discbarrow Semikarakorsky
Рис. 14. Цифровая модель рельефа кольцевого кургана Семикаракорский

The Atamansky IV burial mound, mound 1 is located on an elevated promontory of the high rocky right bank of the Don river. The mound was discovered by I.N. Parusimov and was registered as a destroyed mound of earth of a large barrow. It is heavily plowed and leveled. The northern third of the structure has survived, the southern part was first damaged in the 19th century when planning the gardens of the Razdorskaya village (Fig. 15). In the 20th century, it was leveled by machines, since it prevented the plowing of the field, and from the north there

was a very buried road made of paving stones. It represents a sector of annular earthworks with a reconstructed diameter of 90 m, and 12 m wide (Fig. 16). A small flooded ditch is visible inside the earthworks. The difference in height between the top of the earthworks and the bottom of the ditch is about 2.0 m. In the center there is an almost level platform.

Fig. 15. Photo of the discbarrow Atamansky IV. View from the southwest
Рис. 15. Фото кольцевого кургана Атаманский IV. Вид с юго-запада

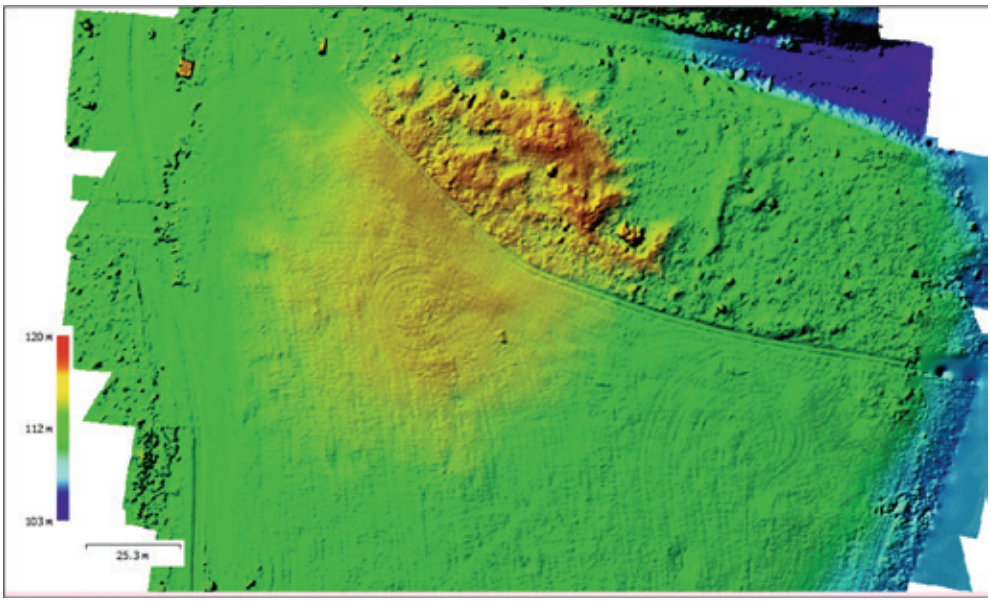

Fig. 16. Digital relief model of the discbarrow Atamansky IV
Рис. 16. Цифровая модель рельефа кольцевого кургана Атаманский IV

The Karpovka II mound is located on an elevated platform of the high rocky left bank of the Don river. It was discovered and partially excavated by E.I. Bespaly and I.N. Parusimov under the name «Fortification "Excavated Barrow"» (Fig. 17). During the work it was perceived as mound of earth which was a completely leveled and laid out in ridges. Before excavations, the earthwork was not ploughed out and had the following dimensions (Fig. 18): diameter from the base — 76 m, height up to 2.5 m. From the northeastern side, the earthworks had a gap of 2 m wide. Around the earthwork, a flooded circular takeout was traced, which had a gap (elevation) at the earthwok's disruption. It was investigated by the scraper trenches with the leaving 1 m wide edge. The rabotage of the front showed that earthworks had been made of clay (Fig. 19), take- out of from the inner ditch. On the inner slope of the earthworks, in the upper horizon of the sliding soil, there were fragments of ram and horse bones, and a large amount of amphora pottery from the Scythian time of the 4th century BC. A nomadic burial of the 13th — 14th centuries with a saber was discovered in the eastern part of the rampart.

