

THE MEGALITHIC QUARTER AT SAINT MARTIN DE CORLEANS IN AOSTA (ITALY)

GIULIANO ROMANO

1. *Introduction*

In 1969, the archaeologist Franco Mezzena discovered a megalithic site which stood at a depth of six metres and measured about one hectare (or approximately two and a half acres) in size at the Saint Martin de Corleans quarter in Aosta, Italy. A succession of 22 layers offers evidence of the site's historic evolution from 3000 B.C. in the Copper Age to the Bronze and Iron Age to the Roman epoch and, finally, up to the present day.

This area, certainly the most beautiful in Italy as well as one of the most beautiful in the entire world, represents a megalithic cult location exceptionally rich in monuments of every type: dolmen, stelae, tombs, sacred plough markings, holes for stakes, holy cobblestoned paths and other important and meaningful structures, all dating back to three thousand years B.C.

While being helped by Guido Cossard to take samples of the location in 1990, the author was able (with the use of a theodolite) to measure the azimuths of all the structures and to survey the entire profile of the mountain-filled horizon degree by degree and — in certain portions — half-degree by half-degree.

The first thing to be noted, as is shown in Figures 1a, 1b, 1c, is that the site's dig maps indicate two large alignment directrices, one pointing roughly southeast-northwest and the other northeast-southwest. The various alignments evidently offer slight deviations in respect to these directrices, since they point separately (as we shall see) to different places on the hilly horizon.

2. *The Structures*

The monument-type constructions at Saint Martin de Corleans are similar to those of the Le Petit Chasseur complex in Sion, Switzerland on

the far side of the Gran Saint Bernard pass separating that country from the Valle d'Aosta. Archaeologists observe that similarities may likewise be found at the megalithic sites of the French canton and the lake at Basel.

The Aosta area, extremely rich in megalithic monuments, was inhabited from the Copper Age period up to the beginning of the Bronze Age, but there are also traces of the Roman epoch.

The work undertaken by F. Mezzena's archaeological team and the C14 measurements completed have brought to light the existence of five chronological stages of development of the megalithic area, all dating back to three thousand years B.C.

The principal features of these stages may be summarized briefly as follows:

The First Stage (circa 3000-2750 B.C.), characterized by the presence of 22 holes that hosted large wooden stakes. Some of these holes contain burnt portions of ram skulls.

In the Second and Third Stages (circa 2750-2400 B.C.), sacred plough markings were made, all oriented in a NE-SW direction and possibly intended as consecration of the area. In addition, there were erected at right angles to one another two alignments of anthropomorphic stelae as well as two platforms lined up with those same stelae.

The sacred plough marks probably bear witness to the particular symbolism accorded the plough, a very important tool in those communities.

This stage also features traces of human bones and a certain number of teeth sown perhaps during a consecration rite.

In this epoch, seven large and five smaller wells were dug. They contained millstones and cereal grain, and they too were aligned more or less in the direction of the stakes and stelae.

The Fourth Stage (2400-2100 B.C.) was marked by the building of four megalithic

tombs, a small *allée couverte* equipped with a large burial chamber (Tomb VII), another circular tomb (Tomb IV), a dolmen on a triangular platform, and yet another rectangular-shaped dolmen on a platform (Tomb V). In this stage, several stelae were knocked down and re-used.

This epoch probably pertains to the ancient *Campaniforme* (or bell-form) period.

The Fifth Stage (2100-1900 B.C.) was the one in which three new cist (or rounded) tombs (Tombs I and III) were built, chambers which likewise saw the usage of felled, "re-cycled" stelae. In this stage, the cult dedicated to ancestral myths depicted on the stelae may have been replaced by a different cult, one which imposed the cancellation of signs from the past.

This stage, which belongs to the initial period of the Bronze Age, concluded the utilization of the area for sacred purposes.

The imposing megalithic constructions at Saint Martin indicate the existence of a social and religious organization of great significance, because it must not have been a simple matter to complete such exacting and important work without proper preparation and without intelligent coordination of the people involved in such a project.

3. Alignments of an Astronomic Nature

In order to better single out the various pieces of construction, we divided the megalithic area into three zones, as shown in the figures: Zone A to the north, where the stake holes, the dolmen and many stelae alignments appear; Zone B to the south; and Zone C, where the sacred wells are located.

