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The Cupola Church. An Archaeological Stratigraphic Description

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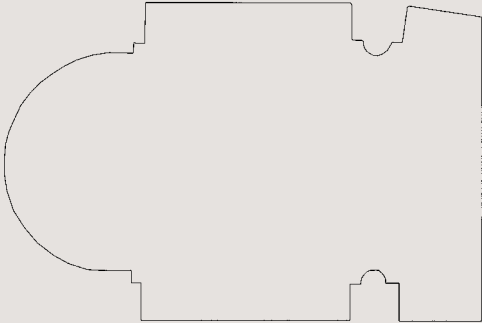
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VIII. THE CUPOLA CHURCH

An Archaeological Stratigraphic Description

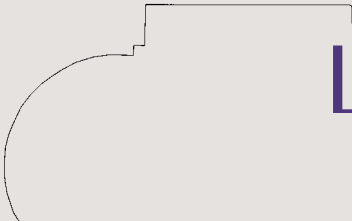


Abstract / This paper presents an archaeological analysis of the Cupola Church in Yeghegis, highlighting the distinctive construction features of a building representative of an architectural type widely found in medieval Armenia. Through stratigraphic investigation, the research details the church's construction procedures, the traces of the devotion of the worshippers, and the restoration interventions of the 1970s. By situating the building within the broader framework of sacred architecture in Vayots' Dzor and the neighboring regions, the study narrows the dating of the church to the late thirteenth century and traces architectural continuities and influences that contribute to our understanding of the architectural program promoted by the Örbëlean dynasty in the thirteenth and fourteenth centuries.

Keywords / archaeological analysis, building archaeology, Cupola Church, masonry types, medieval Armenia, Örbëleans, Yeghegis

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DESCRIPTION OF THE ARCHITECTURAL COMPLEX

This church is known in the scholarly literature as the Cupola Church. Various other denominations have been applied to it, such as Surb Karapet (Holy Precursor), Surb Nshan (Holy Sign), or St Grigor, but there does not seem to be corroborating evidence for any of these dedications in the sources.¹ The main building is a domed-hall church with a semi-dome covered apse (embedded in the straight wall on the exterior), a gable roof, and a central dome standing on a high tambour covered by a conical roof [fig. 1]. The building is roughly oriented east–west (a few degrees NE–SW).

The church is part of an *Architectural Complex* (AC) that includes two *Buildings* (B): the church, B1, and the enclosed churchyard, B2, in which a collapsed *gawit*² may be identified (see below).

All of the *Elevations* (E 1–9) of B1 have been archaeologically analyzed in detail, in order to retrace the stratigraphic sequence of the construction process. One *Masonry Type* (MT1d)³ and two surface dressing types have been sampled. B2 has been described in a Building sheet, and a *Masonry Stratigraphic Unit* (MSU); from the southern external wall has been sampled and described as a masonry type.

The complex is located at the eastern boundary of today's village of Yegheghis, approximately 160 meters west of the Zorats' complex (AC1). It stands on an east–west slope ending in a ledge, partly braced by the enclosure B2 and partly flanked by a gravel road. Presently, the area is partially an orchard, planted with walnut trees and surrounded by the fences of nearby private properties.

The surrounding area was used as a cemetery, and numerous tombstones and *khach'k'ars* are spread around, not necessarily in their original position. Some of these monuments display inscriptions, the oldest of which dates to 1306. It is necessary to note that there are a few other monuments dated to a previous period (second half of the thirteenth century) but not closely related with the church: a decorated and fragmentary lunette, discovered in the southern area outside the church, belonging to a not yet identified building, mentioning Tarsayich Ōrbēlean and his second wife Mina Khat'un which is no longer *in situ* (from 1274); four *khach'k'ars* and three cradle-shaped gravestones forming a small cemetery

(1251–1254) located circa 100 meters in a northwest direction from the church.³ Scholars have suggested that the church was founded in the thirteenth century, basing themselves on its ground plan typology and architectural decorations.⁴

In 1972–1976, the church was restored:⁵ the upper portions of exterior elevations and the slate roofs were totally rebuilt, while minor collapses in the tambour, the vaults, openings, arches, and upper corners were repaired, mostly with newly quarried and worked, and thus recognizable, basalt ashlars.

L.S.

ARCHITECTURAL DESCRIPTION OF B1

Building 1 sits on a three-step *crepidoma*, with continuous walls made of perfectly squared basalt ashlars. One splayed, narrow, and single-light window pierces each side of the church. The windows show molded omega lintels on the west (restored) and north sides; at the southern window, two snakes with divergent heads twine around the light, and the windowsill shows a bas-relief of a twelve-degree sundial, while the façade window opens within a panel

* Research towards this paper started thanks to the funding of the Ministry of Foreign Affairs of Italy for the archaeological mission “The Making of the Silk Road of Armenia: A Light Archaeology of Euro-Asian Connectivity in the Middle Ages (cc. 7–14)” lead by Prof. Michele Nucciotti. It was completed thanks to the ERC-funded Consolidator Grant, *Armenia Entangled: Connectivity and Cultural Encounters in Medieval Eurasia 9th–14th Centuries* (ArmEn), at the SAGAS Department of the University of Florence (grant agreement no 865067). The latter project falls under European Union's Horizon 2020 research and innovation program.