Unfortunately, the authors of the excavations did not know what type of objects they had encountered and how unique it was. Therefore, the work was carried out according to the usual kurgan method. The excavations were carried out in the autumn of 1984 and were suspended after snowfall. The builders of the irrigation pipeline (Fig. 17), having seen the departure of the expedition, flattened the unexplored parts of the object. Thus, they conserved the remains of the rampart and the ditch, which can be further investigated in the future.

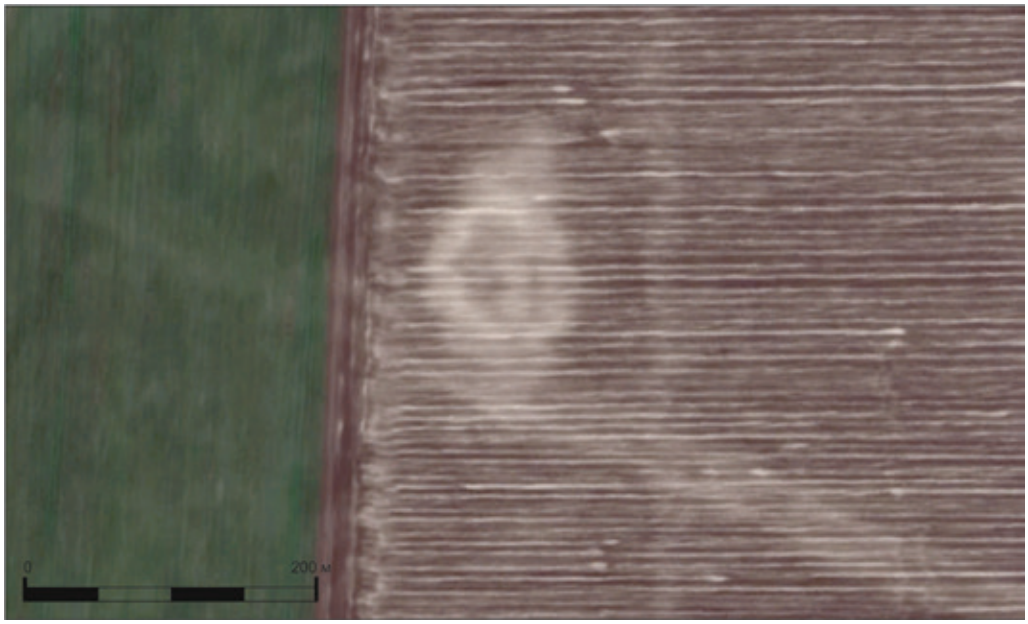

Fig. 17. Satellite image of the discbarrow Karpovka II
Рис. 17. Космоснимок кольцевого кургана Карповка II

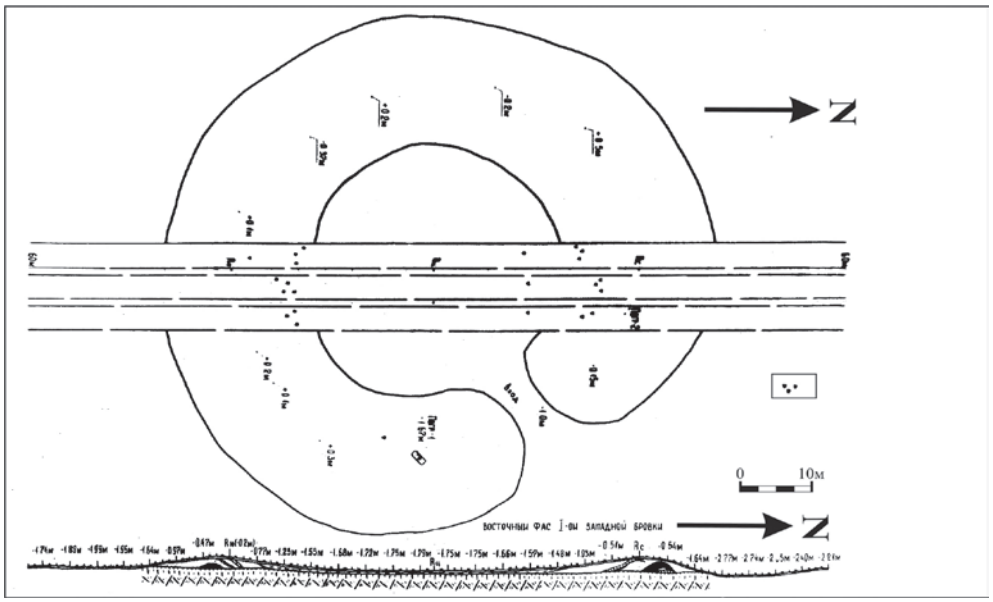

Fig. 18. The discbarrow Karpovka II. The excavation plan and the section in the center
Рис. 18. Кольцевой курган Карповка II. План раскопок и разрез по центру

