

The Astronomy of Pre-dynastic Egypt

Nabta Playa



Nabta Playa

- ▶ 110 km west of Abul Simbu
- ▶ Now, one of the driest area on Earth: less than 1 mm precipitation per year.
- ▶ Beginning in 8500 BCE summer monsoon rains brought water to the internally drained basin.
- ▶ Abandoned around 3500 BCE







Nabta Playa

- ▶ Now, one of the driest area on Earth: less than 1 mm precipitation per year.
- ▶ Occupied by nomadic pastoralists between 8000- 3400 BC.
- ▶ Summer monsoon rains brought water to the internally drained basin.

Early Neolithic (8300-6900 BC).

Scatters of animal bones, lithic artifacts, and hearth stones on fossil dunes at edge of playa.

Domestication of cattle, which could not survive without human intervention –
8400-7750 BC

- Nabta probably began to function as a regional ceremonial center during the Middle Neolithic (6100-5500 BC) during the summer wet season.
- By a regional ceremonial center we mean a place where related but geographically separated people gather periodically to conduct ceremonies and to reaffirm their social and political identity.
- Nabta Playa had water and forage for cattle and goats. One of the few such sources of water in the vast western sahara. Significantly navigational skills –using the stars- were necessary to find the place.

- ▶ Following a major drought which drove earlier groups from the desert, the Late Neolithic began around 5500 BC with a new group that had a complex social system expressed in a degree of organization and control not previously seen.
- ▶ These new people, the Ru'at El Baqar people (the Cattle Herders) appear to have been responsible for first establishing the ceremonial center at Nabta Playa. The newcomers had a complex social system that displayed a degree of organization and control not previously seen in Egypt.
- ▶ They sacrificed young cows and buried them in clay-lined and roofed chambers covered by rough stone tumuli. and constructed many tumuli having both surface and subterranean features.

- The center at Nabta gives evidence of a complex ideology, centered on themes of death, earth, water, skies, and cattle. These gatherings occurred along a dune on the northwestern shore of the basin where there are hundreds of hearths, extensive cultural debris, and many bones of cattle.
- Significantly and spectacularly this nomadic culture leap-frogged sedentism (and agriculture) to create a cultural center.

NABTA PLAYA

Nomadic cattle herders occupied the shores of the lake during the summer monsoon rains between approximately 9000-4000 B.C. when the monsoon moved from central Africa into southern Egypt

Early Neolithic:

**Scattered ostrich eggshells and charcoal:
6700-6600 B.C.**

Late Neolithic:

