

An ET Horoscope

An ET-face plaque from Mexico, interpreted as a horoscope

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Abstract

This paper describes where the carved images on a small stone plaque, said by its seller to come from Mexico, appear to belong in the night sky.



Front

Back

Photographs by Michael Forest

The plaque is carved as what appears to be the face of an infant ET. On the front, the recto, above the eyes, is a carved circle holding seven small signs. On the back, the verso, is one large sign, called here the back sign.

Each sign was traced and laid over star charts of past dates. The back sign is placed on the stars around the north pole of the sky: its top edge runs from Polaris, the pole star today, to Vega, which was near the pole about 14,000 years ago. The seven small signs are placed on seven neighboring constellations of the zodiac, in their order around the sky. Laid on the stars this way, the back sign turns around the pole through the night like the hand of a clock, so it can be read as a stardial.

Each placement was measured and, where a test could be made, compared with the same figure laid at random places. None of the tested placements passed the usual standard of 5 percent: the back sign 10 to 51 percent, by how close to a star a corner must lie (on an earlier test placement); sign 7 5.5 percent (not allowing for the redrawing and the several versions tried); and sign 6 60 percent; signs 1 to 5 were not tested. Compared by shape with 5,289 signs of 107 writing systems, the back sign's closest match was poorer than the closest match of any script sign. The decipherment remains a conjecture until other objects confirm it.

The author bought the plaque because its carved circle looked like a horoscope; the author had written a book on reading character from the shapes the planets make on a chart. Part Two reads the nine carved lines that way, as the birth chart of a steady, self-contained person. No date is fixed, and no sign is read as a word.

Keywords. horoscope; zodiac; star map; north celestial pole; Polaris; Vega; planisphere; naked-eye astronomy; archaeoastronomy; epigraphy; decipherment; carved stone plaque; ET face; Ojuelos stones; Ojuelos de Jalisco; Mexico; stroke order; planetary patterns; ancient astrology.

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Part One. The decipherment of the plaque

Part One displays and describes the plaque, how it was made, and its signs, then lays each sign on star charts of the ancient sky and tests selected placements against random placements.

1. Introduction

The plaque. This is a small carved stone plaque, said by its seller to be from Mexico, about 8 cm (3.1 inches) wide, carved as what appears to be the face of an infant ET (Figures 1 and 2). On the front, the recto, above the eyes, is a carved circle with seven small signs set around it, and nine straight lines cut across it. On the back, the verso, is one large carved sign.

The question, and how it was answered. Do these carved images belong anywhere in the night sky, and if so, where? The author traced each sign and laid it over star charts of past dates, moving it by eye until it lay on the stars. A computer then measured each placement and, where it could, compared it with the same figure laid at random places (section 9 and Appendix C).

The thesis. The author's thesis is that the signs of this plaque form a map of the sky. In it, the large sign on the back is a remembered figure of the northern sky, its top bar running from Polaris to Vega, and the seven small signs of the dial stand for seven neighboring constellations of the zodiac, in their order. The nine lines across the dial can be read, further, as a horoscope.

Where the signs are placed. The author placed the large sign on the back on the stars around the north pole of the sky, its top edge from Polaris, the pole star today, to Vega, near the pole about 14,000 years ago, and the seven small signs of the front on seven neighboring constellations of the zodiac, the band of sky that the Sun, the Moon and the planets travel along.

A stardial. As the sky turns through the night, a sign laid on the stars around the pole turns with them, like the hand of a clock; this paper calls such a sign a stardial (section 8.3).

What is not claimed. No date is fixed, no sign is read as a word, and the maker is not known. The readings are the author's; Appendix A summarizes the measurements.

2. Earlier studies and other decipherments

What has been written. The objects of this kind are known to collectors as the stones of Ojuelos. The fullest recent account is by Alberto Donini and Tomas Hrico, "Paleocontacts between Mexican natives and Otherworldly Entities" (28 pages, hosted by Michael Forest at aliencarvings.com/research-papers). Their paper describes the hill, Cerro del Toro, five kilometers southwest of Ojuelos de Jalisco; the farmers' finds over sixty to eighty years; the estimate of ten to twenty thousand objects in private hands; objects the authors describe as genuine beside acknowledged imitations; and thermoluminescence dates from Laboratory Kotalla in Germany on fired-clay pieces, which fall between about 1800 BC and AD 730.

How their method and ours differ. Their method asks whether the objects are old and what the pictures on them show, and answers with laboratory dates, photographs, and the interpretation of the figures as beings from elsewhere. The method of this paper asks what is on the objects, measured, and whether the signs can be read as anything at all, and answers with scans, counts, and one graphic decipherment. Their work describes the setting the objects are said to come from; this paper supplies the measurements and the decipherment. They describe some symbols on these objects as lacking "any decipherment until today"; this paper offers a decipherment of the signs of one plaque.

One consequence for the date. The published thermoluminescence dates on fired clay from the same hill fall between about 1800 BC and AD 730. Thermoluminescence dates fired clay; it does not date carving in stone, so these dates do not date this plaque. Later tests, reported to the author but not yet published, give a much wider range. The charts of this paper are drawn for 17,660 BC for a reason of their own: it is an epoch that follows from the placement of the back sign (section 10).

How decipherments begin. Many decipherments began with very few signs and one anchor that could be checked from outside. In 1802 Georg Friedrich Grotefend read a few signs of Old Persian cuneiform by guessing that repeated groups were the names and titles of kings known from Greek history. In 1822 Jean-François Champollion announced his decipherment of Egyptian hieroglyphs, from royal names in cartouches, checked against the Greek of the Rosetta Stone. In 1952 Michael Ventris read Linear B from a grid of signs and a few place names of Crete, and Yuri Knorozov began reading Maya writing from a list of signs recorded in the 1500s (Robinson 2002; Coe 1992).

When the anchor is the sky

In some decipherments the sky gave the anchor: signs and numbers were read, in part, by what they pointed to in the sky, alongside inscriptions, context and dating.

The Venus table. In the late 1800s Ernst Förstemann showed that pages of the Maya Dresden Codex are a table of the planet Venus: their numbers count its cycles in the sky (Coe 1992).

The Egyptian star clocks. Tables painted inside Egyptian coffin lids of about 2000 BC list stars in columns, one column for each ten days of the year. They were read as star clocks: the stars that rose in turn through the night told its hours (Neugebauer and Parker 1960), the closest relative of the stardial of this paper.

The Dendera zodiac, and a warning. When the carved zodiac of the temple of Dendera reached Paris in the 1820s, some scholars dated it many thousands of years back from the slow turning of the sky, precession. Champollion read the title autocrator, used by Roman emperors, in a drawing of a cartouche (the real one proved empty); other evidence confirmed that the zodiac is about two thousand years old (Buchwald and Josefowicz 2010). Dates read from the sky are not the age of the object; this paper keeps the two apart (section 10).

The Antikythera mechanism. A corroded bronze device found in a Greek shipwreck was decoded from its gear counts and its inscriptions, which match the cycles of the Moon and the Sun (Freeth and colleagues 2006).

The Babylonian star list. Clay tablets of the series MUL.APIN, known from copies of the 600s BC, list the constellations and those along the path of the Moon: the record from which the twelve signs of the zodiac grew (Hunger and Pingree 1989; Rogers 1998).

The Nebra sky disc. A bronze disc found in Germany, buried about 1600 BC, carries a gold Sun or full Moon, a crescent and seven dots often read as the Pleiades; two gold arcs, one now lost, were added on opposite edges (Pásztor and Roslund 2007).

The anchor here. In the author's view, the plaque belongs in this company: each of these was read, in part, against the sky, and so is this one. Its anchor is the sky, Polaris, Vega and the order of the zodiac, which anyone with a star chart can check.

3. How this decipherment began

A separate decipherment. The decipherment in this paper is separate from those described in section 2. It was made on this plaque alone, and it shares with them only the method of an outside anchor.

Who did what. The author measured the plaque, chose every stroke and every placement but one (sign 6 was fitted to the zodiac band by the computer, Appendix C), and made both the decipherment and the interpretation. The author worked with an AI assistant, Claude, made by Anthropic, referred to in this paper as the assistant. The assistant wrote the computer code, measured what the author chose, drew the star charts, and compared each placement with random placements. Where the author and the arithmetic disagree, both are given.

The author's account, in the author's own words. On the day the dial was measured the assistant argued that a chart is a projection, that the sky bends, and that a flat sign cannot be expected to fit it, and set about drawing eighteen ring charts. The author answered:

"but that is how I do it. I make a copy of the glyph as a transparency and enlarge and move over the star fields from different eras to find possible correspondences. If these are a zodiac, then finding one is finding all."

"The difference is that I have been doing this graphic work for over 55 years and was taught by an expert."

"I can do the graphics faster than you can dispute them. Find a possible date."

The author did it. The author's report that afternoon:

"THAT took 45 minutes starting at 1:03pm to 1:40pm approx. for 6 signs. on zodiac 130bc."

And the next day, asked how the first sign found its place:

"I just opened a star map and opened the first glyph [sign 1] and made it yellow and dropped it on the map graphic and moved it a few inches and it seemed to roughly fit so I rotated it a bit and left it at that and went on."

"This was an almost random discovery, but I knew what I was looking for and what the map should look like."

What the author was looking for. Fifty-five years of graphic work had given the author the pattern of the northern sky by heart. In the early 1970s the author reviewed Dr. Hugh Anderson Moran's book *The Alphabet and the Ancient Calendar Signs* (Moran 1953) for a college class, and then studied with Dr. Moran through a mentorship program, in special courses for which the author received a few credits. Dr. Moran gave the author a list of books to research in the Stanford University Library stacks, and the author learned some French and German to read them. Rare texts on the calendar signs and early writing were among them. For decades after, the author drew epigraphic star maps as a hobby, in search of the origin of the alphabet and of early writing. So when the author laid the first sign of the plaque over a star chart, the author was not searching an unknown map for a likely spot. The author was recognizing a pattern of the northern sky already known by heart.

The author's earlier papers. The method of this paper, laying a sign over a star chart of its date and looking for the stars it was drawn from, is the one the author set out in earlier papers, among them *Celestial Scripts and Inscriptions* and *Astral Art and Astral Epigraphy*, posted by the author on academia.edu and not otherwise published. Those papers propose that many ancient inscriptions were drawn from star patterns. This paper does not depend on that wider proposal. This paper studies one plaque.

What the assistant had done instead. The assistant had measured the dial, drawn eighteen ring charts of the zodiac for eighteen ages, computed the longitude of every one of the author's layers, and looked for the fit in numbers. The numbers did not find a placement. The author's eye did, in an afternoon, and the numbers were then set to work checking it. That order — eye first, arithmetic after — is the method of this paper, and section 9 says what the arithmetic found.

4. The artifact

What it is. An ET-face, mask-shaped plaque (Figure 1), 78 mm wide across the top, 84 mm across the earrings and about 5 cm (2 inches) high from the top edge to the chin, and it weighs 86 g (Appendix A). The plaque is a fragment, broken away below the chin. The eyes are incised in almond shape, each drawn as two almonds, one inside the other. Two stone earrings are mounted through holes cut in the plaque and bedded in a golden-brown adhesive. The plate is 8.3 to 12.4 mm thick and its sides curve inward.

Its two sides and its edge. The plaque has two broad, nearly flat sides. The front, called the recto, carries the ET face and the dial. The back, called the verso, carries one large sign. The narrow surface that runs all around the outline, between the two sides, is the edge. Toward the edge, the front curves down in a smooth roll and meets the edge at a blunt ridge, like the back of a dull knife, or the curl of a wave where it meets the beach; the edges share this shape all around the outline. In this paper "side" means one of the two broad surfaces, and "face" means only the ET face (Glossary).

The front, part by part. The ET face, with its almond eyes, fills the lower part, with a stone earring at each side. Above the face is the dial (section 6): an outer band of seven compartments, the sign band, one sign in each; a ring of short rungs; and an inner field crossed by nine carved lines, which Part Two interprets as the aspect lines of a horoscope chart.

When it came to the author. The author bought the plaque on eBay from Michael Forest (Aliencarvings) on 8 January 2026. Work began a little earlier, on the seller's photographs: the author's tracings date from 27 to 31 December 2025, and the cut-outs of the signs from 6 January 2026.

Where it comes from. The plaque was sold as coming from the region of Ojuelos de Jalisco, Mexico. That is the vendor's word and nothing more is known. The plaque's receipts, online documentation and border papers were examined. There is no findspot, no excavation and no context.

What it is called. In this paper it is the plaque. The seven signs of the dial are called by number, sign 1 to sign 7, and the one large sign on the back is the back sign. The numbers are labels, not readings.

The plaque



Figure 1. The plaque, front (recto). The dial above the face, the two earrings below. Photograph: Michael Forest.



Figure 2. The plaque, back (verso), with the single large sign: the back sign. Photograph: Michael Forest.

5. How the plaque may have been made

The sides and the edge disagree. The two broad sides are smooth, almost shiny. The edge appears filed and sanded: possibly rubbed with a rough, file-like tool and then with grit, which would leave pits and fine scratches like those seen, some as fine as a hair. On a piece carved by hand, the broad sides are usually no smoother than the edge. Flattening a broad surface by hand is slow work, and the work tends to leave marks. On this plaque, the two broad sides are the smoothest surfaces of all. That is consistent with a molded object: its broad sides would take their smoothness from the mold, and its edge would be rough if it was cut loose and filed afterward. This is the strongest single observation about the making. Figure 25 shows the edge under the microscope (Appendix D).

The thickness across the face. Across the face the plaque is 8.30 mm thick at the top center, 8.69 mm at the chin, and 10.34 mm at its thickest, although both sides curve; at the edges, where the front rolls down, it is 11.8 to 12.4 mm. A soft sheet pressed over a curved form bends to the curve and stays about as thick as it was. A piece carved from a solid block keeps an even thickness only if the carver shapes both sides to match, which takes care; otherwise the thickness tends to wander from place to place. A thickness that changes by only about 2 mm across a curved face is therefore a little more consistent with pressing than with carving. It does not prove pressing.

The material, from home tests. The following are simple tests the author made at home with household materials, not laboratory analyses. In vinegar, a weak acid, the golden-brown adhesive under the earrings dissolved and came away in shreds. On the intact surface the vinegar showed no reaction; with the plaque under vinegar, a stream of fine bubbles rose from a spot that had been scratched, as from a carbonate. The earrings gave no visible bubbles in a full minute. These home tests, recorded on 27 August 2026, do not identify either material. A fingernail does not scratch the plaque. The spot chosen for the test already looked worn away before the test; the vinegar did not make that hollow. In the hollow at the tested spot, three short white plates lie parallel to the faces, very straight for their length, as particles settle in a slurry or lie under pressure. The material is not yet named.

The working hypothesis. A slab of composite was cast flat, laid over a form, pressed under a second form, released, filed at the edges, perhaps, and inscribed with a fine point while it was still soft enough to cut, and hardened afterward. Tests remain — the

parting plane, the density, the groove profile at a stroke end — and it is stated as a hypothesis. The hypothesis matters to this paper in one way: under it, the signs were carved into a blank body, so their layout was chosen, not inherited. A mold taken from a carved master is not ruled out (Appendix D). A first look under the microscope (Appendix D) found no seam on the edge, but the edge appears filed, and filing would remove a seam. The microscope also found stroke ends that narrow to a point, as strokes carved with a point do, and groove outlines that are rough, the stone along them fractured.

No layout marks. No stencil or chalk-like outline has been seen so far, on this plaque or on related objects shown in sellers' videos. The designs and the signs may have been laid out first, in a way that left no trace, and carved afterward.

Carved, not drawn. The plaque is stone, or a stone-like material, and its signs are carved into it. A drawn line lies on a surface, in ink or paint. A carved line is a groove cut down into the material: a glyph groove. Every sign on this plaque, from the small signs of the dial to the large sign on the back, is made of glyph grooves. Each groove appears to have been cut with a hard point, dragged across the surface with a certain pressure and at a certain angle. Along both edges of every stroke the outline is rough, and the stone looks fractured, as stone does where a point has dug a groove through it. So each glyph groove has an uneven outline on either side of its center line, the line down the middle of the stroke (Appendix D).

Soft when cut, hard now. The signs appear to have been cut when the material was soft enough for a point to cut grooves like these. How deep the grooves are has not yet been measured. The material seems to have hardened since. On 6 October 2026 the author scratched a small isolated spot on the back, at the left, with a steel instrument with a pointed but not sharp tip: with reasonable pressure the tip made only a shallow scratch, about 1.5 mm (1/16 inch) long. That scratch, too, began thin and ended deeper, and the cut stone gathered at its end. The material is not even throughout: it holds irregular hard grains, such as small black particles.

6. The dial

A circle above the face. On the recto, above the eyes, sits a circle about 31 mm across (Figure 3). The rim of the circle departs from a true circle by a median of under a tenth of a millimeter. Only its lower part is worked; the upper part runs off the top of the plaque.

Three bands, from the inside out. The inner field, crossed by nine straight lines. A serrated ring of 36 short rungs. An outer band divided by eight radial lines into seven compartments, one sign in each.

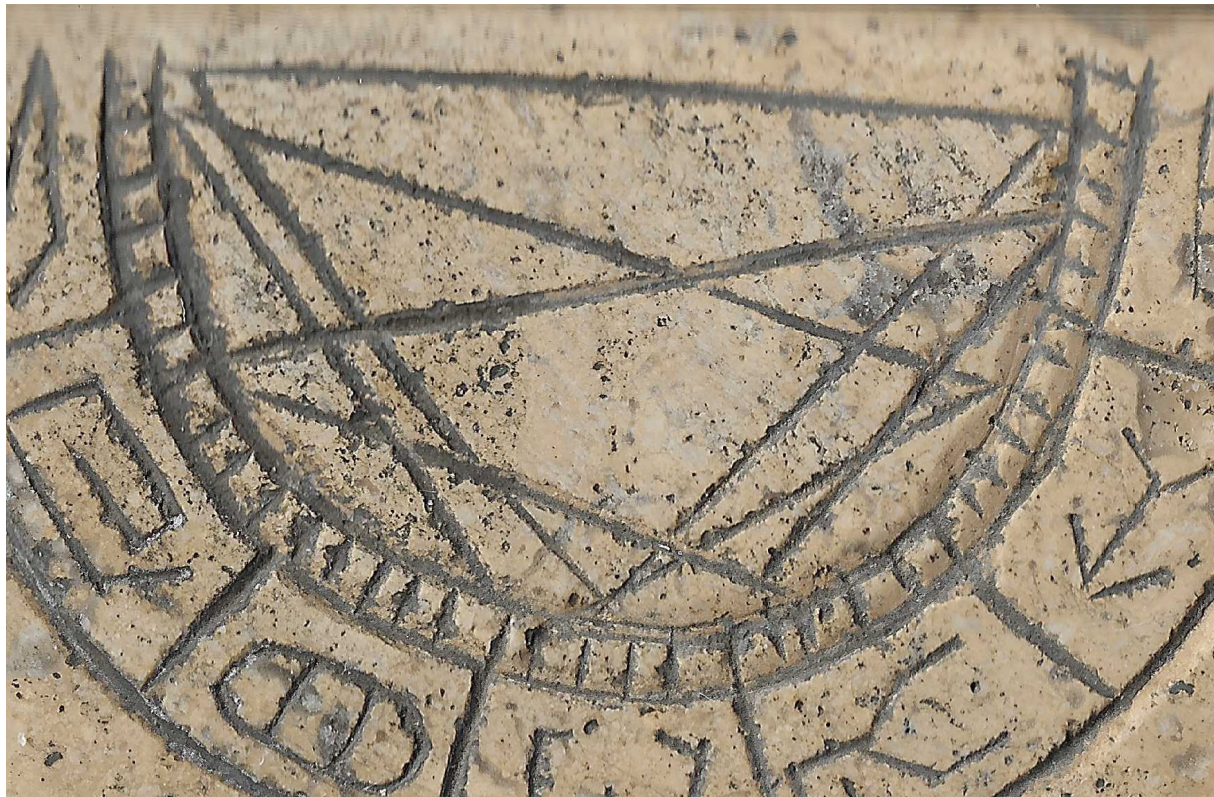


Figure 3. The dial on the 1200 dpi scan.