Let's now take a look at the various alignments of astronomic significance. As can be seen in Table I — which records the azimuths of the various alignments, the heights found on the horizon and the corresponding declinations (for the moon, we naturally took into account the parallax as well as other interfering factors) — and better yet from the figures, practically all the structures in the megalithic complex are aligned with points on the horizon interesting from an astronomic point of view.

The area's southern horizon features a moun-

tain which falls off gradually toward the west. The curve described by the mountain's profile is roughly parallel to the path taken by the moon when at a declination of -28° . On such an occasion, therefore, the moon could be seen skimming the mountain for about twenty degrees (between azimuths 191° and 211°) and was almost hidden between azimuths 207° and 211° (which in the figures showing the alignments are generically given as $-(\epsilon + i)f$). The moon could then be seen moving along its path to the point where it disappeared from view behind a distant mountain corresponding to azimuth 215° (indicated in the figures as $-(\epsilon + 1)$).

This particular phenomenon, one which must have excited great interest among ancient tribes in the Valle d'Aosta, could be seen either in the morning when the moon was full in proximity of the summer solstice or after sunset in the autumn equinox when the moon was in its first quarter.

And it is precisely in the directions $-(\epsilon + i)f$ that a total of four alignments can be found:

- i) The stake holes (no. 8, Table I) in Zone A, part of the first chronological stage. This direction has been determined by taking into consideration the straight regression linking their centre lines. The arrangement of the stakes seems to suggest that tests were made so as to locate as accurately as possible that point on the horizon where the phenomenon took place.
- ii) The axis (or centre line) of Tomb II (no. 3, Table I). A structure that belongs to the area's fourth stage of development.
- iii) An alignment of stelae south of tomb III (no. 1, Table I). This is part of the second stage of development.
- iv) An alignment of fallen stelae (no. 11, Table I) from that same development stage.

The two alignments of sacred wells (nos. 23 and 24, Table I) point — with errors of about one degree — in the direction where the moon set after assuming the declination seen now; those directions were determined by tracing, through their centres, the straight lines of regression. These alignments belong to the megalithic area's third stage of development.

When the rising moon appeared at its lowest declination ($-(\epsilon + i)$), the following three

alignments pointed with good precision as follows:

- a) The southern side of Tomb II's triangular platform (no. 7, Table I). The construction is from the fourth stage of development around Saint Martin de Corleans.
- b) The plough marks in Zone A, found south of Tomb II (no. 14, Table I). These are from the second stage.
- c) The plough marks in Zone C (no. 21, Table I), these too from the second stage of development.

Because of the practical difficulties encountered in tracing the plough furrows, the latter can be accorded but approximate bearings. This may explain why in some zones (as shall be seen) the furrows are oriented well toward the sun in its winter solstice, whereas in other zones the sighting errors are more pronounced.

Toward the rising of the moon at its greatest declination (+ ($\epsilon + i$)) there points — with fine precision — the centre line of Tomb I (no. 10, Table I) in Zone A, belonging to the area's final stage of development. For the setting of the moon on that same occasion (+ ($\epsilon + i$)), there were aligned a row of stelae positioned northward in area A (no. 5, Table I) and the south side of Tomb II's platform (no. 6, Table I). Both of these are like-wise part of the site's final stage of development.

No alignment points toward sunrises in the solstices, but there are a grand total of five directed at sunsets in the winter solstice. They are:

- I The alignment between stelae, the centre lines of Tombs II and III, and a first stele northward in area A (no. 4, Table I). Fourth stage of development.
- II) The plough mark north of area A (no. 12, Table I), part of the megalithic site's second stage of evolution.
- III) An alignment of three stelae in area B (no. 15, Table I). Fourth stage.
- IV-V) The centre-line of the dolmen in the area south (no. 16, Table I) and the alignment between dolmen and stelae in the area south (no. 17, Table I), also pertaining to the fourth stage.

Of major interest is the axis of the well-type tomb brought to light in 1990 by F. Mezzena and surveyed by G. Cosşard. This axis (or

centre-line) is pointed toward the setting of the sun when it assumes a declination of +16.9° — i.e., close to the date given for the Celtic feast-day of Beltane and Lammass. If this is not chance coincidence, the revelation offered by these measurements suggest that this feastday was important even during the Copper Age period, much before the arrival of the Celts.