**Wood from burial chamber surrounding the articulated skeleton of a cow:
5300 B.C.**

**Charcoal from hearths in the vicinity of the calendar circle:
4800 B.C.**

**Charcoal from the megalithic tomb:
3600 B.C.**





Blow-out on north side







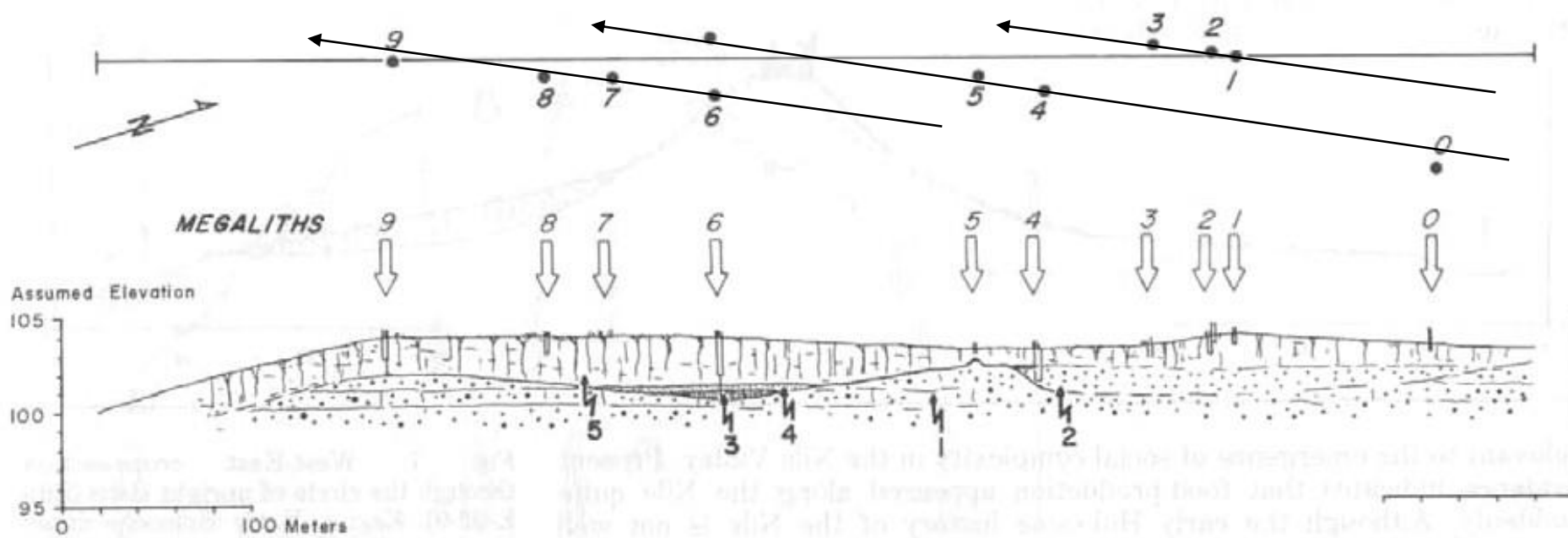




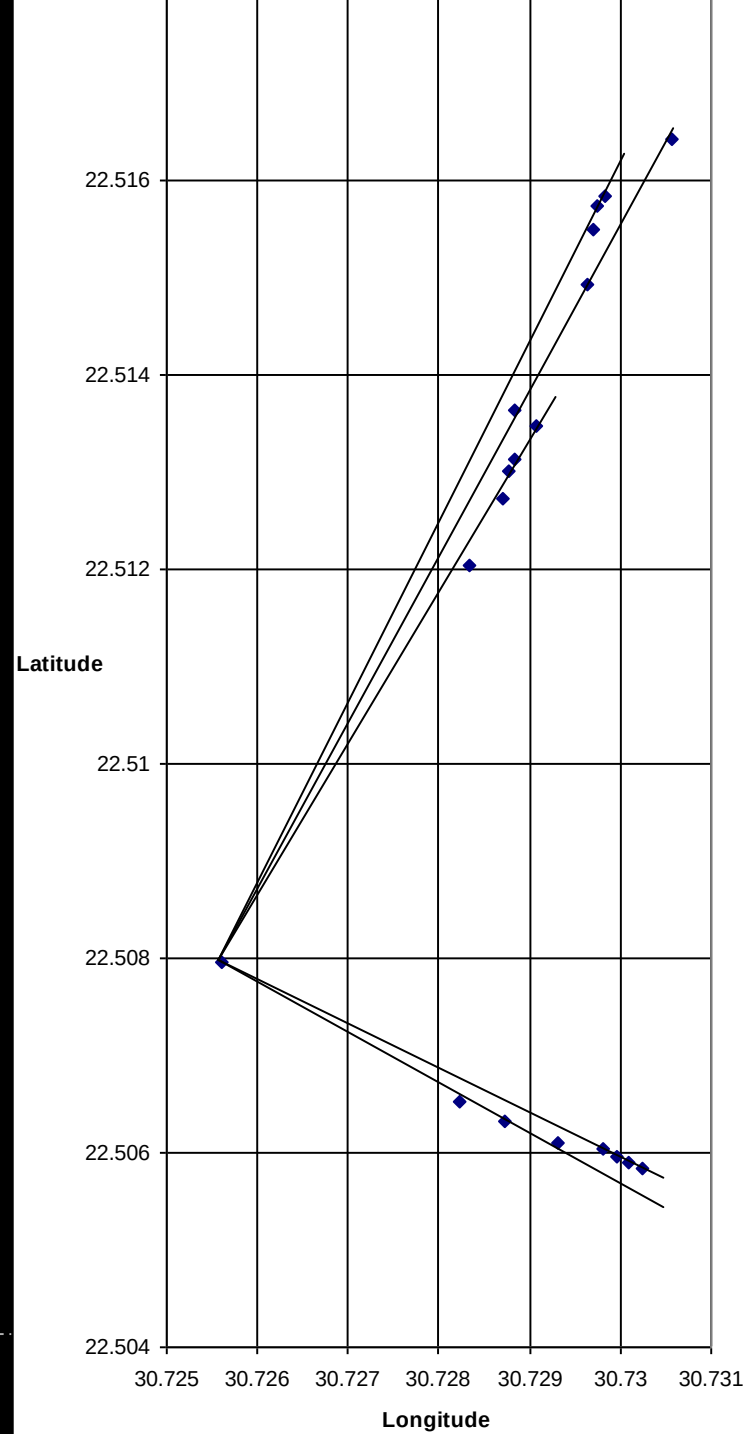
Fields of Stele

- ▶ Five alignments of stele.
- ▶ Sculptured with anthropomorphic rounded shoulders.
- ▶ Face north circumpolar region
- ▶ Groupings may represent souls of departed members of clans or extended families.
- ▶ Five radio carbon dates from the quarry are 4500 to 4200 BCE .