1 See Zaroui Pogossian, “The Golden Age of Yegheghis in the 13th and 14th Centuries” in this volume, pp. 68–80.

2 See Michele Nucciotti, Lapo Somigli, Elisa Pruno, “Atlas of Masonry Types” in this volume, pp. 238–248.

3 See Hamlet Petrosyan, Zaroui Pogossian, “Armenian Inscriptions From and Around Yegheghis” in this volume, pp. 250–275; see also Eruand Lalayan, “Vayots' Dzor. Nshanavor vank'er [Vayots' Dzor. Noteworthy Monasteries], *Azagrakan handēs* [Ethnographic Journal], 26 (1916), pp. 5–84, sp. pp. 67–69, with a discussion about the iconography of the *lunette* and its pertinence to the palace of Tarsayich Ōrbēlean in Yegheghis, where it served as part of the monumental gate.

4 Lalayan, “Vayots' Dzor” (n. 3), p. 66; Hovsep' Yeghiazaryan, *Azizbekovi shirjani kulturayi hushardzannera* [Cultural Monuments of the Azizbekov Region], Yerevan 1955, p. 57; Paolo Cuneo, *Architettura armena dal quarto al diciannovesimo secolo*, 2 vols, Rome 1988, vol. 1, pp. 380–381. Yulius T'amanyan, “Vayots' Dzor S. Karapet ekeghets'u veranoroguma” [The Restorations of the Church of S. Karapet in Vayots' Dzor], *Ėjmiatsin*, 34/5 (1977), pp. 40–45 narrows the construction timeframe of the church to the last quarter of the thirteenth century.

5 T'amanyan, “The Restorations of the Church” (n. 4), p. 41.



[fig. 1] Left: the localization of the Cupola Church in Yeghegis Village; right: a view of the façade

framed by a double bead molding and a continuous semicircles motif [fig. 2].

Traces of a two-tone design are in the alternation of red and grey ashlar (on the façade, north and east sides: MSUs 801, 802 in E1; 701 in E2; 1002 in E3), and in the paint on a bas-relief flower on the façade under the south gable, which is part of the recent restoration but may have been reused. Inside the church, this chromatic feature appears in masonry patterns (north and south walls, MSUs 1201; 1401) and is also emphasized by the red and black paint applied to architectural elements (see below).

Still concerning the decorative apparatus of the external elevation, but belonging to the period of activity of the church defined as Phase 2, there are also many carved crosses grouped on the western (MSUs 828, 829), northern (MSUs 714, 715), and southern (MSU 910) sides.

The tambour consists of seven rows of yellowish basalt masonry, over the same stone cornice and a grey basalt base row. The molded cornice has the shape of continuous bas-relief semicircles on a *cavetto*, similar to the façade window decoration. Two of the four windows (east and west) of the tambour belong to the 1970s restoration, when a number of ashlar were also replaced or straightened. The photos taken from outside before the restoration show the

tambour in good static conditions, although affected by the outward displacement of some ashlar.

The outer eastern elevation (E3) shows a vertical crack (MSUs 1004, 1005), a structural dislocation due to a seismic event or to ground instability, loosening the joints of sub-phase 1b (MSU 1002), 1d (MSU 1003), and 1e (MSUs 1006, 1007) masonries. Traces of this dislocation (MSUs 1311, 1341) may also be found inside the apse (E7), in the broken corners and edges of some ashlar of sub-phase 1c (MSU 1307), 1d (MSU 1310), and 1e (MSUs 1316, 1339).

The space inside [fig. 4] is west-east tripartite, with a narrow (90 centimeters) vestibule, a central hall, and a semi-circular apse, totally occupied by the *bema*. The portal on the counterfaçade, with a 1.30-meter span, shows a simple, rounded arch and, under it, a smoothed lunette without any visible decorations.

The barrel-vaulted vestibule is separated from the hall by two semi-column pilasters, each bearing a double rounded arch, which is part of the central ceiling system. On the south side (E8), a niche with a deeply carved shell vault is framed by a bead molding; opposite (E6), a stoup, shell-shaped and painted outside in red and black, juts from a niche with a bas-relief *intradox* showing a radiant motif. The cornice is richly decorated with a double bead molding and a rosette on both sides [fig. 3]. The south wall of



[fig. 2] Left: the molded lintel of the northern window;
right: a bas-relief sundial and snakes framing the southern window

the vestibule does not match the orientation of the outer wall, being a few degrees northeast–southwest. It is noteworthy that this irregularity in the wall orientation is already visible in the plinth course, which outlines the inner floor plan of the church.