Of less significance, because they point to the rising or setting of two stars, are the following alignments:

- i) The axis or centre-line of Tomb III (no. 2, Table I) in Zone A. A construction apparently dating from the fifth stage of development, one that points to the rising of Beltegeuse about 2500 B.C.
- ii) Trained on the setting of Deneb at around the same date are: the alignment between dolmen in area B and the centre-line of the large well (no. 18, Table I), the alignment between the three stelae south in area B (no. 20, Table I), and the axis of the votive-chapel (sacellum) tomb located in that same area (no. 19, Table I).

4. *Conclusions*

In the 1950s, discovery was made on the outskirts of Aosta of a sacellum (votive chapel) dating from the second century A.D., a construction which, according to the interpretation given by archaeologists, had been dedicated to the moon by a certain Montanus. The combination of this discovery with the finding of so many moon alignments in the megalithic area seems to suggest the existence thereabouts of a continuation of ancient traditions, traditions that may have persisted until the late Roman epoch. Such a suspicion is interesting to say the least, but it needs further confirmation.

The possible moon cult suggested by the numerous astronomic alignments must have been closely linked to the chthonic cults. One might thus reason that the inhabitants of that zone thought it important to line up the area's main structures with points where the moon rose, set or gave birth to special phenomena.

As always, the winter solstice was very important, a date marked by the setting of the sun

behind the mountains. The many alignments on these points of the horizon attest to the sacred-chthonic significance of this important moment of the year. This particular form of orientation is widespread throughout Italy and can be found at an extremely large number of surveyed prehistoric alignments.

The megalithic complex at Saint Martin de Corleans, certainly the most beautiful and the richest in Italy, is amazing simply by virtue of its vast amount of alignments meaningful from an astronomic point of view. Almost every structure or construction seems to be directed, in fact, at certain points on the mountain-filled horizon where the moon rises or sets at particular moments in its main cycles and where the sun appears during the winter solstice. All of this seems to attest, therefore, to the lively attention given these phenomena by the chthonic-sacred cults active among the inhabitants of the Valle d'Aosta in ancient times.

*Department of Astronomy
University of Padova*

BIBLIOGRAPHY

- BURRONI D., MEZZENA F., 1987, *Megalitismo ed arte rupestre in Italia settentrionale durante l'eneolitico*. In *Rassegna di Archeologia* vol. VII A.A. del Congresso Internazionale "L'età del rame in Europa". Viareggio.
- COSSARD G., 1988, *Il cromlech del piccolo San Bernardo*. *Astronomia* n. 82.
1989 - *La pietra altare del Gran San Bernardo*. *Planetario* n. 1.
1993 - *Le pietre e il cielo*. Veco. Cernobbio (CO).
- MEZZENA F., 1978, *Le stele antropomorfe dell'arco alpino (considerazioni ed appunti)*. In *L'arte preistorica dell'Italia Settentrionale*, Catalogo esposizione. Verona.
1981 - *La Valle d'Aosta nella preistoria e nella protostoria*. In *Archeologia in Valle d'Aosta*. Catalogo della Mostra. Aosta.
1982 - *Ricerche preistoriche e protostoriche in Valle d'Aosta*. RSL, XLI-XLII, 1-4.
- ROMANO G., TRAVERSARI G., 1991, *Colloquio Internazionale Archeologia e Astronomia*. Venezia.
- ROMANO G., 1991, *Archeoastronomia Italiana*. Padova.
- ROMANO G., MEZZENA F., COSSARD G., 1991, *Il significato astronomico del sito megalitico di Saint Martin de Corleans in Aosta*. Tecnimage.

The author is indebted to G. Cossard who assisted in the survey and F. Mezzena who gave permission to carry out the survey of the site.