The compartments are twelfths. The compartments are shown unwrapped in Figure 4. The five middle compartments are 27.5 to 31.8 degrees wide, mean 29 degrees. A twelfth of a circle is 30 degrees. The two end compartments are wider, 36 and 37 degrees. The centers of the two end compartments are about 182 degrees apart; the full band between the outer dividers spans 218.6 degrees.

The rungs are near sixtieths, and that is as far as it goes. The 36 rungs of the serrated ring stand 6.07 to 6.25 degrees apart, depending on whether one counts the

rungs or the gaps between them -- a distinction the object does not settle. A full circle would carry between 57.6 and 59.3 of them, near sixty, but sixty is just outside that range. The rungs do not divide the compartments evenly either: a compartment is 4.4 to 6.1 rungs wide, and the seven sit no closer to whole numbers of rungs than seven unrelated widths would. An earlier draft of this paper said five rungs to a compartment. That was wrong and is withdrawn.

The rungs differ in length. The author noticed that the rungs are not all the same length. Each seems to have been cut on its own, perhaps with a file-like tool with a single tooth, which allows a more exact cut than a tool with many teeth.

The lines. Nine carved lines cross the inner field of the dial. The author traced each one on the photograph, point by point, and lettered them A to I from the top left (Figures 13 and 14, in section 12). Line A runs along the top edge of the dial. The ends of the lines meet at nine points on the rim of the inner field; several of these points are shared by two, three or four lines. A circle drawn through all the line ends fits them to about 0.3 mm on the stone. What the lines make together is described in section 12.

The lines were there from the start. The lines are plain to see in the seller's own photograph of the plaque (Figure 1), taken before the author had the plaque. They are carved lines, not lines added by tracing or by the computer.

Why the lines bend. The lines are not quite straight. Several bend where they come near another line, and some stop a little short of the point they aim at, or join another stroke that is going the same way. The author reads this as a result of how carving works. A line once cut cannot be uncut, so each later stroke has to work around the earlier ones. If the point of the tool comes too close to a groove already carved, the thin wall of stone between them can crack. So a stroke ends where it safely can: short of its goal but still pointing at it, or merged into a neighboring stroke headed the same way. The design follows an exact geometry; the carving follows the design as closely as the stone allows.

What that means for measuring. A stroke that stops short, or bends to join another, may still show where the carver meant it to go, but its end is not the exact point of the design. Any direction measured from such a stroke carries that uncertainty. For that reason the lines in this paper are described by where they end and where they meet, not by straight lines drawn through them.

An earlier measurement, withdrawn. Earlier drafts gave angles from straight lines that the computer fitted to a tracing of the dial. The carved lines bend, so those angles missed the ends of the lines and are withdrawn. This paper describes each line by the two points where it ends on the rim (section 12).

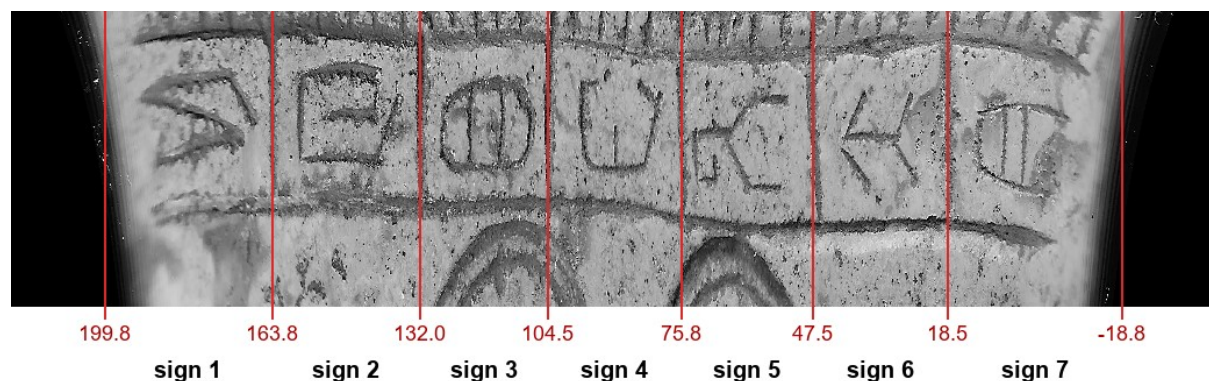


Figure 4. The outer band of the dial unwrapped straight about the circle's center, the glyphs upright as they sit on the object, in the order they are read on it, left to right. Red: the measured dividers, with their angles in degrees.

What these numbers say on their own. Two numbers on the dial can be read as numbers of the sky, and both were measured before anything was placed. The compartments are close to twelfths of a circle -- four of the seven within two degrees of thirty, and a fifth within two and a half. The worked part is about half the circle measured between the centers of its end compartments (182 degrees); measured between its outer dividers it is 218.6 degrees. A circle of twelve, of which about half is shown, is the plan of a zodiac dial, and that plan is on the object whether or not any sign is ever read. A third number, the rungs, is near a sixtieth but is not exact enough to be called one.

And one thing the dial does that the sky does not. The dial is evenly divided. The sky is not: at 5260 BC the twelve zodiac figures stand 18 to 45 degrees apart, while the dial's five middle compartments run 27.5 to 31.8. An object that divides the zodiac into equal parts is dividing it by measure rather than by figure, which is what a scale is for. Dividing by measure also means the signs are not expected to sit tidily inside the Greek outlines, as Figures 8 and 10 show.

7. The eight signs

One sign to a compartment. Seven of the eight signs are on the recto, the front, one to each compartment of the dial; the eighth is on the verso. Reading the dial from left to right as the plaque is held upright, the signs are numbered 1 to 7. Each is shown below as its cut-out from the scan, black on white. Each is a small figure of straight lines and arcs. None shows stars as dots.

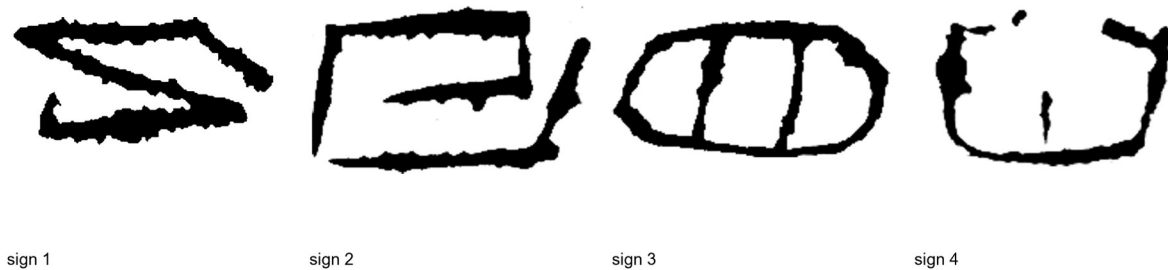


Figure 5a. Dial signs 1 to 4, from the left end of the dial.



Figure 5b. Dial signs 5 to 7, to the right end of the dial.

The verso sign

The verso, the back of the plaque, carries one large sign (Figure 6): a wide bracket, a T-shaped stem, two spirals, and a beak-shaped figure at the right. It is the largest sign on the plaque and the only one on that side. This paper calls it the back sign: the sign of the verso.

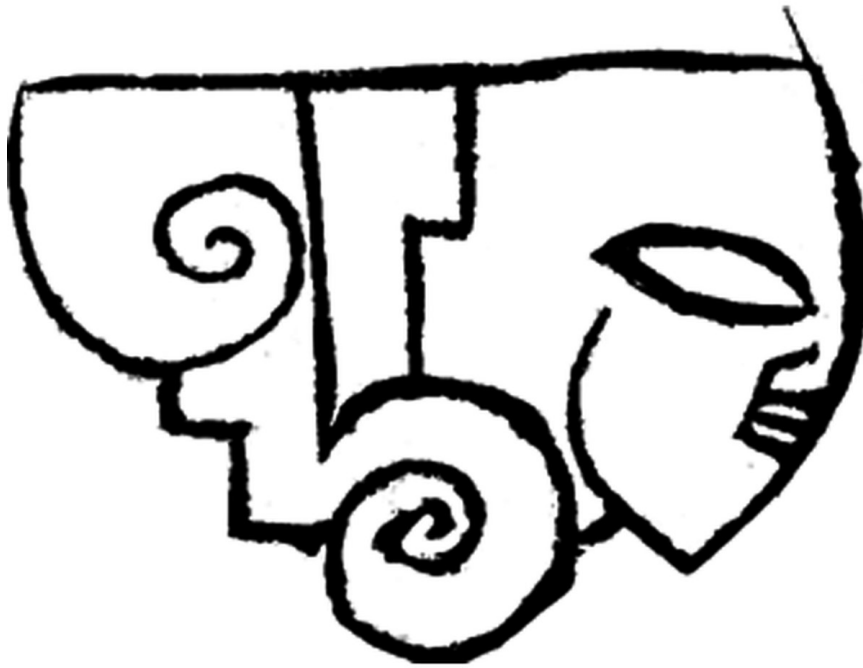


Figure 6. The back sign, the one large sign on the verso.

The arcs. The curved strokes of the dial signs were fitted as arcs. In sign 3, four of its six arcs share one radius, within five percent, struck from two centers; the other two, from a third center, are about a fifth larger. Sign 2 is arcs in pairs, each pair from one center. Sign 4 is two arcs from nearly one point. That is consistent with a compass — or of a stick of fixed length pivoted on a point — though no pivot pits are found on the plaque, and the arcs were fitted by code, not traced by hand.

Primitive geometric forms

Built from a few parts. All eight signs are built from a small kit of geometric parts (Figure 7): straight lines, right-angle steps, arcs struck from a center, two spirals turning opposite ways, an oval, a V, and short parallel strokes. The seven dial signs use only lines and arcs. The large sign on the verso uses every part in the kit. The same parts can be named, counted and looked for on other objects.

Primitive geometric form examples

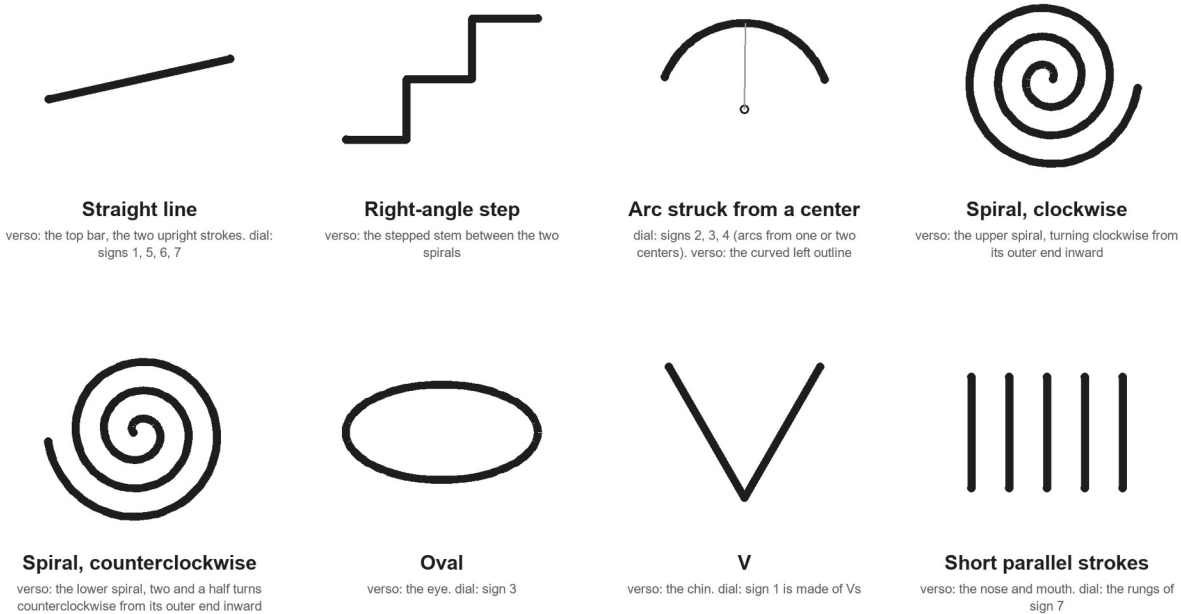


Figure 7. The kit of shapes the eight signs are built from, drawn as clean shapes and named, with the signs each appears in. These are drawings of the kinds of mark, not tracings of the stone.

Designed, not grown. Most writing systems grew over centuries, out of pictures, habits and the needs of a spoken language; a few, such as Korean Hangeul, were designed whole. These signs look designed. Each sits in its own compartment, drawn from the same kit, with its arcs struck from centers. That is the author's observation. The observation can be measured: whether the ends of strokes land on set points of the square that holds the sign, how few distinct parts make up the whole set, and whether every sign fills its square the same way. Those measurements have not yet been made on these signs.

A graphic way of thinking. The author reads the signs as the product of a way of thinking in shapes rather than in sounds. An alphabet needs only some twenty to forty signs, roughly one for each sound. A system that thinks in shapes has no such limit: it can have many more signs than an alphabet needs, and carry ideas directly, as a map or a star chart does (section 12.7). This is the author's view, and a hypothesis. The second plaque from the same seller, with 46 signs, is the subject of a separate paper by the author, "An ET Death Mask" (an unpublished manuscript, October 2026).

8. The signs in the sky

The plaque and its eight signs have now been described. This section lays the signs on star charts: first the seven dial signs on the zodiac (8.1), then the sign on the back on the northern sky (8.2), and last what the back sign does as the sky turns (8.3).

8.1 The seven dial signs on the zodiac

One sign to a constellation. The seven signs are laid on the sky one to a constellation of the zodiac, in the order they sit on the dial.

compartment	sign	constellation
1	sign 1	Gemini
2	sign 2	Taurus
3	sign 3	Aries
4	sign 4	Pisces
5	sign 5	Aquarius
6	sign 6	Capricornus
7	sign 7	Sagittarius, toward Scorpius

Table 1. The seven dial signs and the constellations they are placed on.

The signs as placed. Figure 8 shows all seven signs as they are placed, on the zodiac of 17,660 BC: the date when the pole of the sky passes the middle of the face on the back (section 8.3). Sign 7 is the author's own drawing of it on the zodiac band (Appendix C); sign 6 is traced from its microscope photograph (Appendix D) and was fitted to the band by the computer.

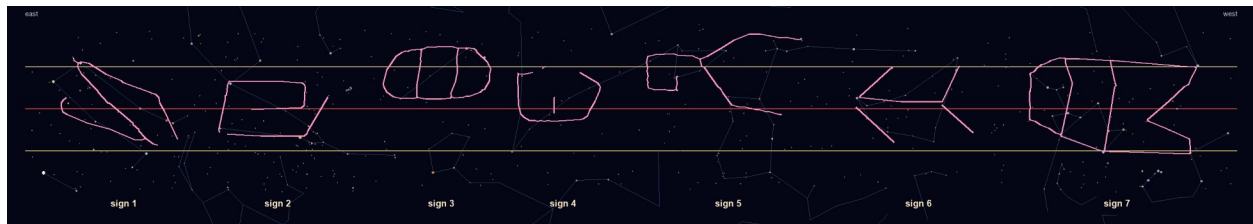


Figure 8. The seven dial signs as they are placed now, on the zodiac of 17,660 BC: signs 1 to 5 as the author placed them, sign 6 traced from the carving and fitted by the computer, and sign 7 as the author drew it again. East is to the left. The zodiac line of that date is red, and the band 8 degrees each side of it is gold.

What the placement says. In the author's placement, the seven signs stand for seven neighboring constellations of the zodiac, running west from Gemini to Sagittarius. On the dial they occupy about half a circle. In the sky they occupy about 217 degrees of the ecliptic, three fifths of the ring. At any hour, about half the zodiac stands above the horizon. The dial, on this decipherment, shows roughly the half of the zodiac a viewer sees.

8.2 The sign on the back

Polaris to Vega. The sign on the back is laid flat on a flat map of the sky centered on it, and scaled so that the two ends of its top bar fall on Polaris (Alpha Ursae Minoris, the pole star today) and on Vega. The author set the ends within 0.7 and 0.8 degrees of the two stars (Figure 9): the closeness of the placing, not a test of it. The rest of the sign covers the sky from Cassiopeia to Cygnus and Lyra; Figure 10 shows all eight signs on that sky. This is the placement of 27 September 2026, the one this paper uses. In every film and chart of this study, the sign is set on the sky of each date by these two stars, as they stood on that date.

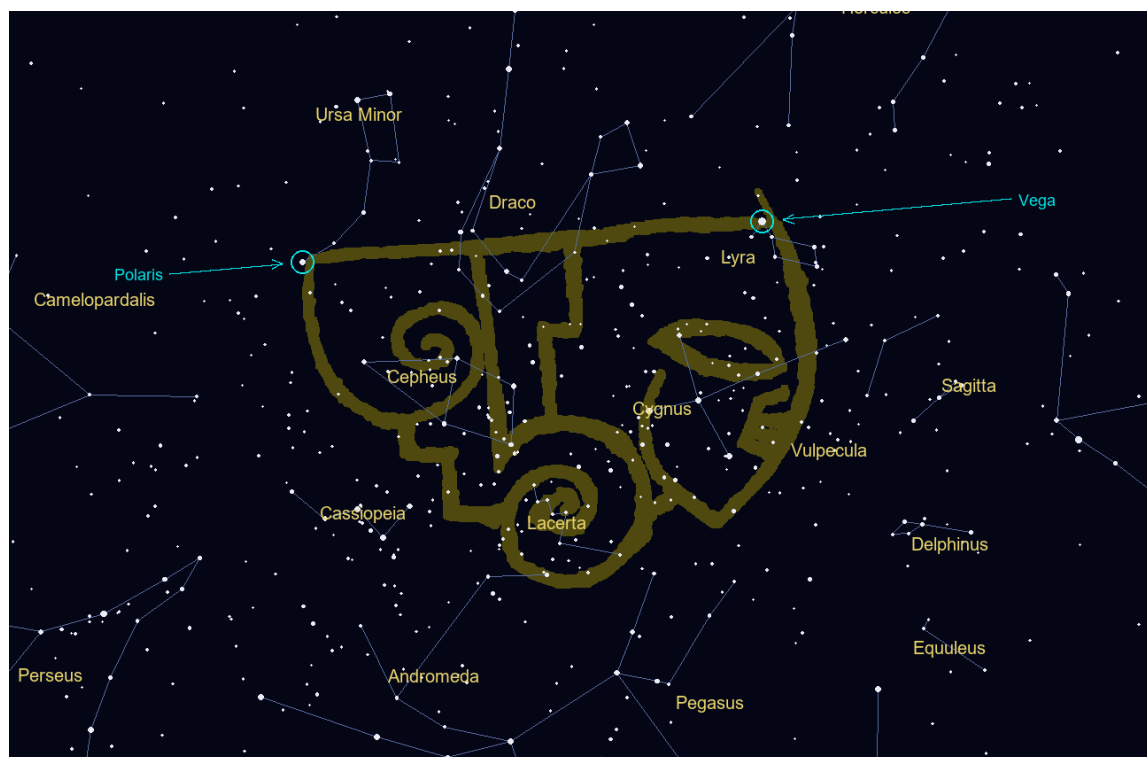


Figure 9. The placement of 27 September 2026, the one this paper uses: the back sign laid flat on the stars, with the two ends of its top bar on Polaris (left, ringed) and Vega (right, ringed). Constellation figures and names: Cartes du Ciel. Placement: the author.