The central hall is flanked by two blind arches that, together with the arch towards the vestibule and the triumphal arch, and linked by a pendentive, bear the tambour. The splayed windows are plain, with an arched lintel. The base of the tambour is a cornice with a *cavetto* and, above this, a two-cord plait bas-relief,⁶ showing traces of dark red and black paint. The shape of the western pilasters' capitals recalls the Doric order, with *griffes* joining a high *dado* to the round cushion below. The eastern pilasters have rounded angles, highlighted by a thin vertical groove. Over these pilasters, there is a molded cornice in the shape of a bullnose over a shallow *cavetto* that runs as the springer of the semi-dome of the apse. Each edge ashlar of the semi-dome, towards the triumphal arch, shows a semicircular bas-relief, repeating the *corolla* motif of the keystone.

The apse, with an elevated bema accessible via two lateral flights of three steps, has a niche on both sides: the left one with a deeply carved shell vault, the right one plain, with an arched lintel.

M.D.F.

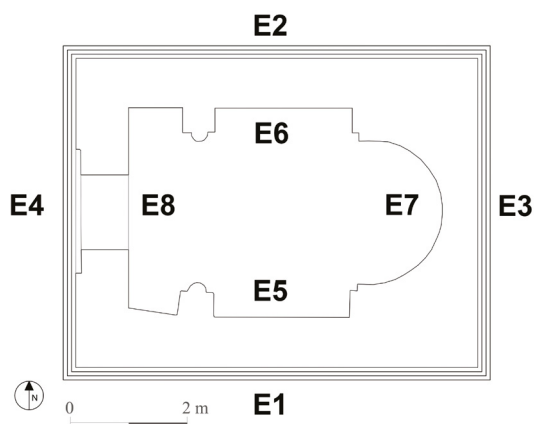
ARCHITECTURAL DESCRIPTION OF B2

Abutting on the western side of the church, there is an enclosure (B2), consisting of three walls, with a nearly square plan (6.60 meters on northern and southern sides, 5.40 meters on the western side). The ground in front of the church slopes from east to west, so B2 works as a terrace, supporting the ground and providing a plan level to grant access to the church. Although this function is still performed, the structure is not well preserved: a maximum of three rows of basalt stones on the interior southern and western elevations and on the northern side, while the external elevations of western and, partially, southern sides are preserved until 1.60 meters above the actual ground level.

On the internal ground and leaning on the walls, there are erratic materials, some burial slabs, two pointed cradle-shaped tombstones, and some *khach'k'ars*.⁷ In the south–east portion of the enclosure, a column

6 This motif is widespread in neighboring territories, like in the façade of Surb Hovhannes Karapet Church, some kilometers west of the village of Lanjar in the Urts Mountains (see below), but also in some Anatolian caravanserais founded in the thirteenth century (e.g., Agzikira Han, Susuz Han, Karatay Han. See Kurt Erdmann, *Das anatolische Karavansaray des 13. Jahrhunderts*, Berlin 1961, *Katalog, Text*, vol. 1, pp. 97–102, 111–114, 117–125, and *Katalog – Abbildungen*, vol. II, illustrations nos 166–175, 196–204, 213–131).

7 See Petrosyan/Pogossian, “Armenian Inscriptions” (n. 3).



[fig. 3] Niche on the southern (on the left) and northern (on the right) side of the vestibule

[fig. 4] The plan of the Cupola Church (B1) with all the analyzed elevations (E)

base is preserved, almost entirely buried in the dirt. Should this column base be *in situ*, it would imply a floor plan about 0.40 meters lower than the first step of the podium (MSU 801), a level that would have left the broken stones of the foundation (MSU 813) of CF1 exposed. Four steps, made of *spolia* stones, were arranged in recent times to overcome the difference in height between the actual floor of B2 and the threshold of the church. Two fragments of a tombstone with an inscription referring to a certain *Mamakhat'un* are used as upper steps (see Petrosyan/Pogossian in this volume).

Access to the enclosure is on the west side, aligned with the portal of B1. The threshold, a single basalt block shaped into an inverted T by removing the upper edges of the short sides, is 0.80 meters above the actual external ground level. The access (1.15 meters wide) is flanked by big basalt squared and smoothed blocks (probably re-used ones, since their dressing is completely different from that of the stones that compose the walls), representing the remains of the jambs [fig. 5].

As already mentioned, the external western elevation is the best preserved. It is made up of large basalt blocks (ca 0.90 × 0.50 meters), squared and with either smooth and regularized surfaces, placed in corners and at the entrance, connected by broken – mostly at the base of the wall – and roughly squared basalt. Due to the presence of large ashlars as jambs and cornerstones, the masonry shows a pattern where rows of smaller blocks are doubled between two large ashlars, and wedges are used. The courses are parallel and roughly horizontal, with no mortar preserved. The north corner, made of two large overlapping blocks, is detached from the wall.

All the other masonry is organized in basically horizontal and parallel courses, and the building material is generally broken and roughly squared basalt. The size is within the range described in MT2b (width of the most regular pieces from a minimum of 30 to a maximum of 52 centimeters, with recurring values between 33 and 35 centimeters; height from 17 to 26 centimeters, recurring values between 20 and 25 centimeters), except for the internal southern elevation, which has slightly larger components and different thickness: 0.90 meters while the other three walls measure 1.15 meters.

The presence of a column base in the southeastern portion of the enclosure suggests the existence of a

roofing system and so allows us to interpret B2 as a *gawit*⁸. It is worth noting, however, that the external elevations of B1 don't show any traces of joints with other structures.