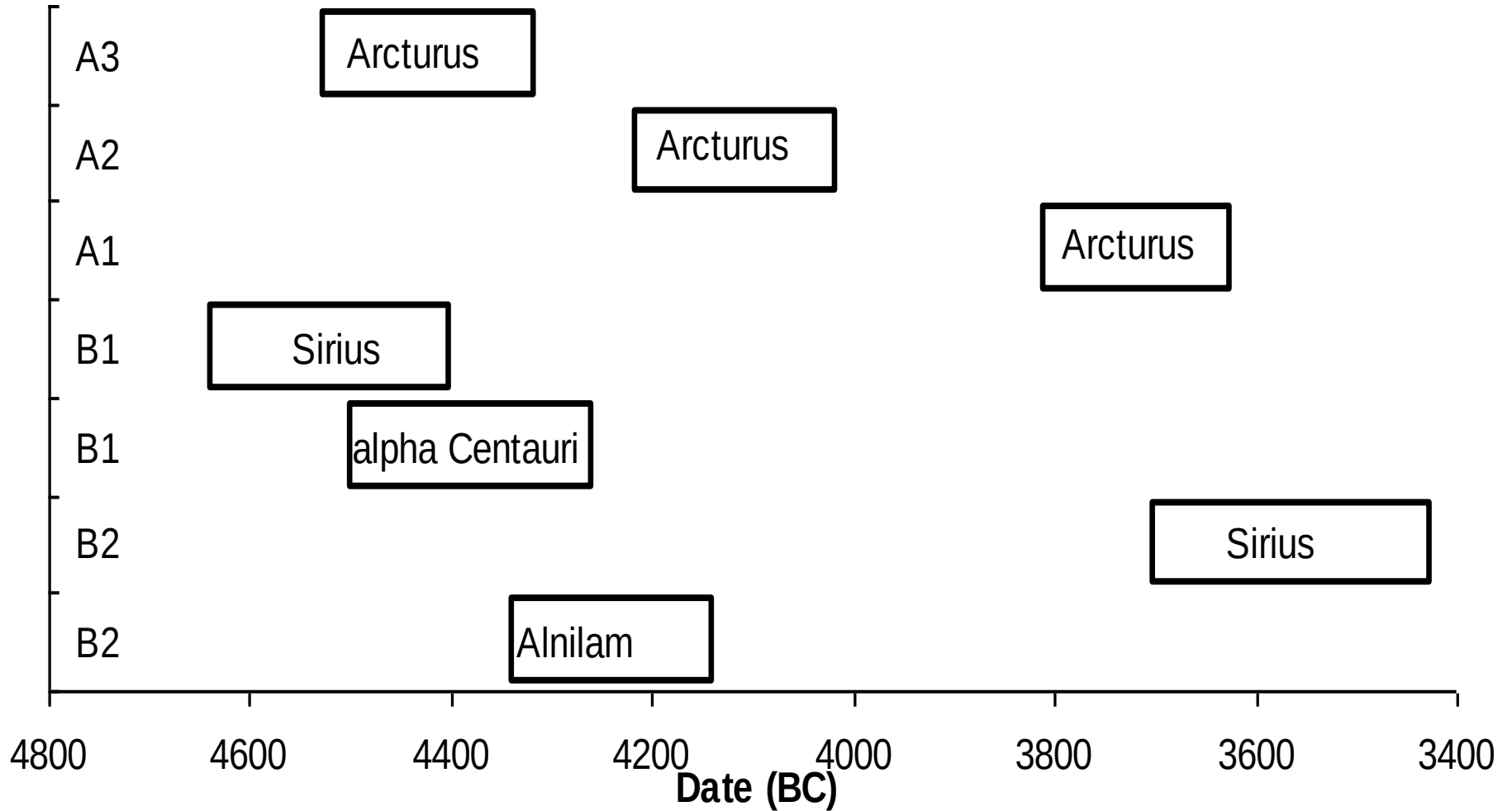








Alignment



Alignments A

Alignment	Azimuth	Star	Dates (BC)
A3	26.3	Arcturus	4530-4320
A2	28.1	Arcturus	4220-4020
A1	30.6	Arcturus	3810-3630

Alignments B

Alignment	Azimuth	Star	Dates(BC)
B2	116.6	Alnilam (Belt of Orion) Sirius Winter Solstice	4340-4150 3700-3430
B1	120.1	Sirius A Centauri	4640-4400 4500-4240

- ▶ Water entered the playa in the northwest through the Valley of Sacrifices, which contained about ten e tumuli with articulated pieces of butchered cattle, goats, and sheep.
- ▶ The largest contained an entire young cow, the most precious offering that a herder can make, contained in an elaborated chamber covered by a tamarisk roof.
- ▶ A piece of wood from its roof yielded a radio carbon date of about 5500 years BC. Probably a female just entering adulthood, the animal, lying on its left side, was oriented approximately north-south, with its head in the west.

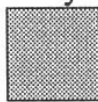
- ▶ This would have been the place to perform sacrifices and ceremonies to ask for water from the gods.