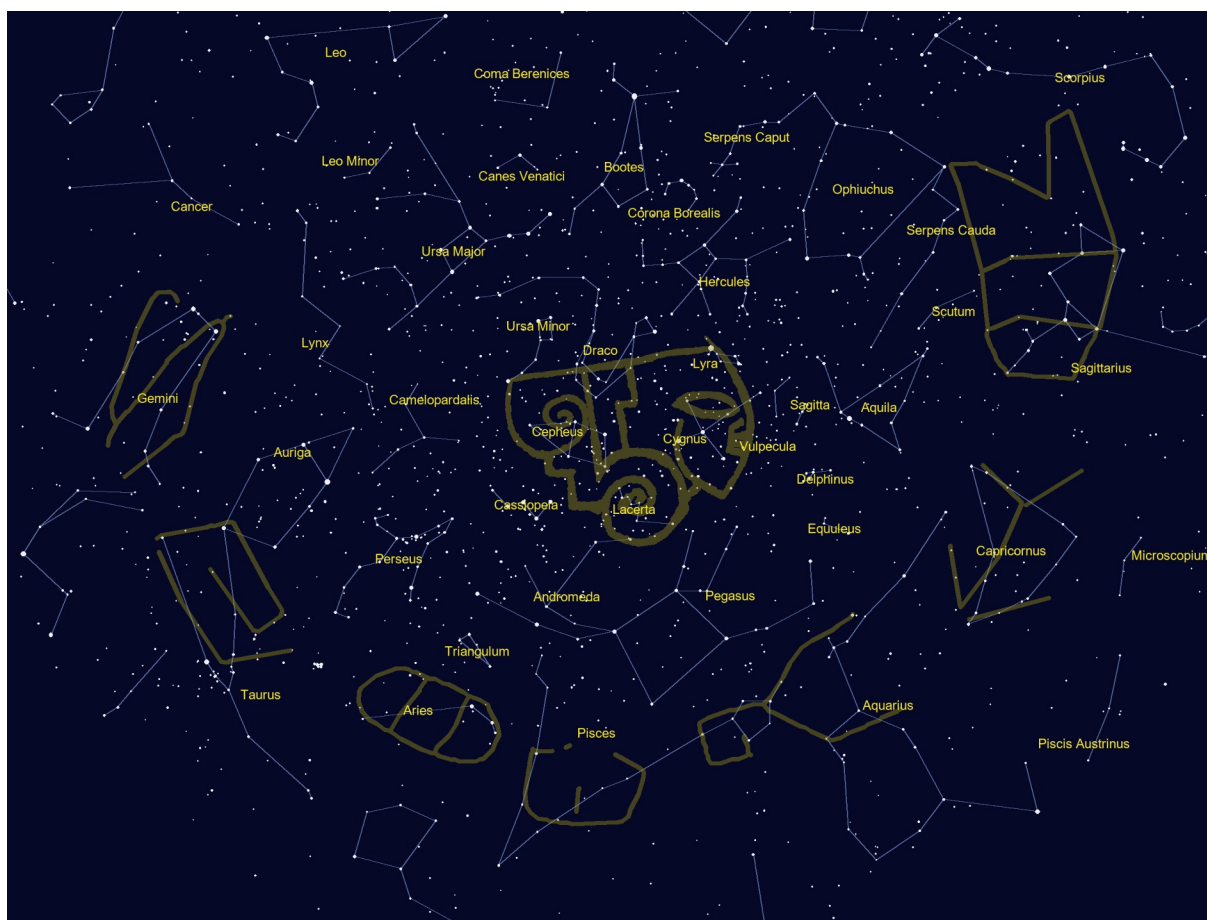


Figure 10. All eight signs as they are placed now, on the sky of 17,660 BC: the back sign, set by Polaris and Vega, in the middle; the seven dial signs along the zodiac below it, Gemini at the left and Sagittarius at the right, with sign 7 as the author drew it again and sign 6 as carved and fitted by the computer. A flat map centered on the pole of the ecliptic; it shows the zodiac signs about twice as large as the back sign. All the signs are drawn faint, so the stars under them show. Constellation figures and names: Cartes du Ciel. Placement: the author (sign 6: the computer).

The key to the face. Over about 25,800 years the Earth's axis turns slowly, and the point in the sky that everything turns around, the celestial pole, walks a small circle among the stars, about 23.5 degrees in radius, around the pole of the ecliptic. Polaris is near that point today. Vega was near it about 12,200 BC. In this placement the pole's circle enters the sign at Polaris, runs down through the face, and leaves the sign near Vega. About 17,660 BC it passes within about one degree of the middle of the face: a chart result, whose uncertainty has not been worked out. So the sign spans the whole path of the pole between the two pole stars, and for thousands of years the sky turned around the face itself.

What it does for the other signs. The seven signs on the front sit in the compartments of a dial. In the author's reading, the sign on the back names the part of the sky those seven belong to: they are a group, and the back sign is their key. The back sign is the sign to look for on other objects for a celestial connection. An earlier test placement, of 19 September 2026, is kept in Appendix F.

8.3 Telling direction and the hours of the night

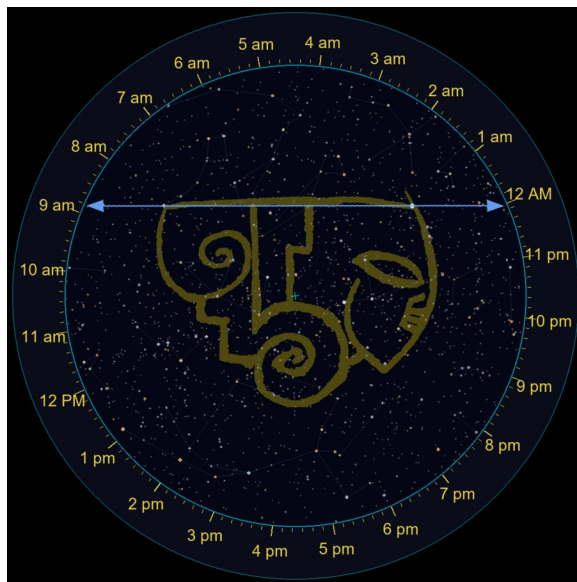
A dial read from the stars. A sundial tells the hour from the Sun by day. A stardial tells it from the stars by night. Seen from Mexico, as from anywhere north of the equator, the northern sky appears to turn counterclockwise around the pole. The planisphere, or star wheel, works this way: a disc printed with the stars turns under a rim marked with the hours. The sky turns once a day around the pole, and a figure fixed among the stars near the pole turns with it, like the hand of a clock. The back sign, laid on the sky by Polaris and Vega (section 8.2), is such a figure: it holds the pole, so the whole sign turns around it through the night. In Figure 12 the sign and the stars are the turning disc, and the hours are marked around the rim.

How it is read. Stand facing north. The pole stands over the north point of the horizon, so the sign gives the direction of north. The height of the pole above the horizon is the viewer's latitude, so the sign tells how far north the viewer stands. As the night goes on, the sign turns counterclockwise around the pole; where the line of its top bar, carried on past Vega, points gives the hour (Figures 11a, 11b and 12). Carried the other way, past Polaris, the line points toward sign 1. The sign cannot tell how far east or west the viewer stands. The hours on the rim come from the turning of the Earth, for one date and place, and shift with the seasons by about two hours a month.

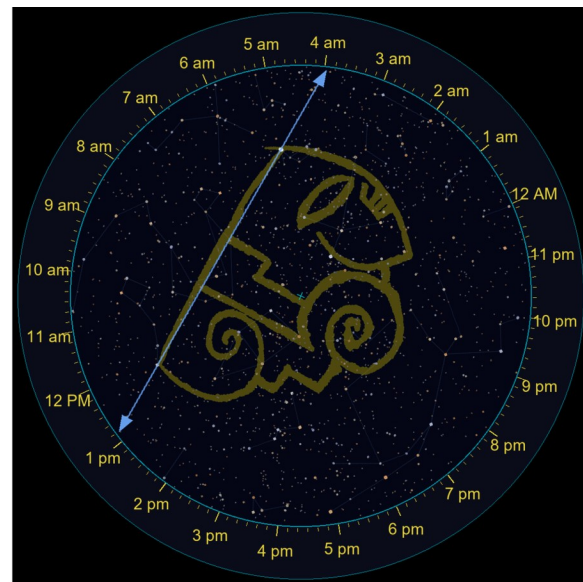
Three epochs illustrated by the placement. Because, in the author's placement, the top bar runs from one pole star to another, three dates stand out. About 17,660 BC the pole passes the middle of the face, and the face turns on its own center (Figure 12). About 12,200 BC Vega is near the pole, about 5 degrees from it, and the sign turns around a point near the right end of its bar. Today Polaris is the pole star, and the sign turns around the left end.

Made for the naked eye. In the author's view, the sign was made for finding one's way under the night sky with the naked eye, and astrology may lie at the foundation of the makers' mythology. Naked-eye astronomy is well recorded in ancient Mexico (Aveni 2001); whether the makers used the sign this way is not known.

The stardial through one turn of the sky



1. Midnight: the top bar level



2. Four hours later

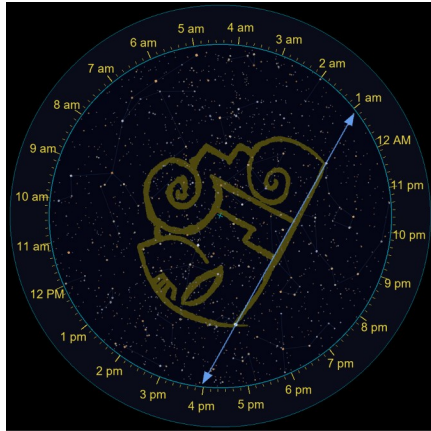


3. Eight hours later

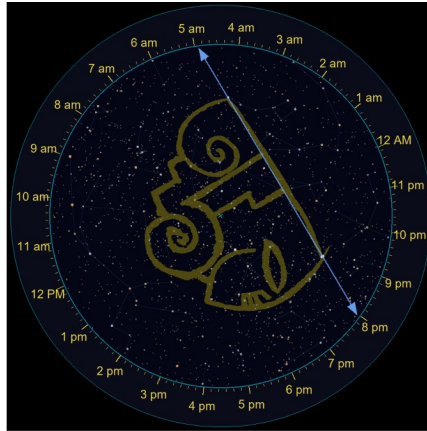


4. Twelve hours later

Figure 11a. The stardial through one turn of the sky, 17,660 BC: moments 1 to 4, four hours apart. The sign, set on the sky by Polaris and Vega, turns around the pole. The faint blue line runs along the top bar both ways, with an arrow past each end: the arrow past Vega points to the hour on the ring; the arrow past Polaris points the other way, toward sign 1. The hour marks are unevenly spaced because the ring is centered on the chart, not on the pole: each mark stands where the bar's line points at that hour. The hours are a schematic example for one date and place; the zero hour, the horizon and the dark hours are illustrative, not a calibration.



5. Sixteen hours later



6. Twenty hours later

Figure 11b. Moments 5 and 6. By day the stars are hidden, but the sky turns on.

The stardial of 17,660 BC, looking north

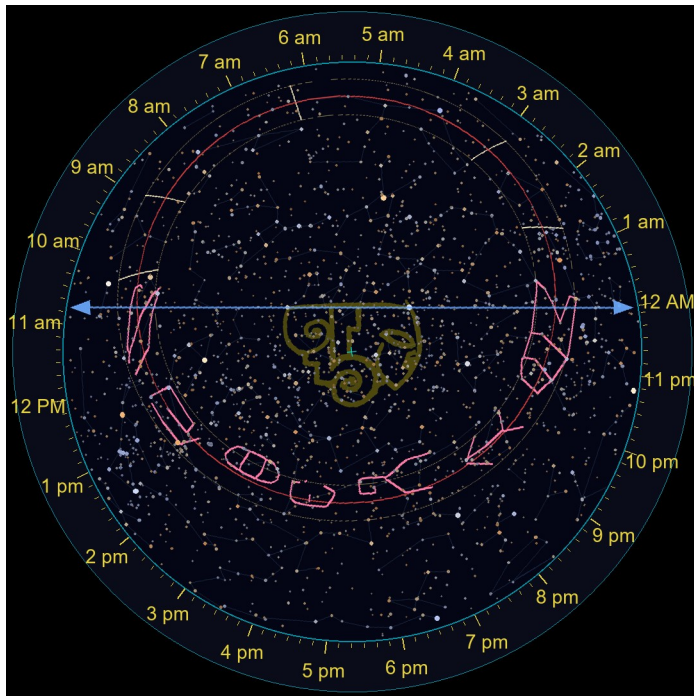


Figure 12. The stardial of 17,660 BC, looking up at the north. The back sign, set on the sky by Polaris and Vega, sits at the middle, around the pole; the seven dial signs lie along the zodiac; all 24 hours are marked around the edge, though the stars show only by night: depending on the latitude and the season, some of these hours fall in the bright daytime, and there they show where the sky stands behind the daylight. The blue line runs both ways along the top bar: past Vega its arrow points to the hour, here midnight; past Polaris it points toward sign 1. As the sky turns, the sign turns with it. The hours are not tied to the zodiac or the stars: they come from the turning of the Earth, for one date and one place, where the horizon decides which hours are dark. The horizon and the dark hours shown are illustrative.

9. How exact a freehand sky map can be

What the arithmetic was asked. Two questions, both narrow. First: do the corners of the graphic drawing of the back sign sit on bright stars more often than the same figure would if dropped at random on the same chart? That is the Random Corners Test, below. Second: does the back sign look like any sign of any known writing?

How a test against random places works. A sky full of stars will fit almost any drawing somewhere. So a fit, on its own, says little. To judge a fit, the drawing is compared with itself, laid where it does not belong. This comparison is called a control test. The drawing is laid at many random places on the same star chart, and each random place is judged in the same way as the real place. If the drawing fits as well at many random places, the test gives its fit at the real place no special standing; if at only a few, the real fit stands out under that test. The result is given as the percent of the tests in which a random place did as well. This paper uses 5 percent as its criterion. A result above it did not meet the criterion under that procedure; it does not show that the drawing has no relation to the stars.

The Random Corners Test. This control test asks whether the corners of the graphic drawing of the back sign sit on bright stars more often than random corners would. The author marked 29 corners of the back sign by hand. The code measured each corner to the nearest bright star on the chart. The test was made on the test placement of 19 September 2026 (Appendix F), and has not been repeated on the placement of 27 September. One corner sits on a star within the distance the test counts: the tip of the beak, on the Cygnus star. The top-left corner of the bracket lies near a star in Cassiopeia, but farther off than the test counts. Then the code dropped the same 29 corners at random on the same chart 4,000 times, turned and moved each time, and counted the corners that landed on stars. In the Random Corners Test, the random corners did as well as the back sign in about 10 percent of the 4,000 tests when a corner must lie within half a degree of a star, 25 percent within about 0.8 degree, and 51 percent within about 1.3 degrees. Under this procedure, that earlier placement did not meet the 5 percent criterion at any of the three distances. That does not show that the sign has no relation to the stars.

Why that is not the end of it. A dense enough field of stars fits any figure; that is why the Random Corners Test was made at all. But the Random Corners Test measures one thing only: corners on stars. A remembered figure, drawn from memory to be

recognized, is not built to pass that test, and the author never said it was. The Random Corners Test did not show the corners sitting on stars more often than chance; the author never offered the sign as a star-for-star chart. The reader has both.

The scripts. Each of the eight signs was laid, turned and scaled, over every one of 5,289 signs of 107 writing systems in the author's collection of Unicode font signs, each reduced to a one-pixel skeleton, and the best fit recorded. The seven dial signs fit some script sign about as well as script signs fit one another, because simple shapes can find close fits in a large collection. The back sign fits none of them closely: its best fit is the worst of all 75 plaque signs tested (8 from this plaque, 46 from the plaque of "An ET Death Mask" and 21 from a third object known to the author only from photographs; an unreleased comparison of 19 September 2026), and worse than any script sign's best fit against the other scripts. Under this procedure, the back sign is the sign of the plaque least like any writing in the collection. That would be expected of a picture of the sky; it does not show that the sign is one.

How well the eye does this, measured. One test was made of the eye itself. On a chart of 5260 BC covering 150 degrees of sky, the author drew, freehand and in one stroke, the line the author judged to be the ecliptic -- the path of the Sun through the zodiac. The true ecliptic was then computed for that chart and laid over it. The author's line departs from it by 2.5 degrees at the middle, 3.0 degrees on average, and 6.6 degrees at its worst, with nine tenths of its length within 5.9 degrees. The two cross near Taurus and open apart toward Leo, which is what a straight line does on a curved field: on this chart's projection the ecliptic, a great circle, bows away from a straight line once it leaves the center. On the test placement of 19 September 2026, the author's star-to-star drawing stays within 1.5 degrees of the back sign over nine tenths of its length (Appendix F). A freehand straight line across 150 degrees of sky is about four times as far out: 5.9 degrees against 1.5 over nine tenths of the length. This comparison has not been repeated on the placement of 27 September.

What the arithmetic cannot do. The arithmetic cannot see a pattern. The arithmetic can only count what it is told to count. The author's eye, trained on the northern sky for fifty-five years, saw the pattern in an afternoon. A test with other observers could show whether people who do not know the placement put the sign where the author did; it would test recognition, not the plaque's age or meaning. That test has not been made.

10. The dates, and the sky from another star

Section 8 named three dates marked by the back sign. This section says what those dates are (10.1), and asks whether the same sky would be seen from a star other than the Sun (10.2).