M.D.F.

ARCHAEOLOGICAL ANALYSES

ARCHAEOLOGICAL ANALYSIS OF B1⁸

The detailed archaeological analysis of B1 allowed us to identify two main phases, rather distant in time from each other (Phases 1 and 4): first, the building of the church as a whole, reputedly dating to the second half of the thirteenth century; second, the restoration that took place in the 1970s. The traces left on the building by the worshippers (Phase 2), and the collapses that eventually prompted the reconstruction (Phase 3), not precisely datable, belong to the wide time span between these two *termini*.

The first phase can be divided into seven sub-phases, basically coeval, that provide details on the design and construction procedures:

- 1a *Crepidoma* (MSUs 812, 813 E1; 700 E2; 1001 E3; 900 E4) and base of internal elevations (1100 E5; 1200 E6; 1300 E7; 1400 E8), which outlines the floorplan of the church.
- 1b Lower perimeter, MSUs 801, 802, 803, 804 E1; 701 E2; 1002 E3; 901 E4; 1101, 1102, 1103, 1104 (E5); 1201, 1202 (E6); 1401, 1404 (E8): two rows of large basalt ashlar above the *crepidoma*, with a homogenous height (63–62 centimeters), plus a row of 57-centimeter-high ashlar. These masonries reach the height of the impost of the portal, and the inside windows on the northern, western, and southern sides. This sub-phase is found inside (except the apse E8, covered by the bema) and outside the church.
- 1c Inside the church, the construction of the semi-pilasters starts (MSUs 1129=1203, 1130=1208 NW semi-pilaster; 1133=1402; 1135=1403 SW; 1305=1414 SE; 1306=1207 NE), leaning on the sub-phase 1b walls. The lower portion of the apse is built (MSU 1307), tied with the eastern semi-pilaster and reaching the level of the lateral masonries. Two U glyphs are engraved on ashlar from MSU 1307 (MSUs 1334 and 1335). Eventually, the niches of the vestibule (MSU 1209 on the northern side and MSU 1405 on the southern side) also belong to this sub-phase.



[fig. 5] B2 southern masonry with squared and smoothed re-used basalt ashlar and broken and roughly squared basalt blocks

8 Stratigraphical analyses of the elevations are presented in the catalogue that follows the text.

- 1d On the external elevations, above the three lower courses, in sub-phase 1d, two more rows of smaller (maximum height 50 centimeters), smooth basalt ashlar are added (MSUs 805, 806 E1; 704, 710 E2; 1003 E3; 903 E4), up to the outer windowsills' height. On the façade, the builders completed the construction of the entrance with the round arch MSU 807 (=1105 and 1106 in the counter façade) and the lunette MSU 808 (=1107 in the counter façade). Looking at the internal elevations, these are raised until the windowsills of northern and southern sides (MSUs 1108, 1109 in E5; 1210, 1216, 1217=1325, 1245=1149 in E6; 1407, 1413, 1415=1329, 1439=1150). Nothing is noticeable in the apse.
- 1e In this sub-phase, internal and external rows of the wall reach the same level. This level matches the base of the tympanum of the external elevations (MSUs 809, 810, 811, 823 E1; 711, 712, 713 E2; 1006, 1007 E3; 905, 906, 911 E4) and, internally, the molded cornice on which lay the vestibule vault, the semi-dome of the apse, and the four double arches sustaining the tambour. At the same time, the builders arranged the jambs and the windowsills of the northern (MSU 1223), southern (MSU 1418), and western (MSU 1114) single-light windows and the niches of the apse (MSU 1308, the northern, and MSU 1309, the southern).⁹
- 1f The construction of the internal roof (the semi-dome of the apse, the vestibule vault) and the supporting system (arches, squinches, and tambour springer) of the central dome [fig. 6]. The latter seems to have a kind of "reverse" composition: the keystone, a semicircular ashlar with a sundial/peacock tail motif engraved on it, lies on the spring of the vault, so at its base, instead of being positioned at the apex [fig. 10]. After that, the double rounded arches were erected to support the tambour. It is clear that in this sub-phase the construction moved from east to west: after the triumphal arch on the eastern side (MSUs 1319 and 1320), the northern (MSUs 1229 and 1230) and the southern (MSUs 1426 and 1427) arches were erected, followed lastly by the western arch (MSUs 1138, 1139, and 1140). Above them, there are four squinches (MSUs 1115=1429, 1134=1231, 1240, 1232=1332, 1338=1428) connecting the square central space to the cylindrical tambour (E9). In sub-phase 1f, the springer cornice of the tambour was also placed,

decorated with a motif of two interlaced ribbons (MSUs 1143=1241=1342=1430=1500). The internal roofing system was completed with the construction of the barrel vault upon the vestibule (MSU 1237=1433), which lies on the western arch.