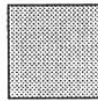
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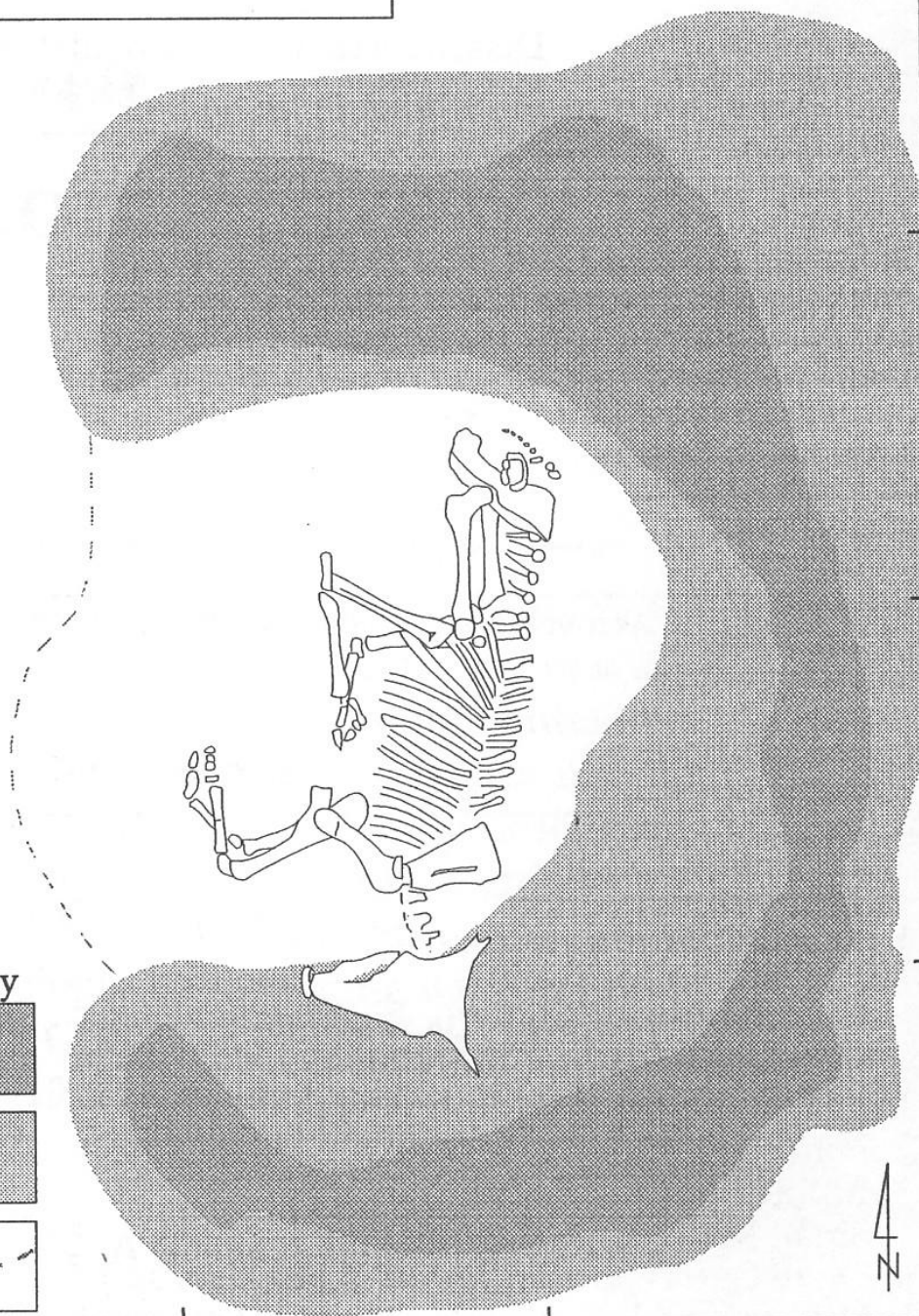
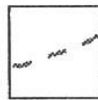
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2