10.1 The dates

What the dates are. Two poles are involved. The pole of the sky is the point the stars appear to turn around each night; today it lies near Polaris. The pole of the ecliptic is the center of the zodiac's circle, and it stays nearly fixed among the stars. Over about 25,800 years the pole of the sky walks a slow circle around the pole of the ecliptic. The dates in this paper are the years when the pole of the sky stood at certain places on the back sign: about 17,660 BC, at the middle of the face; about 12,200 BC, at Vega; and today, at Polaris (section 8.3). They are dates that follow from the author's placement, not dates the object records by itself, and they are not the age of the plaque.

Which date the charts use. The main charts are drawn for 17,660 BC. Two earlier dates remain in a few places. The test placement of 19 September 2026 was drawn for 130 BC (Appendix F). Two early measurements were made on a chart of 5260 BC, a date chosen early in this study: the spacing of the zodiac figures (section 6) and the test of the eye (section 9). Neither result changes much with the date, for the reason below.

Why the pattern survives. Stars move, but slowly. Between 17,660 BC and today, about 19,700 years, by the proper motions of the Hipparcos catalog (European Space Agency 1997), Vega moves about two degrees, Deneb less than a tenth of a degree, and the stars of Cassiopeia's W from a fraction of a degree to about three degrees, for Caph. The fastest bright stars move more — Arcturus about twelve degrees, Sirius about seven — but they are not in the back sign's region. The pattern from Cassiopeia to Lyra in 17,660 BC is the pattern of today with the corners nudged, by about two degrees at Vega, three at Caph and less elsewhere, and the placement is not disturbed. What changes with the date is not the figures but the seasons among them: the point of the spring equinox moves backward through the zodiac one sign of 30 degrees every 2,148 years. The dial marks no season point that has been identified. So the seven dial signs lie on the same constellations at any of these dates, and they cannot date the plaque. Only the back sign, set by the pole, points to dates, and those are the places of the pole, not the time the plaque was carved.

10.2 Seen from another star

Would the same sky be seen from another star? The question is worth asking of an object shaped as a face that is not human. From Alpha Centauri, the nearest star system to the Sun, the zodiac constellations look nearly as they do here: most of their stars lie hundreds of light-years off, and four light-years of travel barely moves them. A few nearer zodiac stars shift more, up to about seven degrees: Pollux, Deneb Algedi, Denebola. Three things change. The nearest stars move a long way: Altair about 15 degrees, Procyon about 19, into Gemini, and Sirius about 27. The Sun itself appears as a new star of about magnitude half, in Cassiopeia, turning that constellation's W into a zigzag of six. And, decisively, the zodiac is not there at all.

Why the zodiac is an Earth instrument. The zodiac is the band of sky along the plane of the Earth's orbit, and the twelve divisions are counted from the point where that plane crosses the equator. The twelve-sign zodiac known today took its form in Mesopotamia in the first millennium BC and reached the West through the Greeks (Rogers 1998); this paper names the constellations by that zodiac because modern star charts do, not because the makers used it. A planet of another star has its own orbital plane, its own band, its own crossing point, and its twelve divisions would fall on different constellations. If the proposed placements are right, the arrangement is consistent with the sky seen from the Earth; the resemblance alone does not establish the object's origin or use. In the author's view, whatever the face is taken to represent, the plaque describes the sky of the Earth, and if its makers came from elsewhere, the knowledge on it was gathered here.

One clarification, since it will be asked. Within the solar system the planets share this zodiac. They all orbit within a few degrees of the same plane, so from Mars or Venus the Sun moves through the same zodiac constellations, and Ophiuchus, in the same order. What differs most from planet to planet is where the counting starts: the divisions are reckoned from the point where a planet's own equator crosses its orbit, and Mars, tilted twenty-five degrees with its axis pointing elsewhere, has that point at a different place among the stars, and a different rate of precession. A similar band, a different zero. A planet of another star would have no share in this zodiac at all.

11. The claim and its limits

The claim. The author's thesis is that the sign on the back of the plaque is a remembered figure of the sky from Cassiopeia to Lyra whose top bar runs from Polaris to Vega, and that the seven signs of the dial stand for seven neighboring constellations of the zodiac. None of the tested placements passed the usual 5 percent standard (section 9 and Appendix C).

What is not claimed. No sign is read as a word. No constellation is read as a name. The maker is not identified. The date is not fixed. The origin of the plaque beyond the vendor's word is not known. The horoscope of section 12 is an interpretation, not a claim.

Age and status. Whether the plaque is ancient or modern has not been established. Objects of this group are disputed, and they are also copied and made for tourists. The study of the signs stands either way: it describes what is on the plaque, not when the plaque was made.

What would strengthen it. A second object carrying the back sign, or the seven signs in the same order. The observer test. A stroke-by-stroke record of the signs picked by hand rather than fitted by code. The tests on the making listed in section 5.

A conjecture, for now. Until such evidence is found, above all other objects whose signs mark actual stars within the glyphs, the decipherment of this paper is a conjecture.

11.1 Evidence, and how far each kind goes

The object. The plaque is privately owned. The author bought it from Michael Forest on eBay on 8 January 2026. The seller attributed it to the region of Ojuelos de Jalisco, Mexico. No excavation, findspot or archaeological context is known for this plaque, so that origin is the seller's account, not an established one. Dates reported for other objects do not date this plaque. Its age, maker, first use and relation to other objects are not known.

Four kinds of statement. The paper joins four kinds of statement. Observations describe the object as the author saw it: its size and its surface. Measurements come from particular images and from choices of where a line runs: tracings, fitted curves and angles. Reported results come from the author's placements on star charts and from the computer's comparisons. Interpretations are what the signs and lines may mean, and

the horoscope reading; they are always the author's. Agreement in one kind does not carry over to another.

Home tests. The vinegar, fingernail and scratch tests were made at home, not in a laboratory. What they show depends on the surface tested, how it had been treated and how it was watched. A difference in reaction does not by itself identify different minerals. The making sequence and the stroke directions are working interpretations of surface features; they do not date the object.

What this release contains. This paper gives figures, descriptions and summary measurements. The code, the full computational inputs and the outputs of the random trials are not released, so the numbers cannot be reproduced from this paper alone. They are reported, exploratory results, not independently reproduced findings. Appendix A summarizes the measurements; it is not a replication package. The 5,289 script signs come from the author's collection of Unicode font signs; their font sources and versions are not listed here, and that limits what the comparison can show.

The back-sign test. The Random Corners Test was made on the placement of 19 September 2026. It has not been repeated on the placement of 27 September used in the main text. It compares one property, the distance from chosen corners to stars, under one random-placement procedure. Its results, about 10 to 51 percent, did not meet the paper's 5 percent criterion. They do not show that the sign has no celestial meaning, and they give the placement no statistical support.

The dial-sign tests. In the Random Places Test of sign 7, the drawing was slid, turned and resized a little at each random place, and its corners pulled onto any star within one degree, as the author did by hand; it was not redrawn, as sign 7 itself was. Of 400 random places, 22 did as well as the real one: 5.5 percent. Several versions of the drawing were considered, and that figure does not allow for the redrawing or the choice. Sign 6 gave 60 percent. Signs 1 to 5 were not tested. These results do not combine into one probability for the seven-sign placement. A reproducible analysis would need the sampling region, every fitting freedom, and an allowance for the choices made while the placements were found.

11.2 The sky assumptions and the horoscope reading

A chart date is not an age. The date on a chart is not the date of the plaque. The epoch 17,660 BC is used because, in the author's placement, the pole of the sky passes

near the middle of the face. The paper gives no full numerical definition of that point, and no worked uncertainty for the epoch. It is a provisional chart result, not a recovered date.

What a check would need. To repeat that result, a reader would need the chart program and its version (Cartes du Ciel 4.2.1), its star catalog, the projection, the chart center and field, the coordinate conventions, the proper-motion and precession settings and the calendar convention; the coordinates used to place and scale the traced sign; and a rule for finding the closest approach, tested against small changes in the tracing and the placement. These are not all recorded here. The circle of precession drawn in this paper explains the idea; it does not replace the long-term astronomical calculation.

The stardial. The stardial figures show a placed figure turning with the sky. They do not show that the plaque was used to keep time. Turning a star figure into a clock hour needs a day of the year, a place and a time convention. Until those are given, the hours, the horizon and the dark hours in the figures are illustrations. That such a figure can be drawn does not show the maker's purpose.

The Bowl. Part Two treats the nine line ends as if they were positions on a horoscope wheel, and reads them by the author's published method. Points 1 and 9, the two ends of line A, stand 171 degrees apart. An opposition is 180 degrees, and the method accepts an orb of 10 degrees, so the two make an opposition: the rim of a Bowl. The occupied arc is therefore 189 degrees and the empty one 171, a Bowl by the method's accepted orb, not points lying inside an exact half circle. Line A is a chord between the rim points, not a horizon found on the plaque, and the equal-house wheel is drawn on by the author. No planets, birth moment, Ascendant or ancient house system has been found on the plaque.

What remains untested. The carved lines are observations. Reading them as aspects, and giving the aspects meanings of character, are further steps of interpretation. It has not been shown that these lines are unusual among the lines a carver could have cut, or that the makers used these conventions. A test in which observers who do not know the placement try to place the sign could show whether others see the same placement; agreement would not by itself show the plaque's age, origin or meaning. Those questions need independent evidence.

Part Two. The horoscope

Part Two reads the nine carved lines of the dial as a horoscope, by the method of the author's book. Part Two is interpretation, built on the measurements of Part One.

12. Reading the dial as a horoscope

Why the author bought the plaque. The author acquired this plaque because its dial looked like a horoscope. The author wrote a book on reading horoscopes from the simple geometry of their planetary patterns, *Planetary Patterns and High Focus Planets in Spherical Astrology* (2010). The patterns were first described by the astrologer Marc Edmund Jones, and it was Jones who, in a telephone conversation, suggested that the author write about them. The horoscope was meant to be the main line of this research from the start. The horoscope had to wait until the dial had been laid on the sky, which is what the sections above do.

A closing interpretation. The sections above read the signs of the dial as seven signs of a zodiac. This section reads the dial itself: the nine lines carved across it. This section is the author's interpretation as an astrologer, after the author's book *Planetary Patterns and High Focus Planets in Spherical Astrology* (2010). The measurements are given with their limits; the rest is interpretation.

12.1 The dial as a chart

Reading the dial as a horoscope. An exploratory reading of the lines as a season or rising-star calendar gave no date; that reading is not documented here and does not rule a calendar out. Read as a horoscope, the lines fall into a pattern.

The Bowl. The line ends fill about half of the circle, 189 degrees, and leave the rest, 171 degrees, empty. That is the Bowl Pattern, the subject of chapter 5 of the author's book.

The resemblance. The charts in the author's book are drawn the way the dial is: a plain circle, the planets on it, the aspects as straight lines across it. The author's figure of the Bowl is a circle cut by one straight line, the Rim Opposition, with the occupied half below. The dial's top line is that line.

How a horoscope chart is read. A horoscope is a drawing of the sky at one moment, as a circle. The planets are placed around it, each at its place along the zodiac. Two planets make an aspect when the angle between them, measured around the circle, is close to one of a few set angles: 0 degrees (conjunction), 60 (sextile), 90 (square), 120 (trine) and 180 (opposition). How close it must be is the orb: the author allows up to 10 degrees for these major aspects, and up to 3 for the minor ones. A line drawn between two planets in aspect is an aspect line.

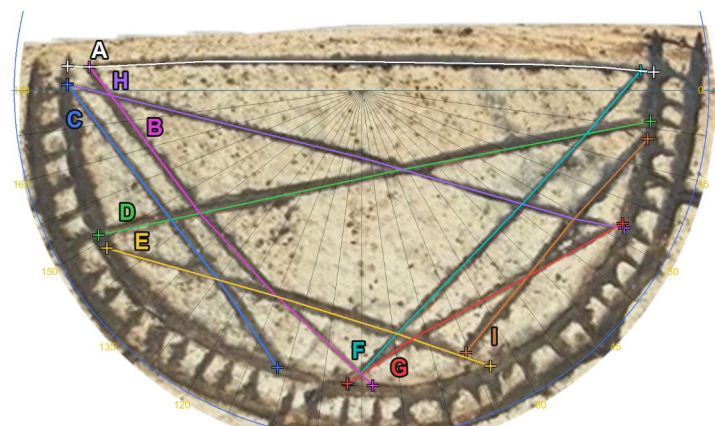


Figure 13. The recto dial with its nine carved lines, traced by the author and lettered A to I from the top left.

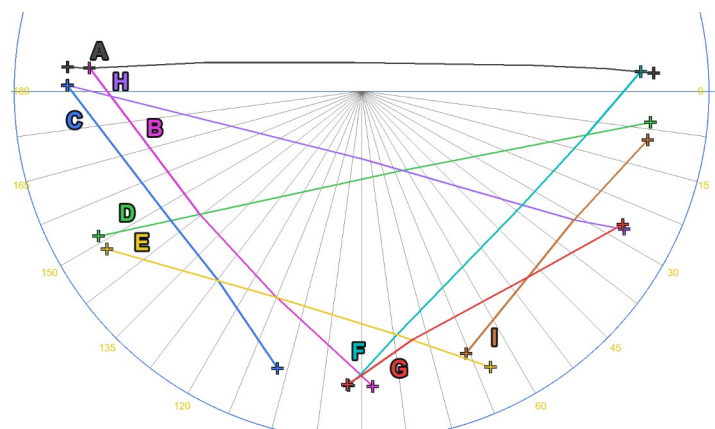


Figure 14. The same nine lines without the photograph, on white, so that each line can be followed.

The chart as a flat page. A horoscope chart lays the sky flat. The zodiac becomes a circle on the page, as if the sky were seen from above, and each planet becomes a point on that circle. The angle between two planets is measured at the center of the circle, in degrees around the rim.

An Aspectarian

Astrologers read angles with an aspect wheel, or aspectarian (Figure 15). Lines are drawn from one point on the rim, the zero point, to each aspect angle, on both sides.

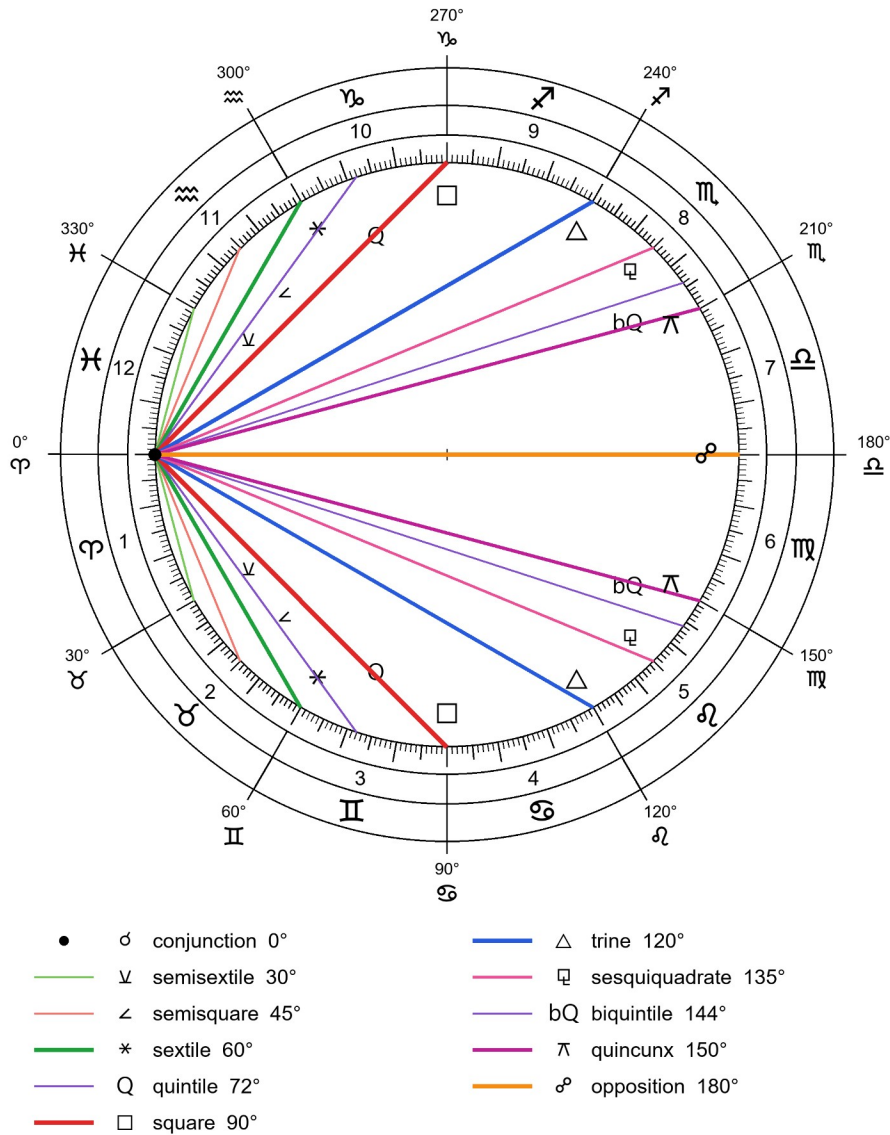


Figure 15. The aspectarian, the author's aspect wheel, drawn complete after the author's own sheet. The aspect lines fill the inner ring and run from the zero point, 0 degrees Aries at the left, to their exact degrees on the 360-degree scale, on both sides, in the author's colors; the key below names them. Outside the scale are the twelve houses, then the signs of the zodiac, then the degree and sign at the start of each.

Patterns. Taken together, the planets form an overall shape on the chart, a planetary pattern. In the author's words, "Classifying a person's astrological chart into one of the planetary patterns is the beginning of delineation." One of these patterns is the Bowl: "When all planets fall within one half of the zodiacal circle, the Bowl Pattern is formed." The planets at the two edges of the Bowl are its rim; the one leading around the circle is the Cutting Planet (Carter 2010). The sections below read the dial in these terms.

12.2 The points and the lines

Now to this plaque. The terms above are general. From here on they are applied to the dial of this plaque: first the nine points where its carved lines end, then the lines themselves.

Nine points on the ring. They are where the lines end, numbered from the left point of line A the way the houses run: from the left, down through the bottom, to the right.

Point	Lines meeting	Angle from point 1
1	A B C H	0
2	D E	34
3	C	77
4	B F G	94
5	I	117
6	E	120
7	G H	158
8	D I	177
9	A F	189

Table 2. The nine points on the ring: the lines that meet at each, and its angle from point 1, in degrees, rounded. Table 3 is computed from the unrounded angles.