- 1g The last sub-phase refers to the top parts of the perimetral walls (internal and external) and the erection of the tambour and the central dome (the actual one is restored). On external elevations, because of the collapse of the upper portion of masonries, 1g is visible only in little portions of E1, E2 and E4, where the tympanums (MSUs 830, 831, 832 in E1; 703 in E2; 913 in E4) were built and the lintels of the windows arranged (MSUs 716 in E2; 912 in E4). The same building operations were performed on internal elevations (MSU 1117 and lintel MSU 116 in E5; MSUs 1226, 1227, 1228, and lintel MSU 1224 in E6; MSUs 1421, 1423, 1425, and lintel MSU 1422 in E8). Once the construction of the perimeter walls, the roof, and the supporting system of the dome were completed, the last element to be built was the tambour with the four single-light windows. These were largely restored in the 1970s (Phase 4). The tambour is crowned by an overhanging, simple-shaped cornice (MSU 1520), on which the dome (MSU 1521) surges. Internally, this is composed of four rows of ashlar (MSU 1521) and a circular keystone (MSU 1522), and features a two-tone decoration: while the keystone displays traces of engraved and red-painted petals, the first row around it is made of eight ashlar of two different lithotypes (red and a grey basalt type characterized, differently from the rest of the church, by white inclusions) arranged in an alternated way to create a double cross image.

Phase 1 is characterized by perfectly squared and smoothed basalt ashlar of large (1a) and medium (1b–1g) size, worked with a chisel, arranged in horizontal and parallel courses (see MT1D). The ashlar have a flat-chisel made margin of circa two centimeters.¹⁰

9 The windowsills of the northern and western elevations were replaced during restorations (Phase 4).

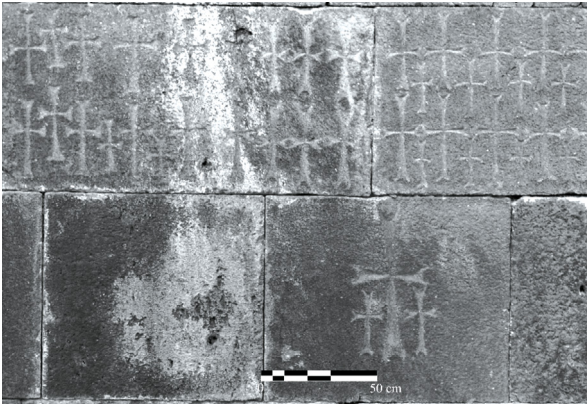
10 The chisel is 1.65 centimeters wide; the mark is approximately 1.6 millimeters wide and 1.4 millimeters deep. The tool marks are frequently at a 45° angle and occasionally at a 30° angle to the horizontal. The marks are never intersecting.



[fig. 6] The supporting system (double rounded arches and squinches) of the tambour and central dome



[fig. 10] In the picture, sub-phase 1g is split to highlight the construction of the upper portion of the walls



[fig. 7] Engraved crosses on E2 (MSUs 714, 715)



[fig. 8] The western and northern sides (on the left) and the southern and eastern sides (on the right) before the restorations of 1970

- 2 Engraved crosses (MSUs 828 and 829 in E1; 714 and 715 in E2; 910 in E4) and traces of ritual practices (MSU 1438=1138 on SE semi-pilaster) left during the active phase of the church [fig. 7].
- 3 Collapses of the upper portions of external elevations (MSUs 815, 824, 705, 1008, 907), part of the vestibule's vault (MSU 1118=1233=1436) and of the apsidal semi-dome (MSU 1317) and cracks (MSUs 1004, 1005 in E3; 1311, 1341 in E7; 1508, 1509, 1510, 1511 in E9) [fig. 8].
- 4 1970's restoration:¹¹ upper portions of external walls (MSUs 816, 825 in E1; 706 in E2; 1009 in E3; 908 in E4), roofs (MSUs 819, 820, 833 in E1; 707, 708, 709 in E2; 1010, 1011, 1012 in E3; 902, 904, 909 in E4), internal dome with red and grey cross, elements of the windows (windowsill 1244 in E6; windowsill 1332 in E7; lintels MSUs 1513, 1517, 1519 of the windows of the tambour and all the eastern window, MSU 1515). The rebuilding of collapsed masonries was performed with original ashlar and with new ones, discernible by color (black or dark red) and by the apparent blade dressing surface;¹² moreover, the detachment of the ashlar of the eastern wall and of the tambour was filled with binder. [fig. 9].
L.S.

DISCUSSION

Sub-phases 1a–1g highlight some construction procedures, aimed at transposing the church project

into stone and mortar, ensuring the stability of the construction. The installation of the external facings presents few problems of interpretation: it is a “box-like” construction, in which, after the foundation *crepidoma*, the progressive raising of the elevations can be identified. At each corner, the walls are tied by bonding stones, and each side reaches the height necessary for the installation of the openings. Each opening is a critical element and constitutes a discontinuity of the masonry mass. The dimensions of the ashlar also tend to decrease with the raising of the building.¹³

Inside the church, the spatial articulation increases the quality and quantity of the construction

¹¹ T'amanyan, “The Restorations of the Church” (n. 4).