Fig. 19. Photo of the section of the shaft of the discbarrow Karpovka II
Рис. 19. Фото разреза вала кольцевого кургана Карповка II. Вид с юго-востока

The mapping of the disc barrows made it possible for the first time to reveal the geographic interconnection of objects with each other. Thus, the centers of the Melikhovsky and

Semikarakorsky disc barrows are located almost ideally on the same parallel (47 ° 29'28 "N — 47 ° 29'30" N), the coordinates of their centers differ by only 2 arc seconds (!) (Fig. 20). The highest section is located exactly on this line on the eastern part of the Melikhovsky earthworks (Fig. 12). Then it became obvious that the two indicated objects form on the map an almost regular isosceles triangle with the sides 10845 m long and 11291 m long with the excavated Karpovka II disc barrow. After that, it was logical to try to find the fourth symmetrical vertex of the outlined geometric figure. Near the point located to the north of the center of Karpovka II was the Atamansky IV mound, a visual inspection of which led to the conclusion that it is a destroyed disc barrow. Thus, a complex of four almost identical interconnected objects was outlined. For the entire complex, the name Semikarakorsky was proposed, since the locations of all other objects could allow displacement in the meridional and latitudinal directions for kilometers, and only the top of the high floodplain island, on which the Semikarakorsky disc barrow is located, allows an interval of location of no more than 300 m.

The relative position of the ring disc barrows on one parallel can be explained by their destination to observe the movement of the Sun or other celestial bodies. To test this hypothesis, an Internet resource suncalc.net. was used to determine the direction of sunrise for any date. According to the data obtained, the Melikhovsky and Semikarakorsky disc barrows are located exactly on the line of sunrise and sunset on the days of the spring and autumn equinoxes.

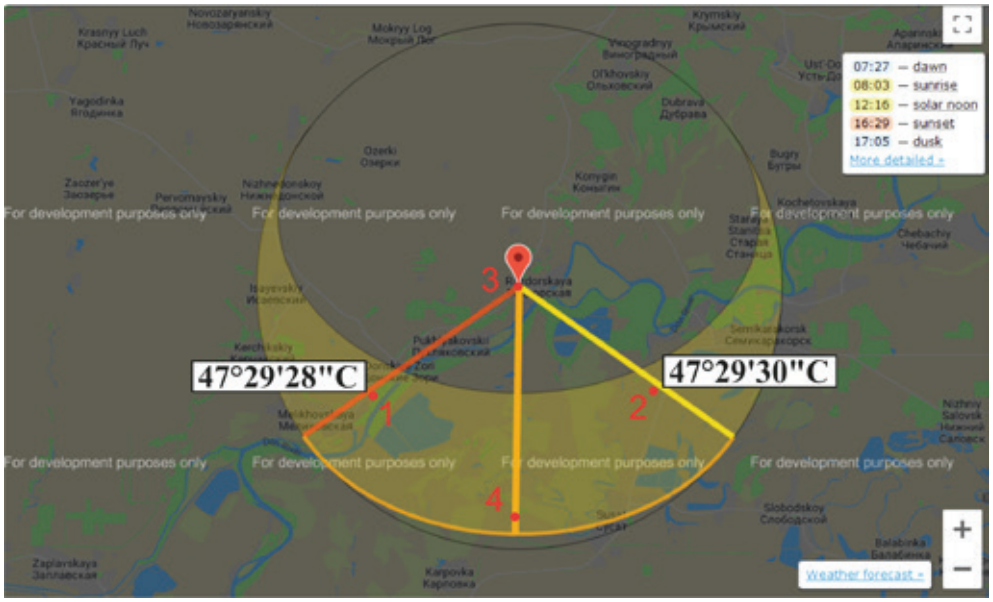

Fig. 20. The location of the discbarrows of the Semikarakor complex relative to the sunrise and sunset lines on December 22, according to the site suncalc.net
Рис. 20. Расположение кольцевых курганов Семикаракорского комплекса относительно линий восхода и захода Солнца 22 декабря по данным сайта suncalc.net

The lines of sunrise and sunset on the day of the winter solstice (December 22) almost exactly coincide with the relative positions of Atamansky IV, Semikarakorsky and Melikhovsky

(Fig. 20) mounds. The existing symmetric deviation can be explained both by the difference in the mathematical model of the suncalc.net resource from the observed situation, and by the orientation of objects not to the sunrise point of the Sun's edge, but to the sunrise of the entire solar disk above the horizon.