The Recto Dial on the Plaque

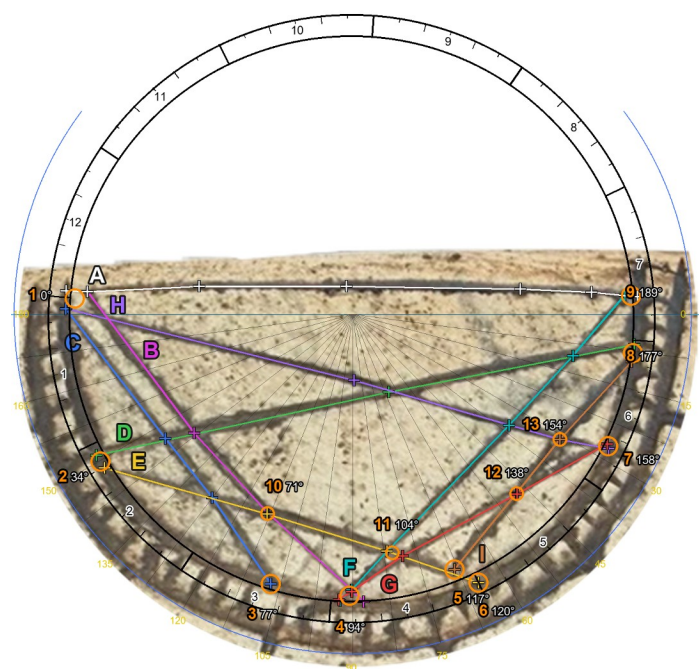


Figure 16. The recto dial with its points numbered from point 1 (orange) and their angles from point 1 (white). The circle through the line ends is drawn whole, with the twelve equal houses of a horoscope counted from point 1 in the band outside it; the houses are drawn on by the author, not measured on the plaque. Points 10 to 13 are where lines cross inside the ring.

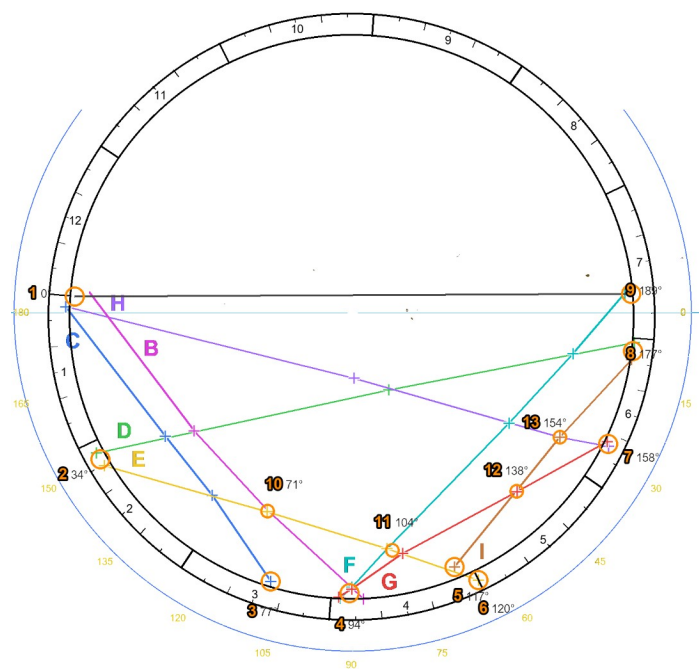


Figure 17. The same points, circle and houses without the photograph, on white (line A drawn straight).

The lines as aspect lines. On a horoscope chart, a straight line drawn between two planets shows an aspect: the angle between them. The carved lines on the dial play the same part. Each line joins two points, so each line is itself an angle, and from here on the lines are read as aspect lines. With the orbs of the Planetary Patterns method (10 degrees for the major aspects, up to 3 for the minor ones):

Line	Joins	Angle	Nearest aspect
A	1 - 9	171	opposition (orb 9)
B	1 - 4	94	square (orb 3.8)
C	1 - 3	77	none
D	2 - 8	144	biquintile (orb 0.4)
E	2 - 6	86	square (orb 3.8)
F	4 - 9	95	square (orb 5.1)
G	4 - 7	64	sextile (orb 4.1)
H	1 - 7	158	none
I	5 - 8	61	sextile (orb 0.6)

Table 3. The nine carved lines read as aspect lines: the points each line joins, the angle between them, and the nearest aspect, with its orb in degrees.

Every point to every point. The aspect grid (Figure 20, after Figure 19) gives the angle between each pair of the nine points and the aspect it makes, if any.

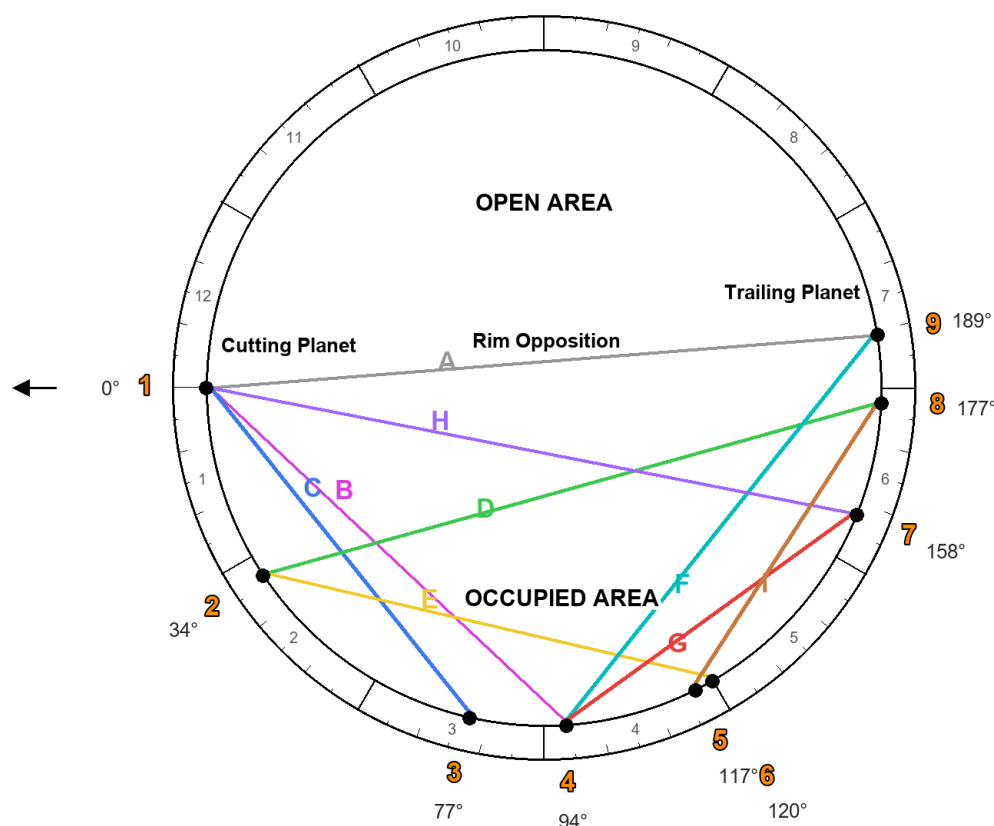


Figure 18. The recto dial read as a horoscope in the Bowl Pattern, drawn in the manner of Planetary Patterns and High Focus Planets in Spherical Astrology (2010): the nine points on a horoscope wheel of twelve equal houses counted from point 1, and the carved lines in their colors. Angles are from point 1, down through the bottom. The equal-house wheel is drawn on by the author; it is not measured on the plaque.

12.3 The Bowl in the author's terms

It is a Bowl, by the author's method. The points fill 189 degrees of the circle and leave 171 empty. The rim points, 1 and 9, are 171 degrees apart: within the accepted 10-degree orb of an opposition (180 degrees), so by the method the chart is a Bowl. Within the occupied arc no span between neighboring points is over 60 degrees; the largest is 43.5.

It has a Rim Opposition. Points 1 and 9, the two ends of line A, are 171 degrees apart. The method counts edge planets in opposition from 170 to 190 degrees apart.

The Cutting Planet is point 1. Point 1 is the High Focus Planet of the chart, and the busiest point on the dial: four lines start there. **The Trailing Planet is point 9,** the other end of the rim.

Point 4 is the T-Square Apex. Point 4 is square to both rim points (94 and 95 degrees), and it is the closest square to the Cutting Planet. The carver cut this T-Square as lines: A is the rim, B runs from point 1 to point 4, and F from point 4 to point 9. The triangle A, B, F is the T-Square drawn in stone.

A trine, and a second opposition. Points 1 and 6 are 120.0 degrees apart on the tracing. Point 8 is 177 degrees from point 1, a closer opposition than the rim itself.

The tilt. Every point other than points 1 and 9 lies on one side of line A. If line A were taken as the horizon, the chart would lie below the horizon, with point 4 near the bottom of the chart, the cusp of the fourth house. Line A is a chord, not a diameter, so this is a reading, not a measurement.

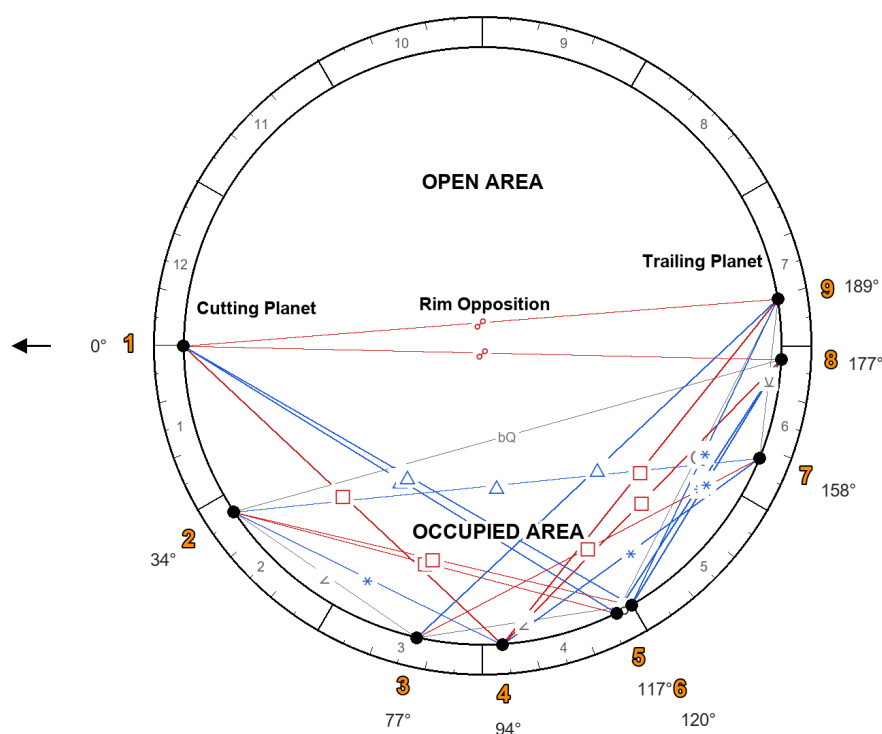
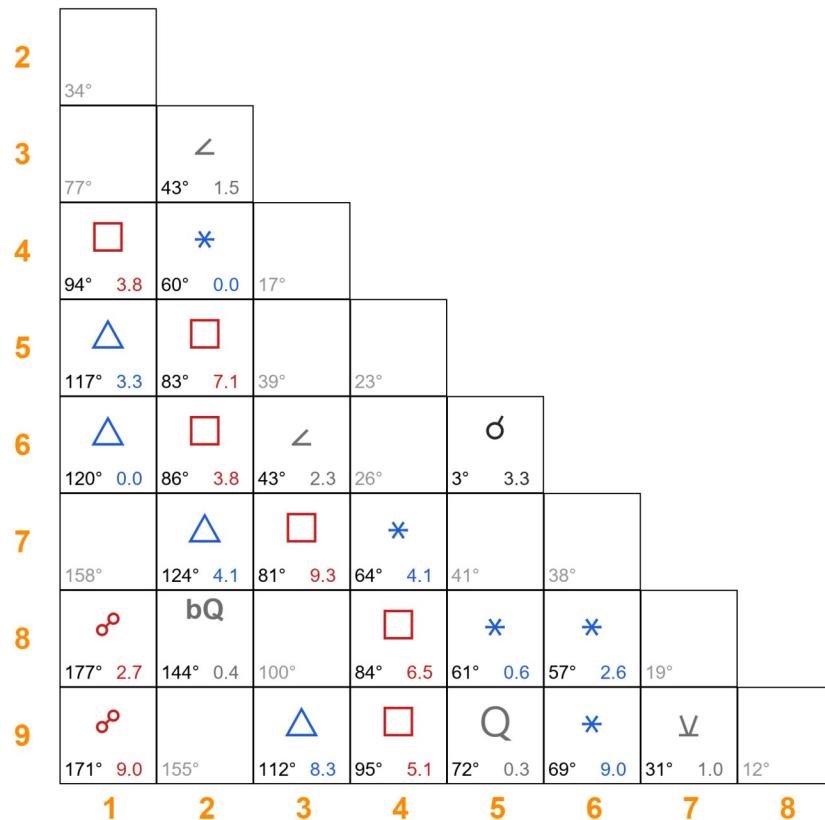


Figure 19. The same chart with the aspects between the points (red: squares and oppositions; blue: trines and sextiles; gray: minor aspects), and the Bowl labeled as in Planetary Patterns and High Focus Planets in Spherical Astrology (2010): Cutting Planet, Trailing Planet, Rim Opposition, open and occupied areas.

The recto dial read as a horoscope

ET Horoscope Aspects



red = square, opposition blue = trine, sextile gray = minor lower left: angle lower right: orb

Figure 20. ET Horoscope Aspects: the aspect grid of the nine points on the ring: the angle between each pair, and its aspect within the orbs of Planetary Patterns and High Focus Planets in Spherical Astrology (2010): 10 degrees for the major aspects, 3 for the minor ones. Red: squares and oppositions; blue: trines and sextiles; gray: minor aspects.

12.4 Reading the Bowl, step by step

For students. The author's Planetary Patterns method reads a Bowl in a fixed order. Here is that order, with the dial as the example. Each step gives the rule in plain words, and then what it finds on the dial.

1. Find the rim. A Bowl has every planet within about half of the circle. The two edge planets of a Bowl are the Rim. When they stand 170 to 190 degrees apart, they make the Rim Opposition, the backbone of the pattern. The method reads the Rim Opposition as a strong personal drive that leads to achievement. The Rim Opposition marks a person

who can compromise, find the answer where both sides win, and stay loyal to a path once it is chosen. On the dial, the rim is line A, from point 1 to point 9, 171 degrees (Figure 18). This one aspect line is what marks the chart as a Bowl. Line A runs straight across the top of the circle, with points 1 and 9 on it and every other point on one side, so the circle is cut into an occupied and an empty segment (Figure 19).

2. Name the Cutting Planet. The planet on the clockwise edge of the rim leads the parade of planets into action. The Cutting Planet is the High Focus Planet. The Cutting Planet shows how the person meets the world. On the dial, it is point 1, where four lines begin (Figure 18).

3. Name the Trailing Planet. The other end of the rim keeps the leader honest. The Trailing Planet cleans up after the Cutting Planet and keeps the person in step with what is real. On the dial, it is point 9.

4. Find the Trigger. The planet in the closest square to the Cutting Planet triggers it into action. In a T-Square, the Apex does this work. The method advises anchoring onto the Apex, because it shows the person's motivating desires and real needs. On the dial, point 4 is the Apex, square to both ends of the rim (Figure 19).

5. Look at the spacing. Even spacing inside the Bowl gives a solid core of character: a life that is well adjusted, even-tempered, stable and predictable. No gap inside the occupied half may be wider than 60 degrees. On the dial, the widest gap is 43.5 degrees, and the points are spread fairly evenly (Figures 16 and 17). This is a stable chart.

6. Read the tilt. The way the Bowl faces colors the whole reading. When every planet is below the horizon, the method's phrase is that the potentials overflow in simple self-expression. If line A is read as a horizon, as a symbolic analogy, points 1 and 9 lie on it and the other seven points on one side of it.

7. Read the helping aspects. A working trine gives momentum: do again what works, and each success becomes another block in the pyramid. A working sextile brings opportunity through contacts, and through always having a second plan. A quintile, or its double the biquintile, marks a special genius that needs planning and good timing. The dial has all three: the trine from point 1 to point 6, the sextiles G and I, and the biquintile D (Figure 19, and the aspect grid, Figure 20).

8. Weigh the two halves. The occupied half shows the work a person does best and the things they cherish. The empty half shows what they will reach for: the people,

missions and experiences that make them feel whole. The method calls the Bowl a picture of duality, like the yin-yang. A Bowl person always wonders whether the cup is half full or half empty.

9. Give the advice. A reading closes with advice drawn from the steps above, put in general terms. For a chart like this one, astrological advice would include being self-reliant; leading by starting things, and letting steadiness check enthusiasm; looking for the answer where both sides win, and keeping to a path once it is chosen; meeting pressure by approaching a problem from the side; doing again what works; keeping friends and a second plan; and planning and timing a special talent with care.

The cautions. The same chart warns that self-containment can become isolation, and steadiness rigidity. The empty half of the Bowl is to be met, not ignored: by reaching toward other people and by giving. The advice follows the author's delineation of the Bowl Pattern (Carter 2010, pp. 57-77).

12.5 The gifts of the Bowl

A stamp of individuality. In the author's words, a Bowl person's uniqueness must be firmly stamped into their identity. They are creatively different. They can be spontaneous and expressive when they choose. What they give to others rests on their own decisions, not only on what others expect of them.

Inside a culture of sameness. Some Bowl people find their lives shaped by circumstance: by the goals of their peers and the expectations of their family. The advice is not to rebel but to prepare. Learn the accepted path well, and grow toward the freedom to choose. A Bowl person becomes independent by discovering their own talents, so that when the time for choosing comes, there is something to choose.

A vessel. The method compares Bowl people to vessels that hold ideas, ideals and wishes, until these spill over into plans and work. In the author's reading, the dial's Bowl, with the seven other points on the occupied side of line A, is the kind whose potentials overflow in simple self-expression.

Calm and balance. Bowl people can stay calm in the middle of turmoil. They feel a need to balance the people around them. They can hold work, family and duty in one hand. In the author's words, self-improvement is a hobby, and world improvement is an avocation.

A gift that marks a person. In the author's view, this plaque was a gift. It is the only one of its kind known to the author, and few children could have received such a gift. In the author's view, that rarity says the child it was made for was marked out, and expected to take on great duties, in this world and perhaps the next.

The earrings. The plaque hangs heavy rings at the sides of the head. In many cultures, rings and ornaments at the head mark rank and authority: a circle near the head, hanging from the head, sometimes several at once. Read together with the chart, the author takes them as a sign of the same thing. They mark a person of strong and stable character, being readied for responsibility and for creative work, and for keeping people, places and work in balance.

A blueprint, not a cage. A chart does not decide a life. A chart is a blueprint, a set of tools. In the author's view, for a people whose whole culture was built around the sky, a chart like this one, read this way, would have been a ticket to success.

12.6 What cannot be known

Sections 12.1 to 12.5 read the nine points of the dial as the planets of a chart. This section says what that reading cannot tell.

No names and no moment. A horoscope is read from named bodies, the Sun, the Moon and the planets, at a known moment. The dial gives neither the names nor the moment. The dial gives only the angles between nine unnamed points on its ring, so the dial gives no date.

Which point is which body. Nothing on the dial says which body of the night sky stands at each of its nine points. A people watching with the naked eye saw seven moving lights: Sun, Moon, Mercury, Venus, Mars, Jupiter and Saturn. Seven lights and one opposite pair, the horizon's two ends or the Moon's two nodes, would make nine. Asteroids and points of their own devising cannot be ruled in or out.