¹² ygv2 is a surface dressing primarily visible on E1, the presbytery, and the north chapel floor. It was executed with a chisel 3.5 centimeters wide, leaving marks approximately 4.6 millimeters wide and 1.3 millimeters deep. The tool's orientation follows circular segments, with the chord of the arc generally parallel to the vertical side, occasionally parallel to the horizontal side, and rarely intersecting at 90°. The margins have been reworked. The surface dressing of the restoration is the same of those of Zorats' Church.

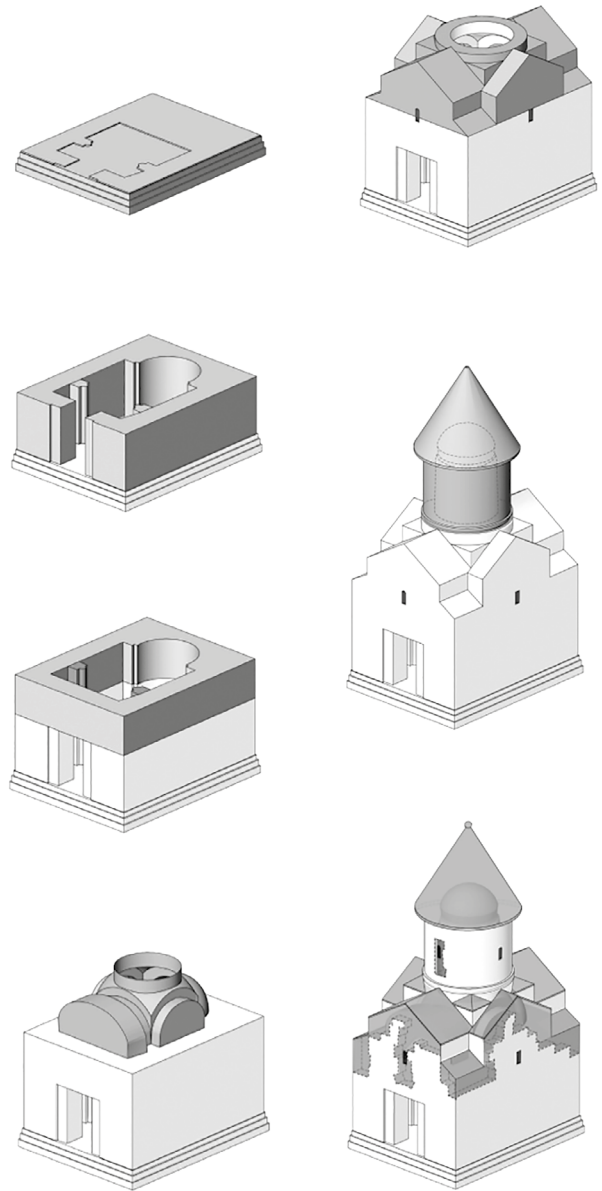
¹³ This is discussed as a common feature in medieval architecture: Jean-Claude Bessac, “Observations sur la construction de la basilique d'Ererouk en République d'Arménie”, *Syria*, 89 (2012), pp. 331–366 noted that it could be related to the lifting equipment more than the construction material supply. On Yereruyk', see also Nadia Montevicchi, Cristina Tonghini, Gaiané Casnati, “Lo Sviluppo costruttivo della basilica di Ererouk (Armenia), secoli vi–x: una ri-lettura archeologica”, *Arqueología de la Arquitectura*, 9 (2012), pp. 29–56.

constraints. Among them, the main one is certainly the central space, providing support to the tambour and the dome through the arches, and therefore by the pillars that uphold them. Here, in the lower part, the two perimeter walls (sub-phase 1b)¹⁴ precede the laying of the pillars and niches of the vestibule. The stronger attachment of the pillars (and of the sides of the apse, working as pillars) to the side walls was accomplished in sub-phase 1d by means of bonding ashlar; meanwhile, on the façade, the arch of the portal was arranged. At the end of sub-phase 1e, on the other hand, the impost of the arches, marked by a sculpted cornice that runs in the apse and vestibule, affected the installation of the surrounding elements, while on the outside, the base of the crowning of the single-lancet windows was created.

An apparent stratigraphic-constructive sequence is established between the pairs of overlapping arches supporting the tambour (1f). At this level, the predominant element is the triumphal arch, which the two lateral ones abut on at the impost, while the arch to the west tightens the system.

Another relevant feature of the construction of the roofs can be found in the relationship between the apsidal half-dome and the triumphal arch. It has been claimed that in domed Armenian churches,¹⁵ it is common to reinforce the arch-pendentive system with the loads of the east and west ceilings, while the flanks are firmly held in place by the side walls. In our case, while the small barrel vault of the vestibule is actually leaning on the west arch, the setting of the apse half-dome, with a keystone on the impost, makes it a self-supporting element, certainly connected to the triumphal arch by the overlying fillings but without a positive relationship with it.

According to Paolo Cuneo, this building belongs to the group of longitudinal domed churches, itself a subgroup of domed halls without corner chapels.¹⁶ In fact, this group, like all the taxonomies in Cuneo's catalog, is formed on the basis of formal typologies of the ground plan. It includes buildings that, on the one hand, share major planimetric features and can be placed in one or another segment



[fig. 9] A schematic 3D model of the construction phases of the Cupola Church according to the archaeological analysis

¹⁴ Maybe also the placement of the lower portion of the apse, not visible because of the bema, pertains to this sub-phase.