TABLE I

<i>n. alignment</i>	<i>A</i>	<i>b</i>	<i>Dec.</i>	<i>dif. Dec.</i>	<i>comments</i>
A zone					
1 stelae at SW	206°.7	10°.9	-27°.6	-1°.5	- (ε + i) f
2 tomb III ax.	117.1	14.4	- 7.5	-3.0	α Ori
3 tomb II hole	206.9	11.0	-27.5	-1.6	- (ε + i) f
4 st. - tomb II, III	228.4	7.0	-22.0	+2.0	- ε
5 stelae at N	292.0	19.6	+29.7	+0.6	- ε + i
6 side N. plat.	291.5	19.0	+28.9	-0.2	+ (ε + i)
7 side S. plat.	144.4	16.2	-19.2	-0.3	- (ε + i)
8 holes of poles	210.3	9.9	-27.2	+1.9	- (ε + i) f
9 stelae	116.3	14.2	- 7.2	+2.7	α Ori
10 tomb I axis	58.6	8.9	+28.6	-0.5	+ (ε + i)
11 stelae	207.5	11.0	-27.3	+1.8	- (ε + i) f
12 furrow 1	223.4	7.5	-24.3	-0.3	- ε
13 furrow 2	230.8	6.0	-20.7	-1.8	- (ε + i)
14 furrow 3	142.8	16.3	-18.6	+0.3	- (ε + i)
B zone					
15 stelae	221.7	7.5	-25.1	-1.1	- ε
16 dolmen axis	224.8	6.8	-24.1	-0.1	- ε
17 dolmen + stelae	226.0	7.0	-23.3	+0.7	- ε
18 dolmen + pit	303.0	20.2	+37.1	+1.2	Deneb:
19 tomb	304.6	20.3	+38.1	+2.2	Deneb:
20 stelae	302.0	20.2	+36.4	+0.5	Deneb:
C zone					
21 furrow 4	144.4	16.0	-19.4	+0.5	- (ε + i)
22 furrow 5	149.4	16.0	-21.6	-2.7	- (ε - i):
23 ritual holes	216.4	8.3	-27.0	+2.1	- (ε + i)
24 ritual holes	213.5	7.8	-28.7	+0.4	- (ε + i)
25 pit grave	252.7	7.0	+16.9		Beltane - Lammas