Chance. With the orbs used here (10 degrees for the major aspects, 3 for the minor ones), about two thirds of all angles fall in some aspect, and a dial of about half a circle tends to hold a Bowl-like spread. In the author's view, what was chosen, and so what may carry meaning, is which lines the carver cut; whether that choice is unusual has not been tested.

12.7 A zodiac, or a horoscope?

Both, in the author's reading. The seven signs are part of an ET zodiac: seven of its signs, set in their places on the sky. They are not the full zodiac. A full zodiac is a ring of signs that goes all the way around the sky; the plaque shows a segment of it, about half, and any other signs are missing (Appendix C). The lines are an ET horoscope: one moment drawn on that part of the map. A zodiac belongs to a culture; a horoscope belongs to one person and one moment.

What decipherment means. To decipher is to make readable what could not be read: a code, an unclear hand, or the signs of a lost script. For a lost script, decipherment means finding what its signs stand for. If the script wrote down a spoken language, that includes its sounds and its words. If the signs carry meaning directly, as maps, star charts and numbers do, it means finding what they point to.

This paper proposes a decipherment. This paper proposes what the seven dial signs stand for: figures of the zodiac, each in its place on the sky. This paper also reads the circle as a chart of one moment. The figures allow a visual comparison with the placements, while numerical reproduction needs the inputs and settings described in section 11; the horoscope reading is an interpretation, since which body stands at each point, and the moment, are not known.

What the paper does not give. This paper gives no sign a sound and no sign a word. Some specialists use the word decipherment only for recovering the sounds and words of a spoken language. In that narrow sense, signs that carry meaning directly can never be deciphered, because no spoken language lies behind them. Nothing is known of the makers of this plaque, so it is not known whether a spoken language lies behind the signs.

Two kinds of signs. Some sign systems write down speech: alphabets and syllabaries, for example. Others carry meaning directly, without words: maps, star charts, numbers, musical notes, road signs. Signs of the second kind can be read by anyone who learns them, whatever language they speak. The decipherment of the dial as a map of the sky suggests that these signs are of the second kind.

Decipherment, then interpretation. The decipherment makes the signs readable, the way a map or a chart is read. Interpretation is the next step: what the moment on the chart means when it is read as a horoscope (sections 12.1 to 12.6).

Summary of findings

The plaque. A small carved stone plaque, said by its seller to be from Mexico, about 8 cm (3.1 inches) wide, carved as what appears to be the face of an infant ET. Above the eyes is a dial of seven signs; on the back is one large sign, the back sign.

The back sign. The author laid the back sign on the northern sky with its top bar from Polaris to Vega, its ends set within 0.7 and 0.8 degrees of the two stars; the rest covers the sky from Cassiopeia to Lyra. In the Random Corners Test, made on the test placement of 19 September 2026, random corners did as well as its corners in 10 to 51 percent of the tests, depending on how close to a star a corner must lie.

A stardial. Set on the sky by Polaris and Vega, the back sign turns with the sky around the pole like the hand of a clock. Three dates follow from the placement: about 17,660 BC, when the pole passes the middle of the face; about 12,200 BC, when Vega is near the pole; and today, with Polaris. They are not the age of the plaque.

The seven dial signs. The author placed the seven signs on seven neighboring constellations of the zodiac, running west from Gemini to Sagittarius: about half the zodiac ring.

The tests. None of the tested placements passed the usual standard of 5 percent or fewer. In the Random Places Test, sign 7, drawn again on the zodiac band, gave 5.5 percent (not allowing for the redrawing and the several versions tried), and sign 6, fitted by the computer, 60 percent; signs 1 to 5 were not tested. The other placements are the author's, made by eye.

Other tests. Compared by shape with 5,289 signs of 107 writing systems, the back sign's closest match was poorer than any script sign's; the author's freehand ecliptic stayed within 5.9 degrees of the true one over nine tenths of its length; an exploratory calendar reading of the dial lines gave no date; the rungs do not divide the compartments evenly.

The dial. The seven-compartment band spans 218.6 degrees (182 between the centers of its end compartments); the five middle widths run from 27.5 to 31.8 degrees. The author reads this as the plan of a zodiac dial.

How the plaque was made. The broad sides are smoother than the edge, which appears filed, as on a molded piece. In the signs read stroke by stroke (signs 2 and 3 and the back sign), the strokes usually begin thin and end deep. In the author's working hypothesis the signs were carved while the material was softer than it is now, and the earrings were set in after them (Appendix E).

The plaque read as a horoscope. The nine carved lines can be read as a Bowl, a pattern in the author's book: interpretation, not measurement.

What is not claimed. What the signs mean in words, who made the plaque, and when. The decipherment is a conjecture, to be tested on other objects.

Part Three. Appendices

Part Three holds the details behind the main text: the measurements, the list of figures, the hunt for the missing signs, the microscope, how the signs were carved, and the test placement of 19 September 2026. The Glossary follows the appendices, at the end of the paper.

Appendix A. The measurements

The numbers behind the main text, in the order they are used.

The body — tape measure, 1200 dpi scans beside a ruler, calipers and postal scale

weight	86 g
width, top left to right	78 mm (tape; scan 78.5)
across the earrings	84 mm (tape; scan 84.9)
height, top edge to chin	about 50 mm (fragment; tape; scan about 47 mm)
thickness edges	8.30 top center; 8.69 chin; 10.34 face; 11.81, 12.40
earrings	outer diameter 24.94 mm; inner 14.58 mm; band 5.18
wide, 5.32 thick	
eyes	left outer almond 24.89 mm, inner 19.89 mm; right
inner 18.90 mm	
	nose between the inner apexes 4.84 mm

The back sign, on the plaque — 8 October 2026

top bar	44 mm (tape)
top bar to the bottom of the lower spiral	34 mm
line from the top bar to the lower spiral	21.6 mm
the eye (almond), across	13 mm
check: stroke layers scaled to the 44 mm bar give	33.8, 20.1, 11.9 mm

The circle

rim: center (252.9, 149.8), radius 250.7 px of 512 on the tracing; median residual 1.3 px

serrated ring: radius 216 px of 512; 13.51 mm on the 1200 dpi scan

rim in millimeters, from the ratio: about 15.7 mm radius, 31 mm across

The compartments

angles from the right end of the diameter, 90 = bottom

dividers at -18.8, 18.5, 47.5, 75.8, 104.5, 132.0, 163.8, 199.8 degrees

widths 37.3, 29.0, 28.3, 28.7, 27.5, 31.8, 36.0 degrees; mean 31.2; middle five 29.1

rungs: 36 over the worked arc, 6.07 to 6.25 degrees each; 57.6 to 59.3 to a full circle

The arcs — radii in pixels on each sign's 512-pixel picture

sign 3: $r = 109$, 110 from (128, 239); $r = 111$, 115 from (365, 254); $r = 131$, 131 from (165, 288)

sign 2: $r = 132$, 143 from (250, 202); $r = 154$, 147 from (367, 398)

sign 4: $r = 74$, 62 from (138, 300)

The back sign on the sky

placement of 27 September 2026: top-bar ends set 0.7 and 0.8 degrees from Polaris and Vega

test placement of 19 September 2026 (Appendix F): 29 corners, 40 bright stars
Random Corners Test, 4,000 tests: 1 corner within 3, 5 and 8 px;

random corners as good in 9.7%, 25.4% and 51.0% of the tests

star-to-star drawing: median 3.0 px; 90% within 8.5 px; farthest 38.9 px

scale of the chart: about 6 px per degree (Vega to Deneb, 23.8 degrees)

The signs against known writing

5,289 script signs in 107 writing systems; skeletons turned in 15 degree steps; no mirrors

fit = symmetric chamfer distance in a 64 px box; smaller is better; best fit per sign

median best fit: scripts against other scripts 1.63; this plaque's 8 signs 1.72

the back sign: 3.50, the worst of 75 plaque signs (8 + 46 + 21);

the worst script sign 2.62

The date and the drift

charts (Cartes du Ciel): 17,660 BC main; 130 BC test placement; 5260 BC early proper motion, 17,660 BC to today, degrees: Vega 1.9; Deneb < 0.1; Caph 3.0;

Ruchbah 1.6; rest of the W < 0.5; Arcturus 12.5; Sirius 7.3

precession: one 30-degree sign per 2,148 years; 19,700 years = about 9 signs

Appendix B. List of figures

- Figure 1.** The plaque, front (photograph: Michael Forest)
- Figure 2.** The plaque, back, with the back sign (photograph: Michael Forest)
- Figure 3.** The dial on the 1200 dpi scan
- Figure 4.** The outer band of the dial, unwrapped, glyphs upright
- Figure 5a, 5b.** The seven dial signs
- Figure 6.** The back sign
- Figure 7.** The kit of shapes the signs are built from, named
- Figure 8.** The seven dial signs as placed now, on the zodiac of 17,660 BC
- Figure 9.** The placement of 27 September 2026: the top bar from Polaris to Vega
- Figure 10.** All eight signs as placed now, on the sky of 17,660 BC
- Figure 11a, 11b.** The stardial through one turn of the sky: six moments
- Figure 12.** The stardial of 17,660 BC, with the zodiac
- Figure 13.** The recto dial with its nine lines, lettered
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- Figure 15.** The aspectarian, the author's aspect wheel, complete
- Figure 16.** The recto dial with its points and the horoscope circle
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- Figure 18.** The dial as a horoscope: the carved lines
- Figure 19.** The dial as a horoscope: the aspects and the Bowl
- Figure 20.** ET Horoscope Aspects: the aspect grid of the nine points
- Figure 21.** The hunt for the missing signs: the sets the author kept
- Figure 22.** The hunt with the faintest stars in cyan: the forms to expect
- Figure 23.** Sign 6 as carved and sign 7 drawn again, on the zodiac band of 17,660 BC
- Figure 24.** The seven dial signs and the mouth under the microscope
- Figure 25.** Details under the microscope
- Figure 26.** Sign 2: the order of its strokes
- Figure 27.** Sign 3: the order of its strokes
- Figure 28.** The back sign: its twelve strokes
- Figure 29.** Was the plaque turned? Left to right for each sign, drawn on the dial
- Figure 30.** Test lines of 19 September 2026, drawn star to star in magenta, before placement
- Figure 31.** The test placement of 19 September 2026: the back sign on the sky of 130 BC
- Figure 32.** The test placement of 19 September 2026: the seven dial signs on the sky of 130 BC

Appendix C. The hunt for the missing signs

Why hunt. A zodiac is a ring. The dial shows seven signs, about half of that ring, so the rest of the ring is missing from the plaque. If the seven signs stand for figures in the sky, the missing signs should stand for the figures in the rest of the ring, and the stars there should show where to look for them, on this plaque's companions or on other objects. This appendix shows how such a hunt is done, and what it found.

The gap. A full zodiac is a ring of signs that goes all the way around the sky. The plaque has seven signs, and laid on the sky they cover only part of that ring, a segment of it. The rest of the ring has no sign on the plaque. That empty stretch is the gap: the place where any missing signs would go. With sign 7 as first placed, the gap is 131 degrees of the ring. With sign 7 drawn again (Figure 23), it is 143 degrees.

How many are missing is not known. Nothing on the plaque says. At the seven signs' own average spacing, four more fit in the gap, eleven in all. Five fit only if they are packed tighter than all but one of the seven's spacings, twelve in all. Twelve is the number of the later zodiacs; here it is not assumed. With sign 7 drawn again the gap is wider: four more fit with room to spare, and five need a spacing of 29 degrees, still tighter than all but one of the seven.

The hunt. To see what signs drawn in these stars might look like, the stars in the gap were joined, bright star to bright star, in several sets drawn by the computer as drafts. The author chose which sets to keep (Figure 21). These lines are drafts to show what drawing signs in the stars is like. They are not readings, and no missing sign is claimed.

The forms to expect. When the fainter stars are joined too, down to magnitude 6.5, the empty places fill with curved chains of stars, closer to the curved strokes of the verso sign than to straight lines. The author takes these as the sample of the forms to expect (Figure 22). They need not match the constellations of the Western zodiac.

Possible Zodiac Lines for Missing Signs

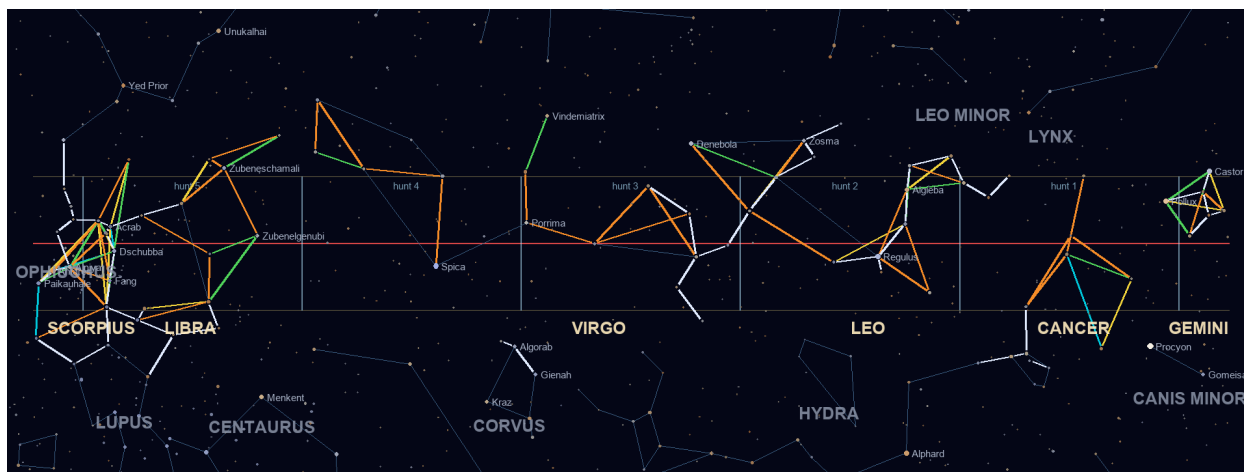


Figure 21. The empty part of the zodiac on the sky of 17,660 BC, laid flat: the zodiac line of that date level across the middle, north up, east to the left. The five hunt sectors are marked. The lines are the draft sets the author kept (cyan, yellow, green, orange and white), each joining bright stars.

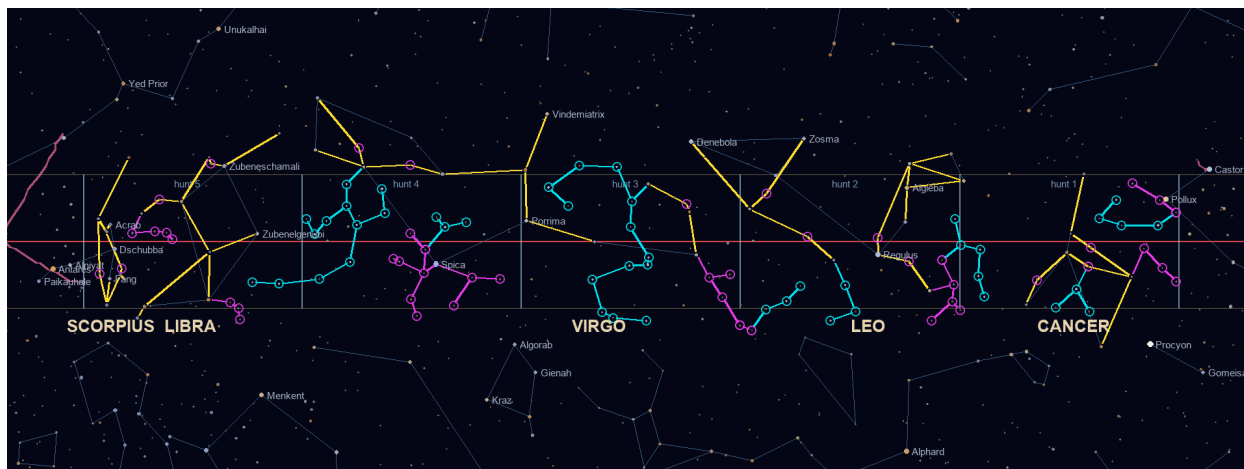


Figure 22. The same stretch of sky with the fainter stars joined too, one drawing to a sector. Yellow lines join bright stars (to magnitude 4.7); magenta lines join fainter stars (4.7 to 5.5); cyan lines join the faintest (5.5 to 6.5), drawn only where the sky was still empty. The cyan chains are the author's sample of the forms to expect.

Sign 7 drawn again. As first placed, sign 7 was far wider than the other six signs. The author drew it again on the zodiac band of 17,660 BC, from its shape as carved, with its corners on stars (Figure 23). Sign 7 is now about as tall as the band is wide, and its middle sits on the zodiac line. Beside it is sign 6, traced from its microscope photograph and fitted to the band by the computer.

How sign 7 scores on the stars. A star counts when it lies within half a degree of a line. Brighter stars count more: each star scores 6 minus its magnitude, for stars to magnitude 5.5. Sign 7 scores 41 from 23 stars, among them Kaus Australis, Nunki, Larawag, Sabik, Ascella and Kaus Media.

The Random Places Test. This control test asks whether the drawing of sign 7 fits the stars at its own place better than at places where it does not belong (section 9). At each of 400 random places along the zodiac, the selected drawing of sign 7 was slid, turned and resized a little, and its corners moved onto nearby stars (section 11.1), then scored the same way as the real place. The controls did not repeat the redrawing of sign 7 or the choice among its versions. In the Random Places Test, a random place did as well as the real place in 22 of the 400 tests: 5.5 percent of the tests. That figure describes this restricted comparison; it is not a chance probability for the whole search. The usual standard is 5 percent of the tests or fewer. Several versions of sign 7 were tried before this one, and the 5.5 percent does not allow for that choice or for the redrawing.

Sign 6. The same Random Places Test was made for sign 6, as fitted by the computer. Random places did as well as the real place in 60 percent of the tests. That did not meet the paper's 5 percent criterion. Signs 1 to 5 looked right by eye when they were placed; they were not redrawn on the stars, so they were not tested.

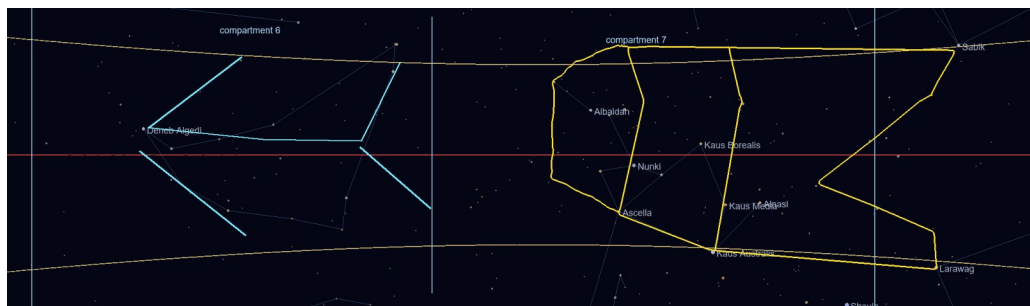


Figure 23. Sign 6 as carved (cyan), and sign 7 drawn again by the author (yellow), on the zodiac band of 17,660 BC: the zodiac line of that date in red, the band 8 degrees each side of it in gold, north up, east to the left. The light blue lines are the edges of dial compartments 6 and 7.