We can assume the following motivation for the construction of structures. The simplest instruments for observing the movement of the Sun decayed over time. To renew the marks on objects on a clear night, it was possible to make fires in the centers of the disc structures and set up the necessary anchor marks again. Thus, for many generations the exact date could be determined by observers of rather low qualifications. Due to the location of all four objects in the elevated areas, the floodplain of the Don river valley could not limit the visibility between the disc barrows. However, it can be argued that direct optical communication between the Semikarakorsky and Atamansky IV mounds is impossible due to the presence of a 20 m elevated section between them.

The hypothesis about the possibility of using disc barrows as benchmarks to adjust the observational instruments does not contradict the author's observations: from the Melikhovsky disc barrow using binoculars, one can easily distinguish the locations of the Karpovka II and Semikarakorsky mounds. This does not contradict the practice of the past, since the distance between semaphores of the optical telegraph of the 19th century was more than 15 km, and the theoretically possible limit was considered 65 km.

However, the astronomically exact coincidence of the coordinates of the centers of the Semikarakorsky and Melikhovsky disc barrows is perplexing, since because of the precessional displacement of the earth's axis with a period of 26 thousand years, the objects that were at the same latitude in the past cannot remain on it to the present time. It also remains unclear whether the deviation of the coordinates of Karpovka II (longitude: 40 ° 37'36.55 "E) and Atamansky IV (longitude: 40 ° 38'2.71" E) from the meridian can be explained by precession. The listed problems require further development by competent specialists. However, given the rarity of the ring mounds, their geographical binding can be considered an established fact. For the henge of the British archipelago and the ring structures of the North Caucasus, such patterns of location have not yet been established.

Excavation Results and Dating

In total, five disc barrows have been excavated in the Lower Don: two have been fully explored, and a limited area has been opened on three of them. As described above, the excavations of the sites at the Semikarakorsk and Sambek ring structures did not allow establishing the time of their construction. The finds of flint objects of the Eneolithic appearance at the Sambek settlement allow us to make a careful assumption about its dating to the boundary of the Eneolithic and Early Bronze Age, since otherwise it is difficult to explain the presence of such material on the watershed far from settlements and burial mounds. The excavations of the Sanctuary at the Tryokostrovskaya station allowed dating it to the Late Bronze Age. The Karpovka II mound has been excavated almost completely, however the absence of burial structures dating back to the time of the construction of the object prevented its dating. Mound 20 of the Vysochino V burial ground has been fully investigated and reliably dated to the 1st century AD.

Disc Barrows of the Sarmatian Time

The excavations of K. F. Smirnov in 1966 near the Lipovka village of the Orenburg region initiate the history of the study of the Sarmatian ring sanctuaries, which comprise several dozen in the Urals and Kazakhstan. An investigation was done of rather large annular earthwork (mound 6 of the Perevolotsky I burial ground on the Samara River) with a diameter of 46–48 m and a height of 1.2 m, surrounded by a ditch 6 m wide and up to 3 m deep [Morgunova, Kuptsov, 2018: 23]. Like other disc barrows, Perevolotsky I did not contain any burials.

Such sanctuaries are known in the basin of the Ingul river on the territory of Ukraine, e.g. Kurgan 9 of the burial ground Ryadovy mogily. Ordinary graves are circular mounds of earth with a diameter of 44–46 m and a height of up to 0.8 m [Melnik, Steblina: 170]. Many fragments of amphorae of the 3rd — early 2nd century BC were found inside the structure.