3



Calendar Circle

4890 BCE

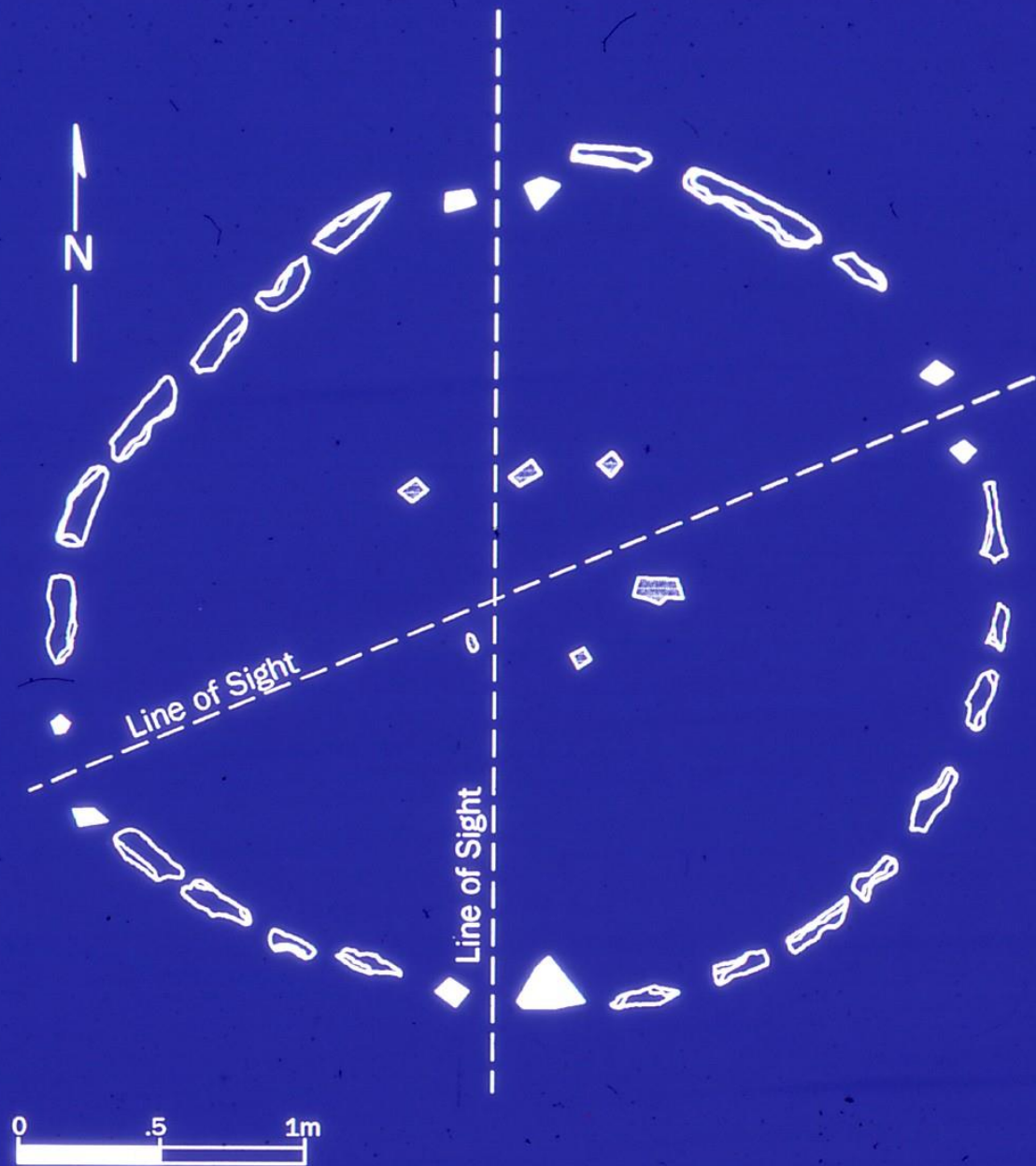














- ▶ The megalithic alignments radiate outward from the largest tumulus.
- ▶ Beneath, the builders of the structure had dug a pit through playa sediments to expose a table rock at a depth of 2.6 m.
- ▶ The pit was partially refilled and a large secondary stone, weighing 2-3 tons, was placed upright above the center of the table rock. The stone has a vague resemblance to a cow