A board for students. The hunt can be played by hand: drive a nail at each star of a printed star sheet, bigger nails for brighter stars, and weave colored string between them. Many different figures fit the same nails; that is why placements in this paper are compared with random ones where a test could be made. The hunt names no missing sign.

Appendix D. Signs under the microscope

Each dial sign close up, in the order of the dial, and the mouth of the face.



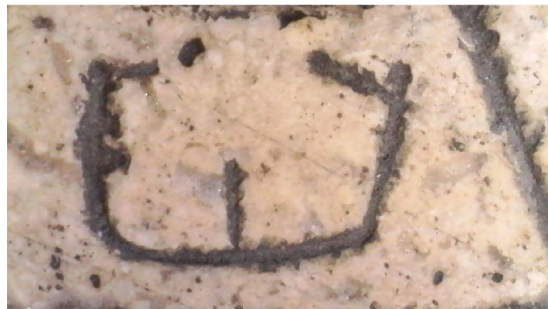
sign 1



sign 2



sign 3



sign 4



sign 5



sign 6



sign 7



the mouth

Figure 24. The seven dial signs under the microscope, in the order of the dial, signs 1 to 7; and the mouth of the face. The height and the magnification were reset for each photograph because the plaque is curved, so the photographs share no scale. Photos were taken with a small digital microscope on 30 September 2026.

The end of sign 7. In sign 7 (Figure 24) a dark spot lies inside the right end. The author reads it as a mark, not a stroke. The right end comes down from the top point, turns in, and meets the bottom line at a corner.

No seam. No seam shows along the edge. The edge is covered with fine parallel scratches that look like the marks of filing and sanding (Figure 25). Filing would remove a seam. So the missing seam cannot tell carving from molding. One fine gray line does run along one edge. The gray line is not a seam. The gray line is an incision filled with hard dirt. The dirt has been left in place; it looks as if it would come out if pried. The darker tarnish on the outer surface is harder still: it does not come off with a finger, with water, or with light scratching by a fingernail.

Pointed stroke starts. Several strokes narrow to a fine point at one end: the inner stroke of sign 2, the tail of the eye, and the ends of sign 1. By the stroke rule of Appendix E, a thin, pointed free end is where a stroke began; the deep, rounded end is where it stopped. A stroke cut with a point narrows like this. These ends are consistent with cutting. Photographs in low side light are still needed, to see the shape of the groove itself.

Uneven grooves, broken edges. At this magnification the grooves are uneven, and the stone has broken away along their edges, as in sign 6 and sign 1 (Figure 24). A point dragged through material hard enough to break leaves this: the material chips beside the point as the scratch is made. This is consistent with a material firm enough to break when the signs were carved. Neither feature rules out a mold taken from a carved master, or later work on the surface.

The filling. Most grooves hold a dark gray, grainy filling. In places it spreads past the groove onto the surface. The filling was put in, or gathered, after the grooves were carved.

The earring holes. In one ear, the earring goes into a part of the stone that is broken. Broken pieces of stone fill the hole around the edge of the ring, held together by a brown adhesive. Under magnification the hole looks rough, as if no good drilling tool was used: the insides of the holes appear to have been cut by hand. The two earrings are not set at the same angle, so the plaque may not have been made to be worn.

The adhesive. The adhesive is a hardened, golden-brown material. The adhesive looks as if it was soft once, and it was worked smooth in places. The adhesive may be the first part of the plaque to decay, which would explain the cavities around the earrings.

The tool marks. The faces and outer surfaces are smooth, apart from light scraping by shaping tools. The scraping leaves rows of parallel grooves, as if from a rasp with only a few long teeth, about five, that cut into the stone. The teeth seem uneven, as the tools of one particular workshop would be. The tools may have been simpler than a modern workshop's. They were used with the stone-working skill that made such carvings possible.

Scratches through a crust. At one edge, fine pale scratches cut through a dark crust (Figure 25). Those scratches were made after the crust formed.

Under ultraviolet light. Under a 365 nm ultraviolet lamp the stone glows a pale cream-white. The carved grooves stay dark: their dark filling does not glow. Many small dark specks across the surface do not glow either. The earring ring glows white, with dark patches. The adhesive at the earrings stands out clearly under the lamp, lighter than the cream of the stone: a layer of it was left around each insertion and not cleaned away.

A small crystal in a crack. Under the ultraviolet lamp, a small crystal beside one stroke of the back sign flashes light blue. When the plaque is turned to one angle, the flash is so bright that it fills a hand magnifier. Turned away, the blue is gone. The flash is the lamp's light reflected from a flat, mirror-smooth crystal face, not a glow. The crystal is a sliver about twenty times longer than it is wide and about a tenth of the width of a groove. The crystal lies flat, parallel to the surface, in a crack beside the glyph groove, with only a small broken chip of stone between the crack and the groove. The stone breaks this way along every stroke, where the cutting point pressed it apart (section 5). Here the stone that covered the crystal seems to have chipped off as the point passed, and left the crystal face clean. The crystal appears to have been inside the stone before the stroke was carved, and exposed by the carving, rather than grown after the carving. Other, smaller white squares flash in the same way here and there. The crystal has not been identified.

Details under the microscope



the eye: its tail ends in a point



a spiral



the other spiral



the mouth of the face on the back



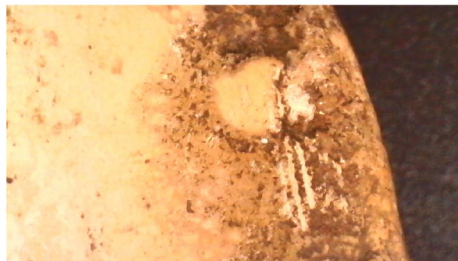
a stroke start, narrowing to a point (sign 2)



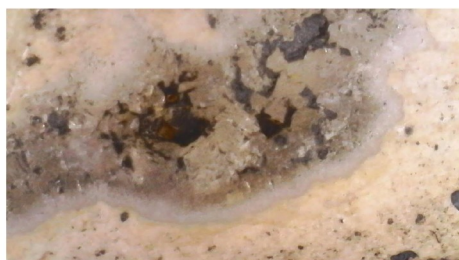
the mouth, from below



an edge: file and sanding scratches



scratches cutting through a dark crust



the spot tested with vinegar

Figure 25. Details under the microscope, each named under its photograph. The photographs share no scale. The vinegar did not make the hollow in the tested spot: it was poured into a hollow already there, to see how the stone reacted.

Appendix E. How the signs were carved

Two of the seven dial signs have been read stroke by stroke under a magnifying glass: sign 2 and sign 3.

Sign 2. Under a magnifying glass, the strokes of sign 2 can be told apart (Figure 26). At one end each stroke is thin and shallow. At the other end it is deep and dug in. The author reads the thin end as the start.

The strokes fall into sets:

Set	Strokes	Direction
1	the inner line, A to B; the top line, D to C; the bottom line, E to F	left to right
2	the right side, C to B; the left side, E to D	up and down
the diagonal	F to G: a stroke of its own, starting just left of the deep end of the bottom line at F	slanting up to the right

Table 4. The strokes of sign 2, in sets.

Which came first. At corner C, the right side is cut over the end of the top line, so there the stroke across came before the stroke down. The order within each set is not known yet.

The diagonal. The diagonal is a stroke of its own. It starts thin at F, just left of the deep end of the bottom line, and runs up to G, where it ends in a deep cavity, the place where the point was lifted out. Which of the two was carved first is not yet known.

A simple test. In a smoothed, frozen soft paste the author cut strokes in every direction. In every stroke the deep, disturbed end, where the material bulged as the point came out, was the end of the stroke, as the author reads sign 2. A soft paste is pushed aside, while stone breaks.

Sign 3. The author has read sign 3 the same way (Figure 27). The rounded outline of sign 3 is one stroke. The stroke starts at A, at the upper left, and runs down the left end through B, along the bottom through F and D, around the right end, and back along the top through C and E to A, where it closes. That the outline closes at A is the author's best judgment. The two uprights were carved after it, each from the top down: first E to F, then C to D. Where the second upright meets the bottom at D, it ends in a point. Where it meets the top at C, the join is filled with dirt.

Signs under the microscope

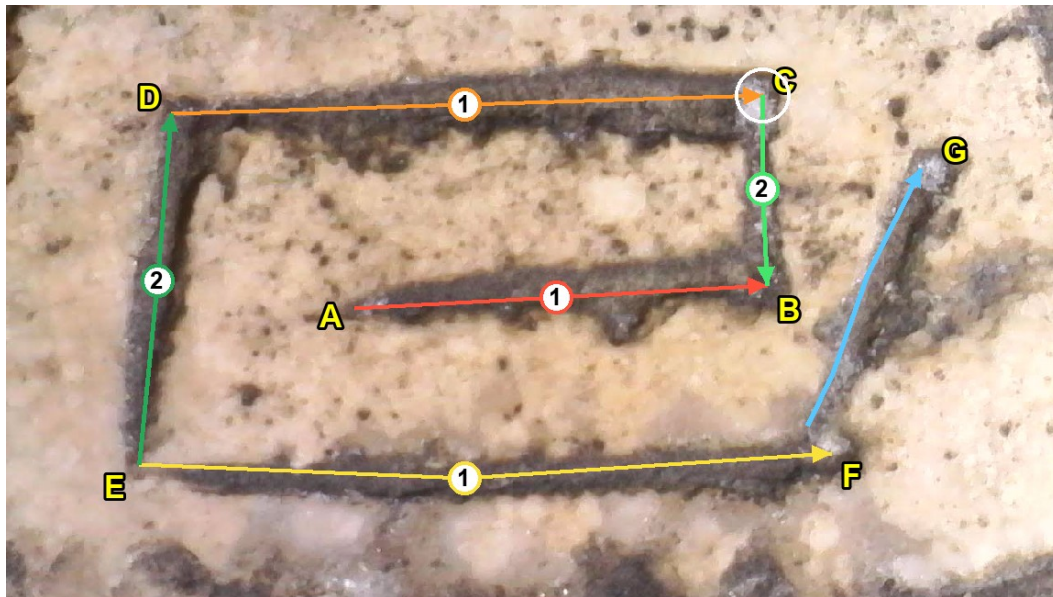


Figure 26. Sign 2 under the microscope, with the author's letters A to G. Each arrow runs from the thin, shallow start of a stroke to its deep end. The number in each circle is its set: 1, the strokes across; 2, the two up and down. The diagonal, in blue, is a stroke of its own: it starts thin at F, just left of the deep end of the bottom line, and ends in a deep cavity at G. The white ring marks corner C, where the right side is cut over the end of the top line.

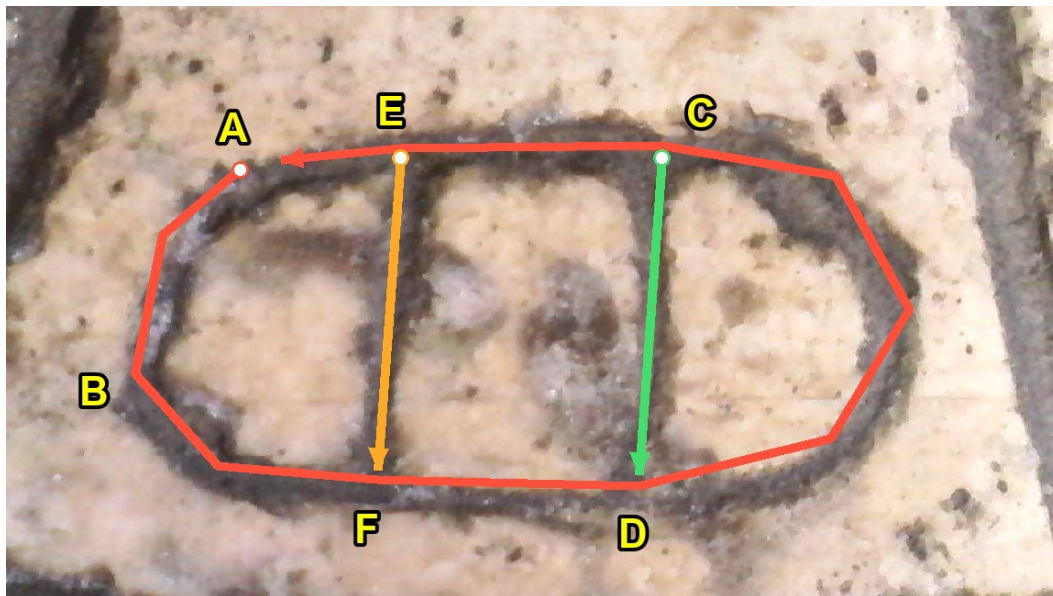


Figure 27. Sign 3 under the microscope, with the author's letters A to F. The outline is one stroke, from A around through B, F, D, C and E, closing at A. The two uprights were carved after it, from the top down: E to F, then C to D.

The back sign. The author has read the back sign as twelve strokes (Figure 28): the top bar; the left spiral, turning clockwise; a line from the top bar down to the lower spiral; a stepped line from the top bar, centered; the stepped line on the left, down from the left spiral; the lower spiral, turning counterclockwise; the face, from a thin taper at the upper right down to the point of the chin and up to below the eye; the almond eye; the mouth, which is three small strokes: a vertical loop, a vertical line inside it, and a half curl to the upper right that ends like the curl at the side of a nose seen in profile; and a short stroke joining the lower spiral to the face. The two spirals turn opposite ways. The back of the companion plaque, in "An ET Death Mask", also carries a pair of spirals turning opposite ways.

The face stroke, read by depth. The stroke of the face starts at the upper right (A), where it narrows to a fine point past Vega, runs down to the point of the chin (B), and turns up to end below the eye (C) (Figure 28). End C is deeper than end A. By the working rule, a stroke starts thin and ends deep: so the carver carved it from A, down to the chin, and up to C. For a right-handed carver the long run from A down to B is a pull toward the body, the easier way. The author drew Figure 28 with a computer mouse, in the order convenient for drawing; that order is not the carving order, which is read from the stone.

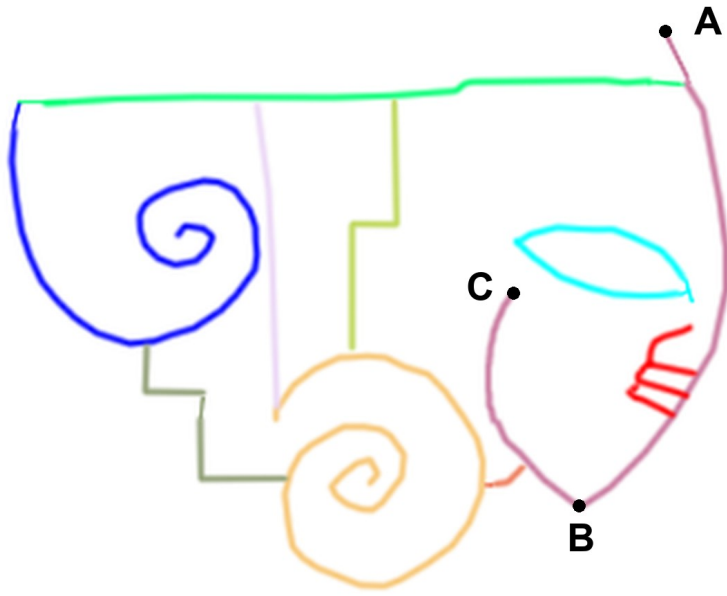


Figure 28. The back sign, its twelve strokes as the author reads them, one color to a stroke; the three small strokes of the mouth share one color. A, B and C mark the face stroke: A its thin start at the upper right, B the point of the chin, C its deep end below the eye. The colors record the shapes; the drawing was made with a computer mouse, and its drawing order is not the carving order.

Thin ends, in two kinds of place. In sign 2, the inner line is thin at its free end A, where it starts. In sign 3, the second upright is thin at D, where it ends against the outline. So the working rule has two parts. At a free end, the thin end is the start. Where a stroke runs into another line, the thin end may be its finish, as the tool eases off at the line.

Was the plaque turned? The seven signs sit around the dial, each at its own angle. If the strokes across run from the left in every sign, as seen with the sign upright, then on the plaque they point seven different ways, following the ring (Figure 29). The carver would then have turned the plaque, or moved around it, to cut each sign upright. If the plaque was never turned, the strokes would instead share one direction on the plaque. The author's view is that the earrings were put in after the signs. The earrings stand up from the surface. With them in place, the surface is uneven, and the signs would have been hard to carve across it. Reading the direction of the strokes on all seven signs may help test this.

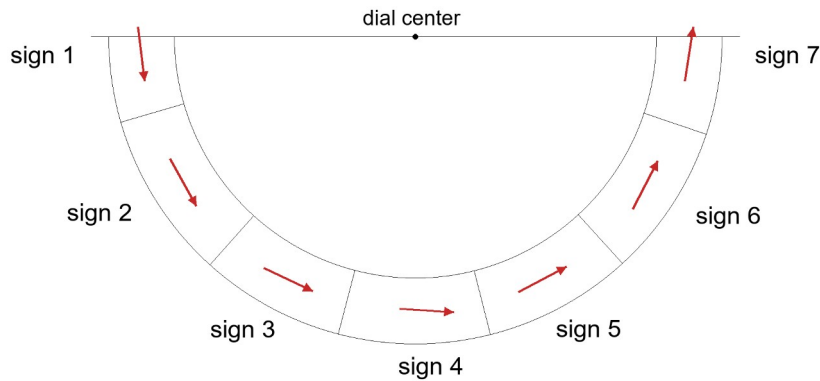


Figure 29. The dial, with its seven compartments. Each arrow shows, on the plaque, the direction "left to right" for the sign in that compartment, seen with the sign upright and the dial's center at its top.

How the carver may have worked. The author's view is that the tool was small, perhaps of metal, and perhaps worn on the finger. The tool seems to split the surface more than slice it, leaving coarse grooves with broken edges. Copper, bronze and brass scratch only what is softer than they are, so if the tool was one of them, the surface was soft when it was carved. The author also sees the plaque turned in the hands into place for each stroke, so that every stroke is made the same way, like a machine that turns the work and repeats one cut. A carver who had learned the signs as a standard could then cut them quickly. The sets in sign 2 fit this: all the strokes of one direction together, then one turn of the plaque.

Glyphing. In the author's view, the making of a sign is a movement: the hand, or hands, place the plaque and drag the tool, stroke after stroke. One or more makers may have taken part, with one or more tools: a point to cut grooves, others to scratch, to dig, and to make holes in hard material.

Reading by touch. In the author's view, a carved groove keeps a record of the motion that made it. At a free end a stroke usually starts thin and shallow and ends deep, so the groove can show which way the point moved. Where two grooves cross, the later one breaks through the earlier one, so the crossing shows their order. A reader can follow the grooves with a fingertip, or with a pointed tip, and feel the motions again without seeing them. On a small plaque the carver can turn the plaque by hand; on larger objects and sculptures, a helper may turn and shift the work while the carver's hand repeats a few practiced movements. In this view the signs were learned and taught as movements, much as a sign language is, and not only as shapes.