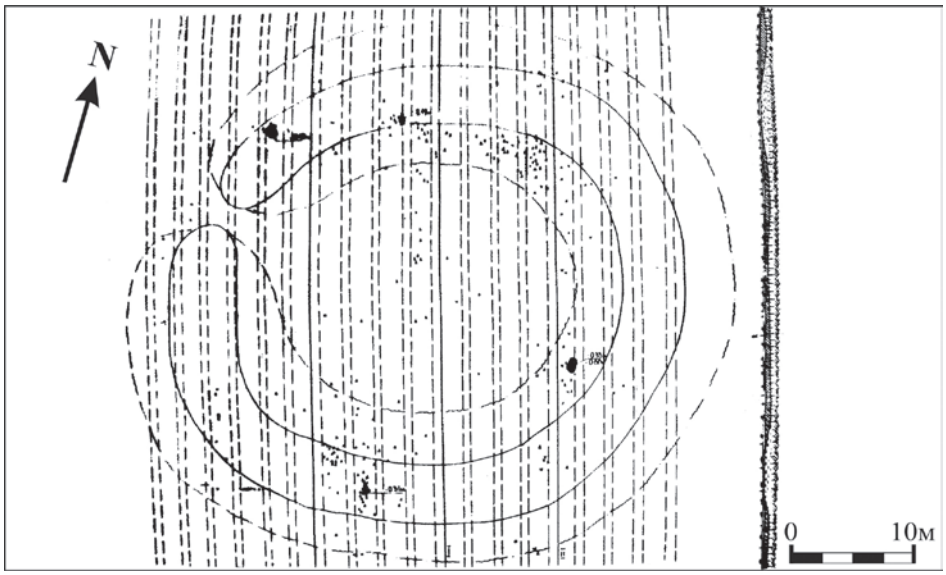

Fig. 21. Kurgan 20 of the Vysochino V burial mound, discbarrow. The excavation plan and the section in the center
Рис. 21. Курган 20 могильника Высочино V, кольцевой курган. План раскопок и разрез по центру

Large annular earthwork was investigated in the Lower Don by E. I. Bespaly and I. N. Parusimov in 1986 — mound 20 of the Vysochino V burial ground (Fig. 21). It was located at the top of the watershed between the Don and the Kagalnik rivers, among the vast Sarmatian mound necropolis. "The excavated object is heavily plowed earthworks of a circular shape, visually on the surface it was poorly visible. In the NW sector, the earthworks had a barely noticeable gap. The object was dug out with a scraper leaving the edges. The edges were oriented N — S, the soil was cut in thin layers (1–2 cm each), all findings were recorded and plotted on the plan. In total, 20 strips were uncovered, between which 19 edges were left 1–1.5 m wide. All the fronts were cleaned (in total, 4 linear kilometers of the edges were cleaned), the most informative faces were graphically recorded. The rabotage showed

that annular earthworks of 8–10 m wide (along the bottom), represented in the plan an almost regular circle with a diameter (in the center of the earthworks) of 70 m, in the NW sector the earthworks had a gap of 4 m wide. The soil for the construction of the earthworks was taken from the adjacent areas inside and outside the earthworks. As a result of soil take-out, two annular hollows 8–10 m wide were formed, the depth of the hollows from the level of the buried soil was 0.4–0.7 m. In the northwestern sector, where the earthworks had a gap, there were no hollows. The earthwork is up to 0.4 m high" [Bespaly, Lukyashko, 2008: 88]. On the inner slopes of the earthworks and in the inner ring takeout, fragments of amphorae, gray-clay circular vessels, stucco vessels, small fragments of sandstone, an accumulation of animal skulls (two skulls of horses, one of a large predator (bear?), two skulls of rams) were found. According to the amphorae, the object dates back to the 1st century A. D and was created by the bearers of the Sarmatian culture.

Thus, the wide distribution of disc barrows of the Early Iron Age on the territory of the Eurasian steppes is beyond any doubt. Excavations of several of them have presented very modest results. The level of development of excavation techniques today does not allow obtaining valuable information from excavations "for demolition". These objects should be carefully preserved for future research.

Conclusion

Disc barrows of Eurasia, except for the territory of the British Archipelago, are at the beginning of their research. To date, it has been established that they are common throughout Europe and date back to the period from the 5th millennium BC up to the 1st millennium AD. They are direct analogs of British henge and contain a lot of valuable historical information.

The Semikarakorsk complex, highlighted by the author, for the first time for similar structures, presents the geographical relationship of location which unequivocally testifies to their use to determine the most important dates of the year: the spring and autumn equinoxes, the days of the summer and winter solstices.

The dating and cultural attribution of most of the disc barrows and, in particular, the Semikarakorsk complex, urgently requires further research. The archaeoastronomical aspects of the location of the Semikarakor complex by ancient people also need careful study.

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