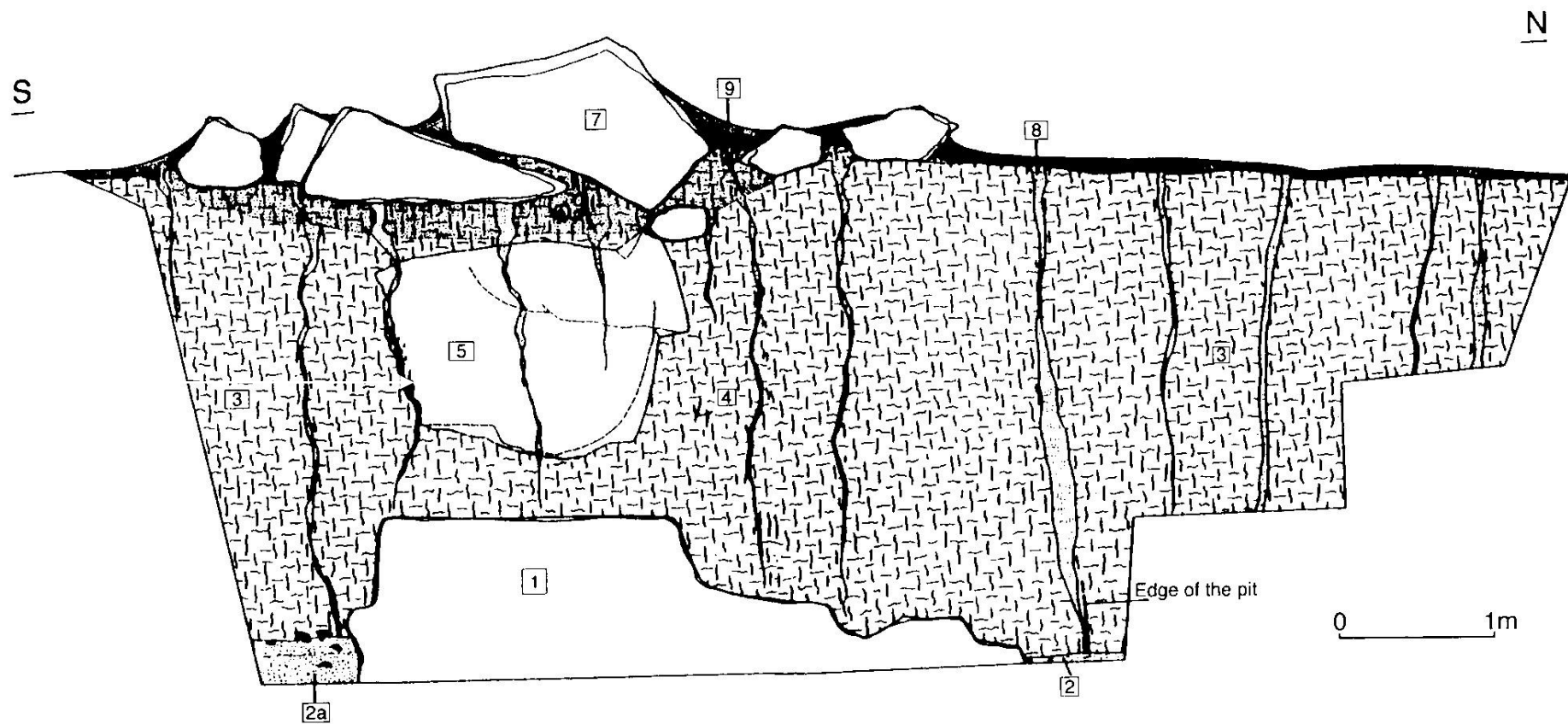
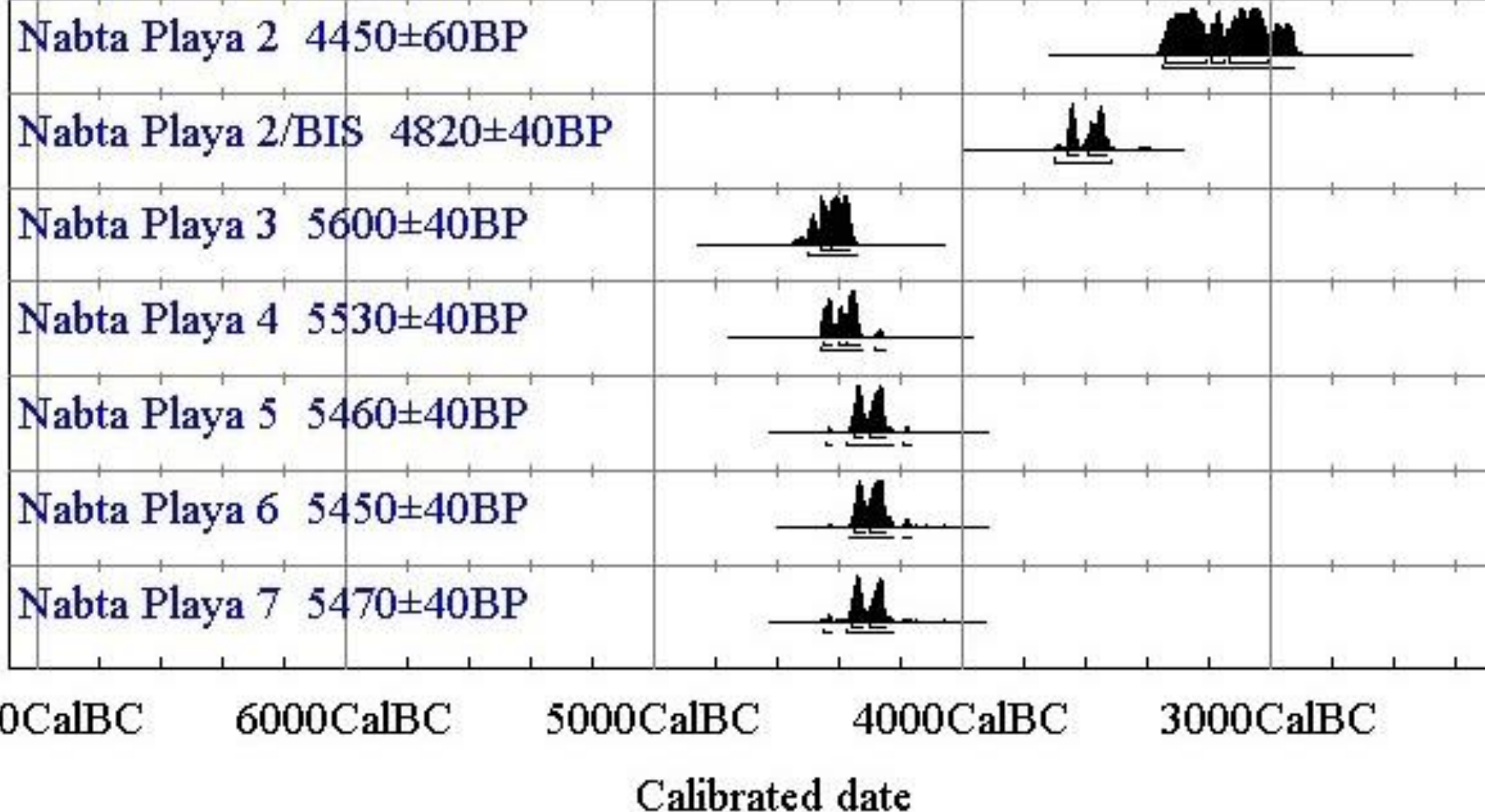