¹⁵ Patrick Donabédian, "Les architectes de l'Arménie médiévale usaient-ils de dispositifs parasismiques?", *Revue des Études Arméniennes*, 34 (2012), pp. 169–242.

¹⁶ Cuneo, *Architettura armena* (n. 4), vol. II, p. 729.

of a fairly broad periodization. On the other hand, however, they also feature considerable differences in their internal and external volumes, building materials, geographic distribution, and, sometimes, chronological range. For example, comparable central cruciform domed buildings appear in a different group in the catalog, despite the fact that their floor plan, being inscribed in a rectangle, determines external volumes that are similar to our case and other domed-hall churches.

Narrowing the field of our investigation to the historical region of Syunik' and Vayots' Dzor, the buildings corresponding to Yeghegis' Cupola Church are the chapel of St Astuatsatsin within the monastic complex of Tat'ev, one of the seats of the metropolitan of Syunik' whose centrality was restored under the dominion of the Ōrbēleans at the end of the thirteenth century,¹⁷ and the church of St Astuatsatsin of the Spitakavor Monastery, on the flank of Mount T'ek'sar, near the village of Vernashen and immediately south of the Yeghegis River Valley, in the domain of Proshean princes. St Astuatsatsin at Tat'ev, dating back to the eleventh century,¹⁸ although with a similar plan, stands on a low vaulted building and has an octagonal drum marked by blind arches. Spitakavor's St Astuatsatsin, built between the beginning of the fourteenth century and 1321¹⁹ by the Prosheans, despite having a much richer decorative apparatus, shares with the Cupola Church of Yeghegis not only the plan and the external proportions, but also the continuous semicircles motif. Compared to the Cupola Church, in Spitakavor the semicircular motif is positioned at the base of the drum, both inside and outside.

A recent essay has linked a church in nowadays Ayrarat region near the village of Lanjař, dedicated to the Mother of God, known as Spitakavor (St Astuatsatsin) in the monastic complex of St Hovhannes Karapet (St John the Baptist), to some monuments of Vayots' Dzor.²⁰ The church has a bas-relief on the portal, representing the Virgin seated with the Child and two angels in the lunette, and the Pantocrator enthroned in an upper panel, probably with the apostles Peter and Paul, framed by a two cord plait bas-relief, very similar to the "snake" design at the base of the tambour of the Cupola Church. The iconography of the bas-reliefs has affinities with decorative apparatuses of the *gawit'* of the St Karapet Church in the Noravank' Monastery and the St

Astuatsatsin of Areni. Both religious centers were built at the commission of the Ōrbēlean dynasty and saw the work of the celebrated architect and sculptor Momik. On the other hand, the morphology of the monastic enclosure near Lanjař and the distribution of the buildings that are part of it show a strong analogy with the Spitakavor Surb Astuatsatsin of Vernashen.

The details of the foundation of the church Spitakavor St Astuatsatsin of Lanjař are well known thanks to epigraphic evidence. They have led Patrick Donabédian to define this building as an architectural "exclave" of Vayots' Dzor, "outside the natural and traditional boundaries" of this *marz*.²¹ Its construction is dated to 1301, and its founder is Princess Gonts'a, from the celebrated Zak'arid family, who married Prince Jalal Ōrbēlean, the youngest son of Tarsayich from his second wife Mina Khat'un. Jalal and Gonts'a were the parents of Bishop Tarsayich-Step'anos, who commissioned the construction of the Zorats' Church in Yeghegis. The master builders, sculptors, and stonecutters of the complex are also known, among them the *Vardapet* Sargis, who was probably also active in Gařni and Geghashen.²²

From a planimetric point of view, the Spitakavor St Astuatsatsin of Lanjař shares architectural features with the Cupola Church in Yeghegis and Spitakavor St Astuatsatsin in Vernashen. The first is slightly larger than the two churches of Vayots' Dzor, and is part of the group of domed hall churches, in the variant with narrow oriental chapels and

17 See Zaroui Pogossian, "Vayots' Dzor, Syunik', and the World. Global Transformations and Local Dynamics between the 9th and 14th Centuries" in this volume, pp. 24–66.

18 Cuneo, *Architettura armena*, (n. 4), p. 420.

19 Grigor Grigoryan, *Syunik'ā Ōrbelyanneri ōrok' (xiii–xiv darrer)* [Syunik' Under the Ōrbēleans (13th–14th c.)], Yerevan 1981, pp. 180–181; see also Pogossian, "Vayots' Dzor, Syunik', and the World" (n. 17).

20 Patrick Donabédian, "Saint-Jean-Baptiste d'Urc. Une «exclave» architecturale à l'ouest du Vayoc' Jor", *Revue des études arméniennes*, 39 (2020), pp. 611–628. On this monastery complex, see also Hovsep' Yeghiazaryan, "Hovhannu Karapeti vankə ev nra vimagir arjanagrut'yunnerə" [The Monastery of Hovhannes Karapet and Its Inscriptions], *Ejmiatsin*, 19/1 (1962), pp. 57–63; Cuneo, *Architettura armena* (n. 4), pp. 126–127. In this contribution, we will refer to the church as "Spitakavor St Astuatsatsin of Lanjař," as Lanjař is the starting point (5.7 kilometers eastward) for the road to reach the monastery. Yeghiazaryan refers to the monastery as close to the village of Vedi, while Cuneo says that it stands on the west of "Karaxaç'" village.