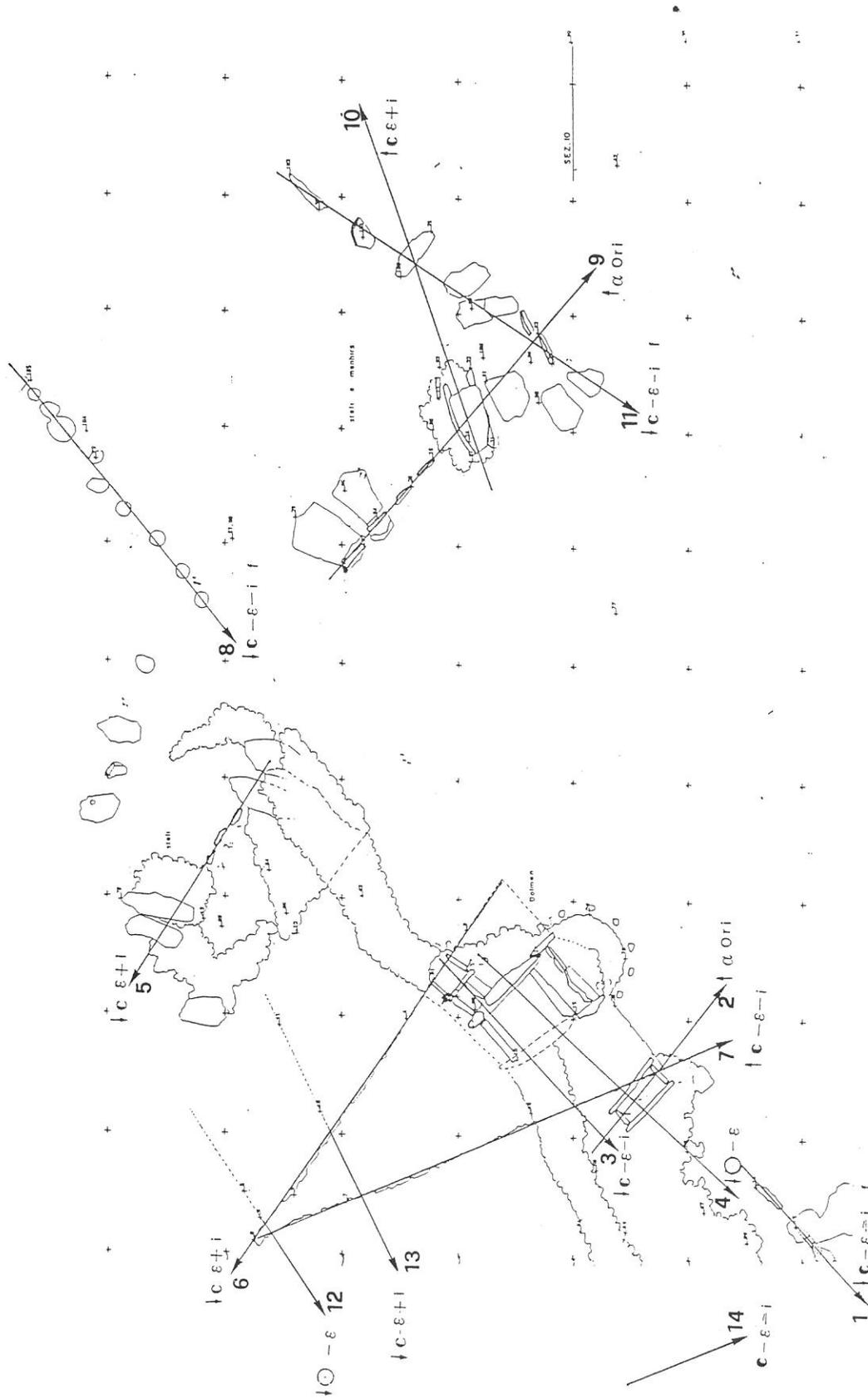


Fig. 1a

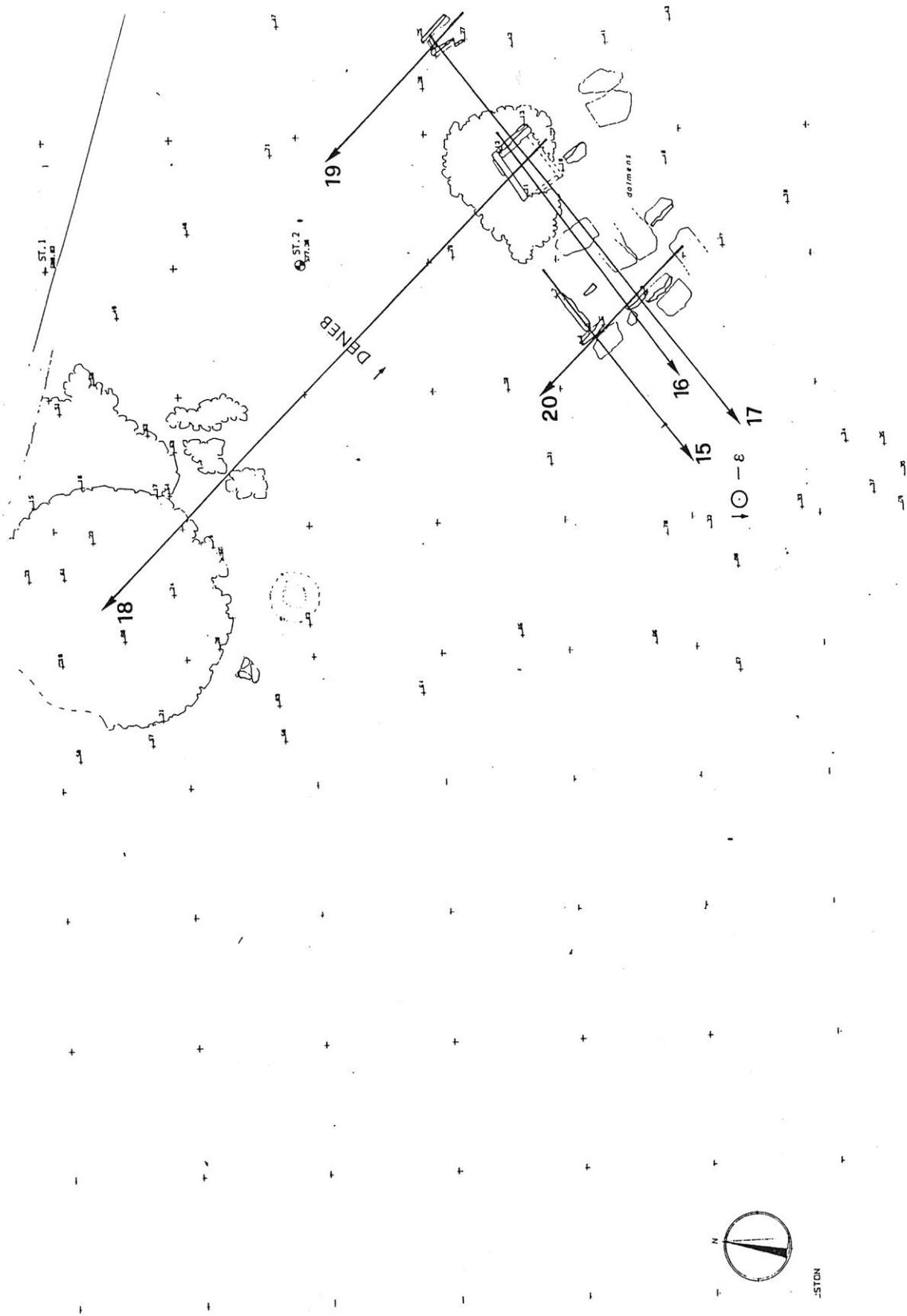