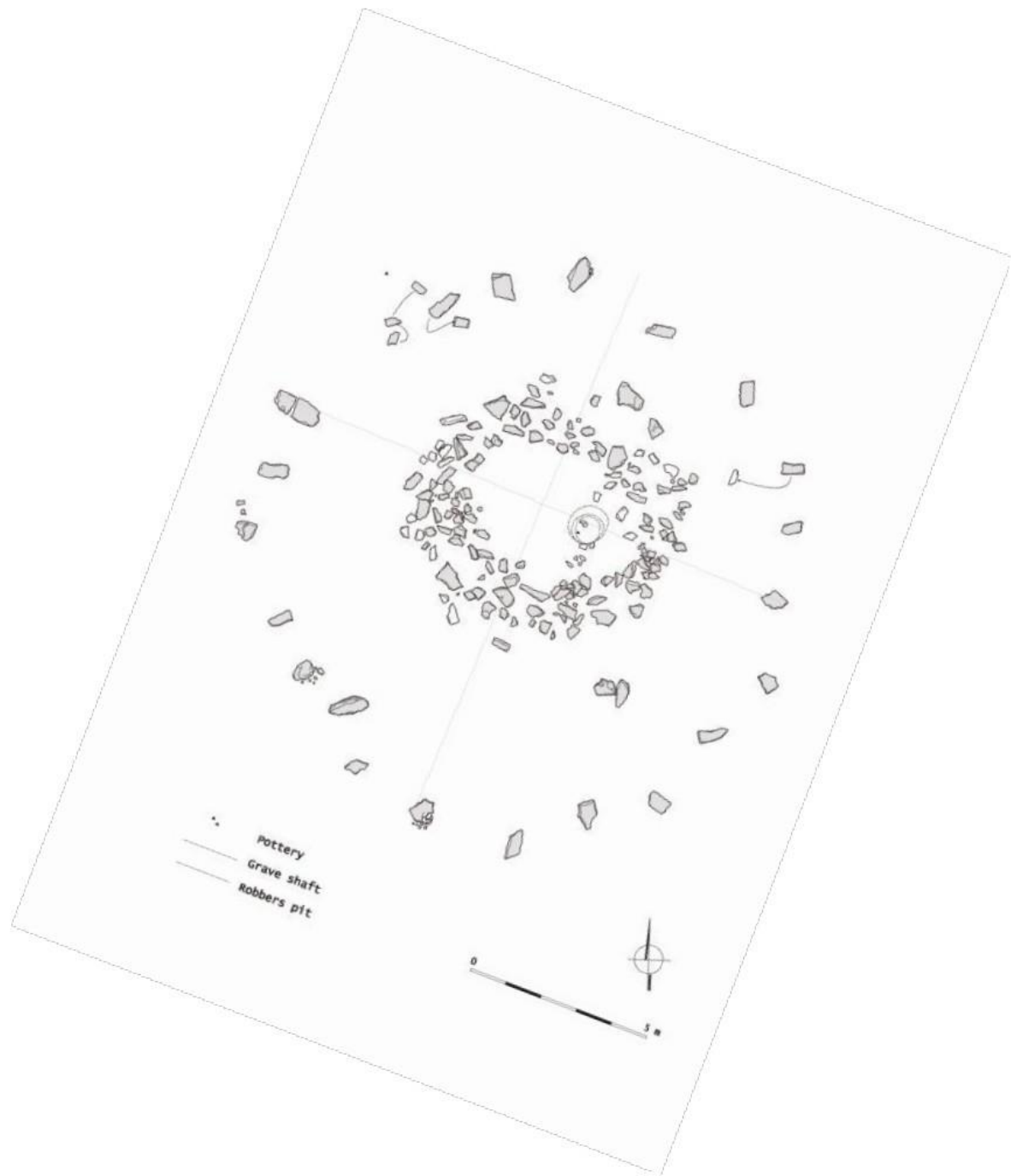
Table rock at bottom of pit of Complex Structure A