Three tests. A metal tool may leave traces in the grooves, which a lab test of the surface can find without harm. Any trace would have to be told apart from the author's own steel scratch on the back. No trace of metal would be consistent with, though not proof of, a tool of stone, bone or shell. The shape of the tip shows at the turns: a round point keeps the same width in every direction, and a point with a small blade does not. A standard order would show again in the same sign on another object.

A scratch test on soapstone, 6 October 2026. The author dragged a steel edge down the flat face of a piece of soapstone. Each scratch began at the tip as a thin, shallow line and grew wider and deeper toward its end. The end, where the tool was lifted out, was the widest and deepest point of the scratch, with only a slight taper as the tool withdrew. The pressed stone was pushed out evenly to both sides of the groove. The test agrees with the rule used in this appendix: a stroke starts thin and ends deep. The round hollows at the ends of strokes on the plaque are where the cutting point was lifted out. Shiny specks of a mineral in the soapstone did not flash where they were cut.

What is still open. Whether the sets and the order of the strokes carry a meaning, or are only the carver's habit, needs the same study of all seven signs. In the author's view the way a sign is made may be part of what it means: the motion, the form and the meaning may be bound together, as they are in a sign language. This paper makes no claim about it.

Appendix F. The test placement, 19 September 2026

A test, kept on record. These are the first maps of this work. On 19 September 2026 the back sign, and then the seven dial signs, were laid on a chart of the sky for 130 BC, and the placement pictures of that day, Figures 31 and 32, were sent to Michael Forest the same day. The placement of 27 September 2026 replaced it: there the top bar of the back sign runs from Polaris to Vega (Figure 9), and that is the placement this paper uses. Two results of section 9 were measured on this test placement and have not been repeated on the later one: the Random Corners Test and the star-to-star comparison. In this test placement the seven signs ran from Gemini to Scorpius (Figure 32); in the placement of section 8 they run from Gemini to Sagittarius. These maps are kept because they were shared, and because they show how the decipherment began.

The test placement, 19 September 2026. Laid on the northern sky, the sign covers the stretch from Cassiopeia to Lyra. The top bar of the back sign runs from Polaris to a star below Vega, to the south of it, and Vega sits at the tip of the stroke that rises at the right-hand end. The beak sits on Cygnus and Vulpecula, the lower spiral on Lacerta, the left corner on Cassiopeia. This was the author's test placement, sent to Michael Forest as it stood and not corrected at the time.

Magenta test lines before placement

Drawn first, as tests. The magenta star lines were drawn first, on the afternoon of 19 September 2026, as test lines, while the placement was still being worked out; the drawing is an exploratory comparison, not an independent check. Their picture was saved at 6:15 pm, and the picture of the placement in Figure 31 at 6:31 pm, the same afternoon.

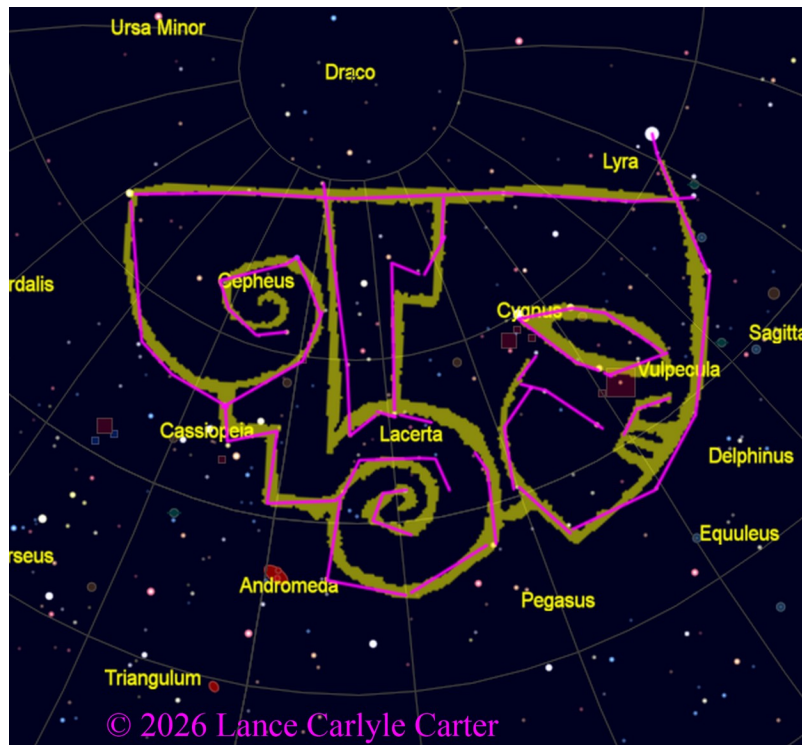


Figure 30. Test lines of 19 September 2026, drawn star to star by the author in magenta over the sign in olive, before the placement of Figure 31 was settled. The drawing departs from the sign by half a degree over most of its length, and by six and a half degrees at the run to Vega. Chart: Cartes du Ciel. Star lines: the author.

What kind of map it is. On the test placement of 19 September 2026, the sign is not a chart to steer by star for star, but a symbolic map: a pattern simple enough to remember and draw, accurate enough to find the stars by. Redrawn star to star on the chart, the figure stays within half a degree of the sign over most of its length, within a degree and a half over nine tenths of it, and departs by six and a half degrees only on the run up to Vega. Vega is the target. Find Vega, and the sign gives that part of the sky; from it the hemisphere and the directions follow.

The test placement of 19 September 2026

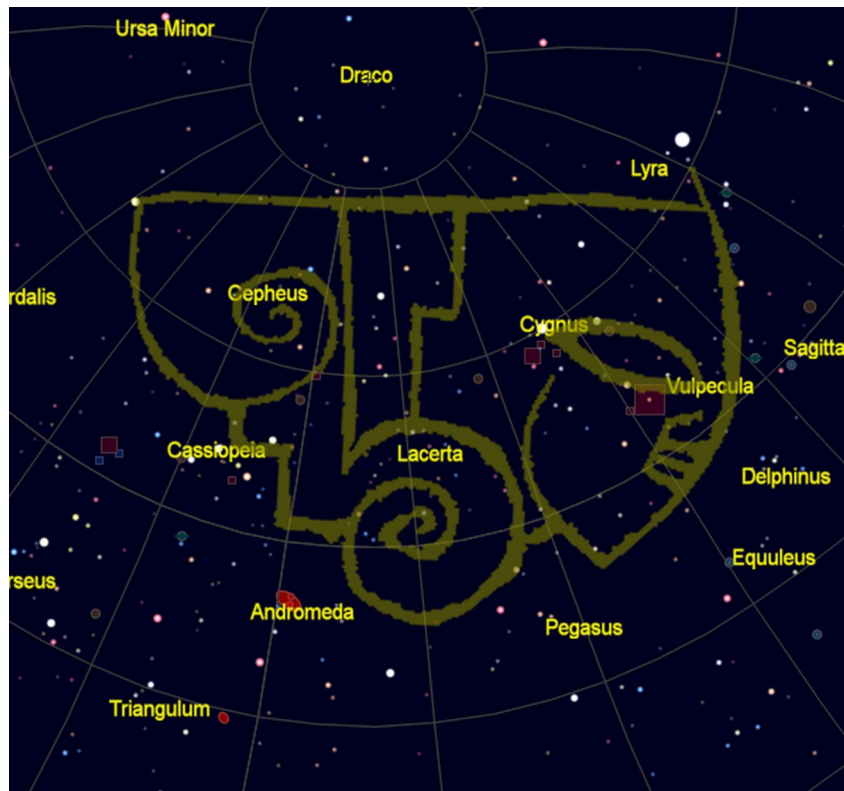


Figure 31. The test placement of 19 September 2026: the back sign (olive) on the sky of 130 BC. Its top bar ends at a star below Vega; the stroke rising at its right end reaches Vega, top right. Sent to Michael Forest that day; replaced by Figure 9. Chart: Cartes du Ciel. Placement: the author.

Why it was placed again. In the placement of 19 September the top bar ended at a star below Vega, and Vega was reached only by the rising stroke at the right. Looking again, the author saw that the top bar itself can be laid on two stars: Polaris at its left end and Vega at its right. A bar that runs from one known star to another can be laid down by anyone who knows those two stars, and the rest of the sign then follows by proportion, as a freehand map is scaled from two points. In this placement Vega is no longer at the tip of a pointing stroke: it sits at the right-hand end of the top bar, with Polaris at the left-hand end. For that reason this paper no longer calls the sign the Vega pointer, as earlier work did; it is the back sign.

The seven dial signs

The seven signs were first laid on a chart of the sky for the year 130 BC, one sign to a constellation of the zodiac, in the order they sit on the dial (Figure 32). That placement was a test of the decipherment, and the picture was one of the images sent to Michael Forest that day. Figure 32 shows where each sign fell.

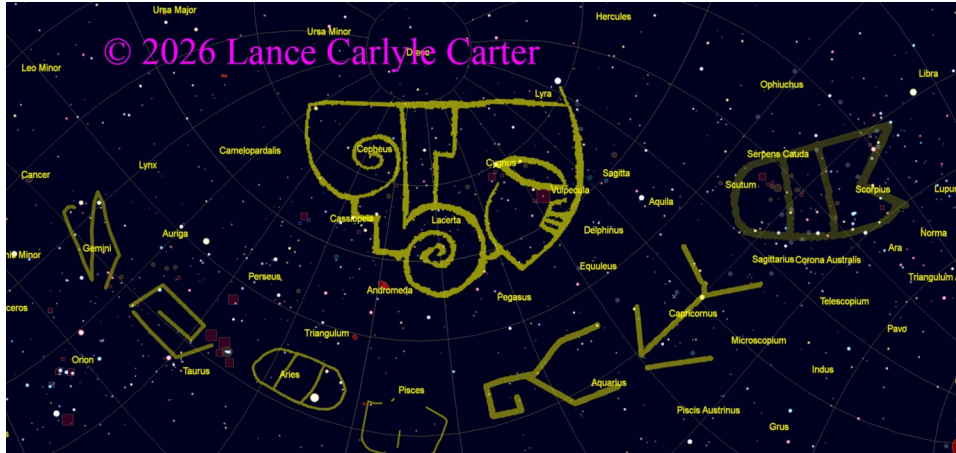


Figure 32. The test placement of 19 September 2026: the seven dial signs laid on the sky of 130 BC, Gemini at the left, Scorpium at the right. This picture was sent to Michael Forest that day. Figure 8 shows the signs as they are placed now. Chart: Cartes du Ciel. Placement and crop: the author.

Glossary

The words this paper uses, made or borrowed, in plain terms, in alphabetical order.

Archaeoastronomy. The study of how people in the past watched the sky, from their monuments, objects and records.

Artifact. An object made or shaped by people. The word says nothing about the object's age.

Aspect. The angle between two planets on a chart: conjunction (0 degrees), sextile (60), square (90), trine (120), opposition (180), and minor ones in between.

Aspect grid. A triangle table showing the aspect between every pair of points (Figure 20).

Aspect line. On a horoscope chart, a straight line drawn between two planets to show the aspect between them. In the paper's horoscope section, the nine carved lines on the dial are read as aspect lines.

Aspect wheel. The common name for the tool the author calls an aspectarian.

Aspectarian. The author's name for an aspect wheel: a transparency with lines from one point, the zero point, to each aspect angle at its exact degree. Laid on a chart with the zero point on a planet, the aspectarian shows which planets are in aspect with that planet (Figure 15).

Back sign. The one large sign on the back (verso) of the plaque. Laid on a star chart, the back sign covers the sky around the north pole, its top bar running from Polaris to Vega. Earlier drafts called it the Vega pointer.

Bowl (Bowl Pattern). A chart in which all the planets lie within about half of the circle and the rest is empty. In these papers "Bowl" always means the Bowl Pattern of astrology. The straight edge of a Bowl is the Rim Opposition.

Carbonate. Carbonate minerals, such as calcite and dolomite, and rocks made largely of them, such as limestone and most marble. Many fizz in acid, even weak acid such as vinegar.

Carved. Cut into a solid material, as a groove, with a hard tool. A carved line is cut down into the surface; a drawn line lies on it, in ink or paint. The signs of the plaque are carved.

Center line. The line down the middle of a stroke. The outline of a carved stroke is uneven on either side of it, where the stone looks fractured.

Compartment. One of the seven spaces in the outer band of the dial, each holding one sign.

Composite. A material made of two or more ingredients, for example a fine powder bound together.

Control test. A test comparing a drawing at its real place with the same drawing laid at random places. The result is the percent of the tests in which a random place did as well;

this paper uses 5 percent as its criterion, and a result above it is not proof that the proposed relation is absent.

Cutting Planet. In a Bowl, the planet on the clockwise edge of the rim. The Cutting Planet leads the others and is the chart's most important point. On the dial, point 1.

Decipherment. Making readable what could not be read. Here: finding what the signs of the plaque stand for on the sky, and reading the dial as a chart. This paper gives the signs no sounds or words.

Dial. The circle above the eyes on the front of the plaque: an inner field crossed by nine lines, a ring of rungs, and an outer band of compartments.

Edge. The narrow surface that runs all around the outline of the plaque, between the two broad sides, where the plaque is about 12 mm thick.

ET face. The shape the plaque is made in: what appears to be the face of an infant ET, with wide almond eyes, a narrow nose and a flat mask.

File marks. Fine parallel grooves left by a file, a tool with rows of teeth. On this plaque, marks like these show on the edge.

Filed and sanded. Smoothed by rubbing with a rough tool (a file) and then with grit. Both leave fine parallel scratches.

Form. The shaped surface a soft sheet is pressed over, or under, to give it its curve.

Gap. The stretch of the zodiac where the plaque has no sign: where any missing signs would go.

Glyph groove. The groove of a carved sign: the channel the cutting point leaves in the material. The width, depth and ends of a glyph groove show how the groove was carved.

Glyphing. The making of a carved inscription: choosing the signs, placing them, and cutting them, stroke by stroke. Here it means signs made on a portable object; petroglyphs are signs carved on rock in place, on cliffs and boulders.

Groove profile. The shape of a carved line seen in cross-section: a V, a U, or flat-bottomed. The groove profile tells what kind of tool made the line.

Home test. A simple test made at home with household materials, not in a laboratory.

Horoscope (chart). A drawing of the sky at one moment, for one person or event, with the planets on a circle.

House. One of twelve parts of a chart, counted from the Ascendant, the left end of the chart's horizon line.

Interpretation. Explaining what something means. Here: what the moment drawn on the dial means when it is read as a horoscope.

Line (on the dial). One of the nine straight, or nearly straight, lines carved across the inner field of the dial, lettered A to I from the top left. Read as a horoscope, they are aspect lines.

Molded. Shaped by pressing or pouring soft material against a shaped surface, so that it takes that shape as it hardens.

MUL.APIN. A Babylonian list of stars and constellations on clay tablets, known from copies of the 600s BC: the record from which the twelve signs of the zodiac grew (section 2).

Naked-eye astronomy. Watching the sky without a telescope, as all astronomy was done before about AD 1610.

Nebra sky disc. A bronze disc found in Germany, buried about 1600 BC, with gold figures of the sky, among them a cluster of dots read as the Pleiades (section 2).

Orb. How far from an exact aspect two points may be and still count: 10 degrees for the major aspects, up to 3 for the minor ones.

Parting plane. The line where two halves of a mold met; a molded object may show it as a faint seam.

Placement. Where a sign is laid on the star chart: by the author, by eye, for every sign but sign 6, which the computer fitted.

Planetary pattern. The overall shape the planets make on a chart. Seven are named: Splash, Bundle, Seesaw, Bowl, Bucket, Locomotive, Splay.

Planisphere. A star wheel: a disc printed with the stars that turns under an outer rim marked with the hours. Set for the date and the observer's latitude, and turned until its stars match the sky, the rim gives the hour.

Plaque. The object itself: a small, flat, carved piece shaped as what appears to be the face of an infant ET, about 8 cm (3.1 inches) wide.

Polaris. Alpha Ursae Minoris, the pole star today, at the end of the handle of the Little Dipper.

Pole star. A bright star near the north pole of the sky, which seems to stay still while the sky turns around it. Because of precession the pole star changes over thousands of years: Polaris now, Vega about 14,000 years ago.

Precession. The slow turning of the Earth's axis, which moves the pole star and the seasons against the stars, about one degree every 72 years.

Random Corners Test. The control test of the back sign: its 29 corners dropped at random on the same star chart 4,000 times, to see how often random corners land on stars as well as the real ones (section 9).

Random Places Test. The control test of a dial sign: the drawing of the sign laid at 400 random places along the zodiac, to see how often a random place fits the stars as well as the real place (Appendix C).

Rasp marks. Coarser parallel grooves from a rasp, a file with a few large teeth. On this plaque, rows of about five long, uneven teeth.

Reading (astrological). An astrologer's interpretation of a horoscope chart for a person.

Recto. The front of the plaque. The recto carries the ET face and, above the eyes, the dial with its seven signs.

Rim Opposition. In a Bowl, the two planets at its edges, facing each other across the chart, 170 to 190 degrees apart. The line between them is the straight edge of the Bowl. On the dial, line A.

Rung. One of the 36 short bars in the ring between the inner field and the compartments of the dial.

Side. One of the two broad, nearly flat surfaces of the plaque: the front (recto), with the face and the dial, or the back (verso), with the back sign. Also called a broad side.

Sign. One carved figure. The seven signs of the dial are called by number, sign 1 to sign 7, counted from the left end of the dial as the plaque is held upright. The one large sign on the back is the back sign.

Slab. A flat sheet of material of more or less even thickness, before it is shaped.

Star clock. A table of stars that rise in turn through the night, used to tell its hours, as on Egyptian coffin lids of about 2000 BC (section 2).

Stardial. A dial read from the stars by night, as a sundial is read from the Sun by day. The sky turns once a day around the pole, and a figure near the pole turns with it and points to the hour.

Stroke order. The order in which the strokes of a sign were carved, and the direction in which each was carved.

T-Square. Two planets in opposition and a third at right angles to both; the third is the Apex. On the dial, point 4.

Thermoluminescence. A laboratory method of dating fired clay or burnt stone: heating releases light from energy stored in the mineral since it was last fired. It does not date carving in stone.

Tool mark. Any trace a tool leaves: the shape of a groove, scratches along it, breakout at its edges, the shape of its ends.

Trailing Planet. In a Bowl, the other planet of the rim. The Trailing Planet follows the Cutting Planet and keeps the Cutting Planet in check. On the dial, point 9.

Vega. Alpha Lyrae, a bright star of the northern sky, near the pole about 14,000 years ago.

Venus table. Pages of the Maya Dresden Codex that count the cycles of the planet Venus (section 2).

Verso. The back of the plaque. The verso carries one large sign, the back sign.

Zodiac. The band of sky that the Sun, the Moon and the planets travel along, divided into signs. A full zodiac goes all the way around the sky; the plaque shows seven of its signs, a segment of it.

Zodiac line (ecliptic). The Sun's yearly path through the stars, down the middle of the zodiac.

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