Fig. 1b

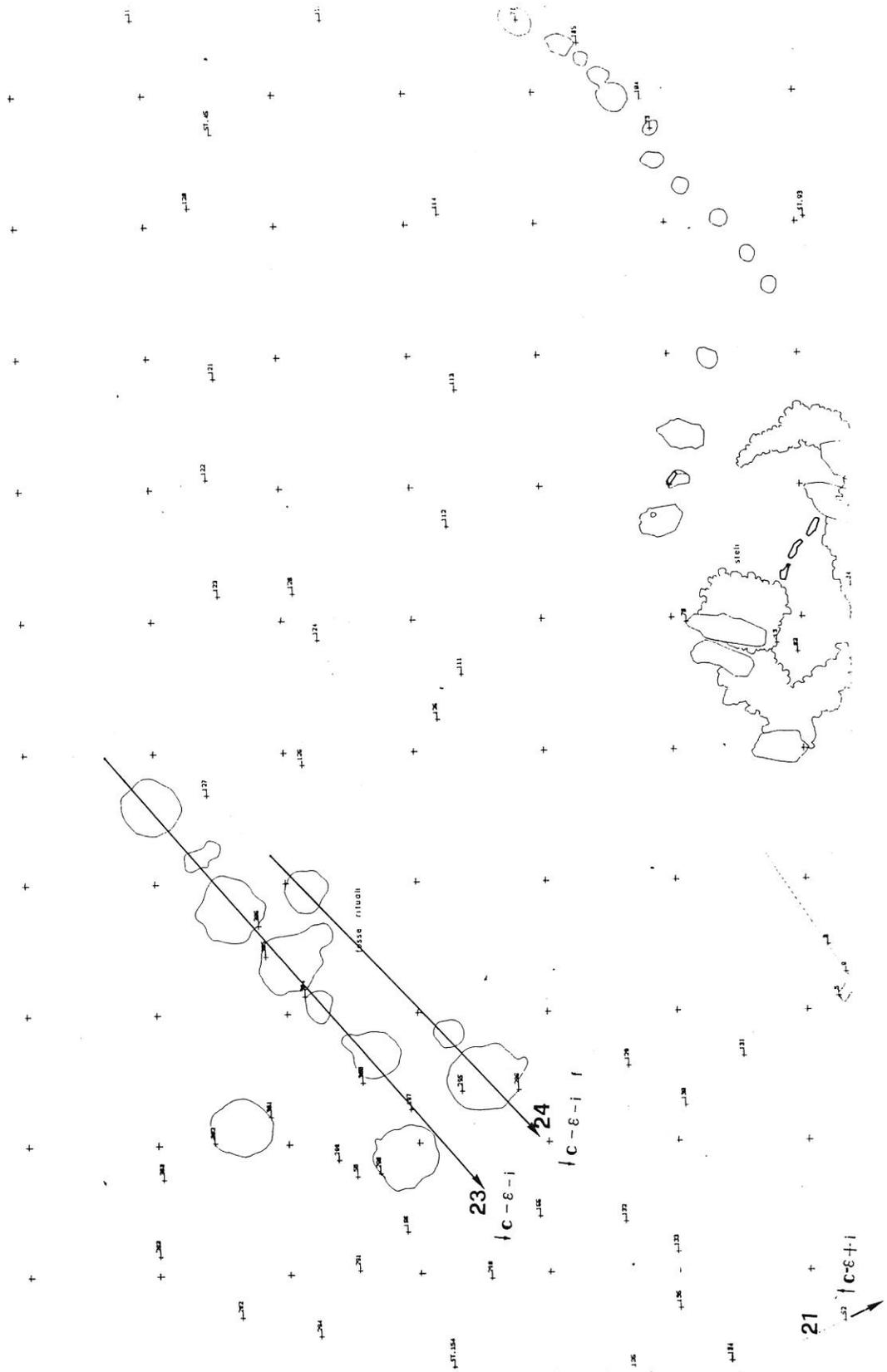


Fig. 1c