Burials facing south the realm of the dead- similar to burials in Nubia



N

TULUP

BEAKER



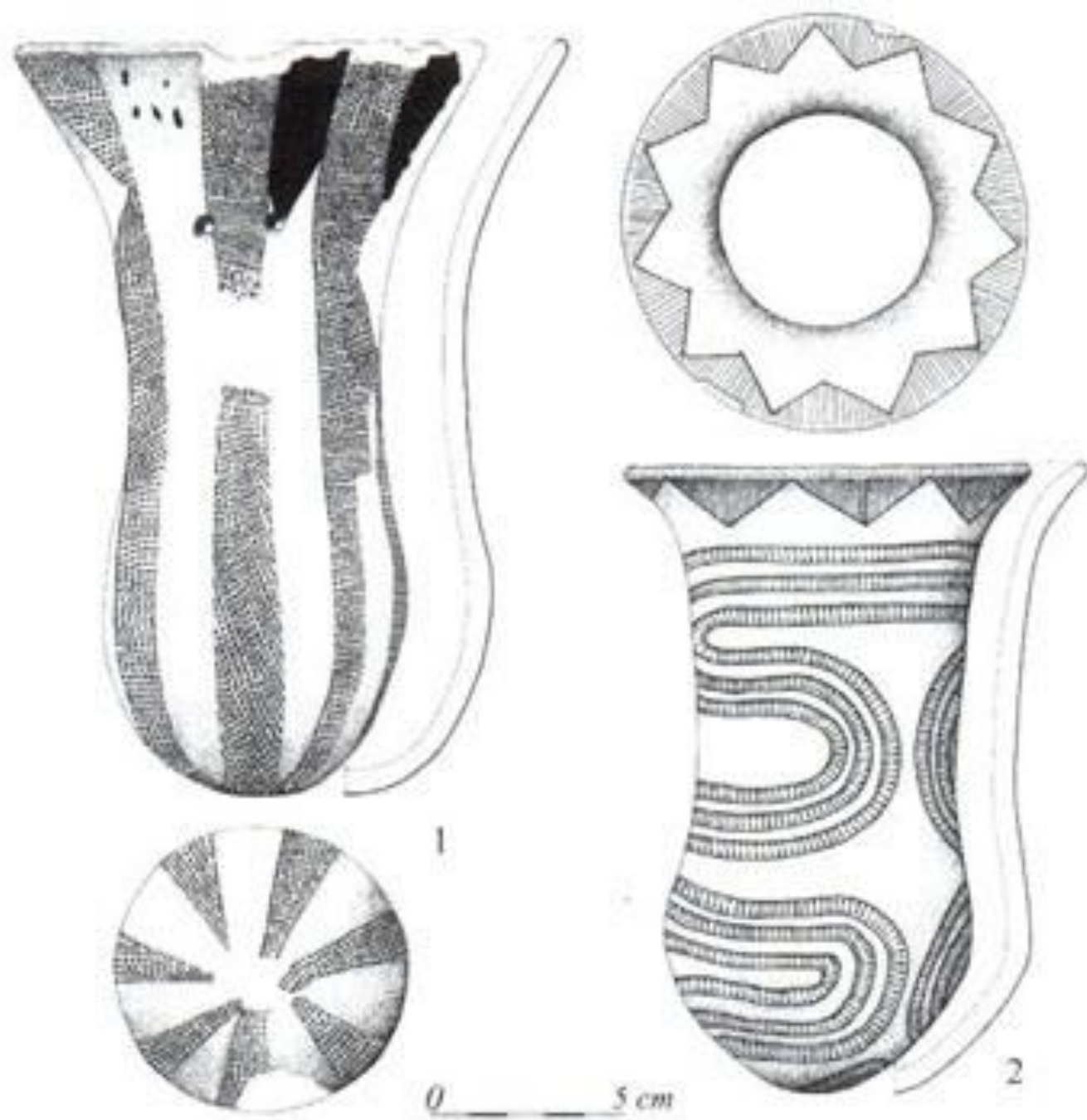


Figure 3. Gold Beadlets. From Site F. 91. 2. 1. 2. (continued) by Dr. J. J. J.

Slab of mica fashioned into tilapia from Red Sea



Bracelet of mussel shells from Red Sea



Hathor

- ▶ Evidence of influence on Dynastic Egypt of nomadic pastoralists of the Sahara: cattle were not important for the agriculturists of the Nile Valley, whereas they were worshipped by the nomads.







- ▶ Transformation of the cow to the goddess and creator of the sun.
- ▶ The ultimate conflation of sun worship and cattle worship, which appears in Nabta Playa.
- ▶ The sun is entwined by a snake, a hazard of the Nile valley.





OASIS

PALE
ALE

BREWED AND BOTTLED IN BOULDER, COLORADO