21 Donabédian, "Saint-Jean-Baptiste d'Urc" (n. 21), p. 613.

22 *Ibidem*, p. 622.

pairs of dihedral niches on three sides. All three are equipped with western enclosures, undoubtedly uncovered in the case of the two Spitakavor St Astuatsatsin churches, with some sign of the existence of a roof in the case of the Cupola Church. The comparison of the latter with the first two, dated with greater precision and, in the case of Spitakavor St Astuatsatsin of Lanjař, with known workers, can first of all restrict the time span of its foundation, placing it, rather than generically in the thirteenth century, in the late thirteenth century (most likely during the lordship of Tarsayich Ōrbēlean). Furthermore, through a detailed stratigraphic analysis of the churches in Lanjař and Vernashen, the peculiarity of some construction procedures could be detected, and be possibly related to a period, a geographical spread, or a very specific manpower. Otherwise, a continuity of the operational practices implemented over time could be disclosed, comparable to that which characterizes the Armenian ecclesiastical building from a typological point of view.

Concerning the construction features, it is noteworthy to mention that the same “reverse” scheme of the apse semi-dome is present also in the upper floor of St Astuatsatsin Church in the monastery of Noravank’. Also known as Burt’elashen (“built by Burt’el”), it was commissioned by the Ōrbēlean Prince Burt’el (r. 1302–1348) as a family mausoleum. Although still doubtful, it seems that the two-story church was erected around the year 1339, as recorded by the fine embossed date on the western façade, and its architect is thought to have been the famous Momik.²³ The sharing of such an uncommon element both in St Astuatsatsin in Noravank’ and in the Cupola Church in Yeghegis testifies a common constructive knowledge that was spread in Vayots’ Dzor region in a specific time, i.e., the end of the thirteenth and the first half of the fourteenth century.²⁴

M.D.F.

CONCLUSIONS

In the “built landscape” of Armenia, we find a very strong continuity and homogeneity in ecclesiastical buildings, as regards some architectural types as well as their construction techniques, even in the preparation of the construction material. Many of the solutions that the builders adopted to make the best use of the available raw materials, mostly basalt and

tuff, and to overcome the scarcity of others, such as limestone for mortars,²⁵ were transmitted, improved, and adapted over the centuries, and employed in the most monumental buildings, as well as in more modest, smaller churches. In our case, the object of the archaeological analysis – the Cupola Church of Yeghegis – represents a variation of the most successful²⁶ (and therefore somewhat standardized) model that is attested in a large time span that goes from the ninth to the fourteenth century. It does not show an abundant decorative or epigraphic apparatus and did not undergo numerous demolitions or reconstructions. Thus, the stratigraphic sequence of its construction is not complicated. In this context, the archaeological analysis aimed at identifying the specific features of the original building yard phasing, pointing out operational chains that could possibly characterize several buildings, albeit different in type, function, and monumentality, belonging to a specific construction know-how in a historical region and chronological period.

M.D.F. & L.S.

23 The discussion about the period of construction of the church and the attribution to the architect Momik is still open. Assuming that Momik died in 1333, Karen Matevosyan, *Momik*, Yerevan 2010, pp. 41–49 suggests that the construction of the mausoleum started when Momik was still alive (1318–1319) and it continued under his students. On the contrary, Giulio Ieni, “Momik Vardapet e l’arte nel Vayots-Dzor fra XIII e XIV secolo”, in Adriano Alpagò-Novello, Giulio Ieni, Murad Hasrat’yan, *Amaghu Noravank’*, *Documenti di architettura armena / Documents of Armenian Architecture*, vol. xiv, Milan 1985, pp. 15–19, argues that on the base of architectural and stylistic features the mausoleum cannot be considered Momik’s work. On the rise of the Noravank’ Monastery after the Seljuk conquest of Armenia and the local political struggles, see Zaroui Pogossian, “Princes, Queens, Bishops, Sultans: Seljuks in Syunik’ and the Rise of the Monastery of Noravank’”, *Orientalia Christiana Periodica*, 1 (2023), pp. 207–250.

24 At this stage of research and due to the lack of information on the architect and the workers who built both churches, as well as based on the archaeological analysis (operational practices, masonry features, stone-working analysis) of the St Astuatsatsin in Noravank’, it seems possible, even though far from certain, to credit the Cupola Church to the architect Momik. See Cecilia Luschi, Laura Aiello, Marta Zerbini, “A Fidelity Made of Stone. The Armenian Architecture Seen from Vayots’ Dzor Fringe”, *DISEGNARECON. Traveling from the Orient to the West and Return. Cities, Architecture and Restoration. Writings in Memory of Paolo Cuneo*, 13/25 (2020), pp. 8.1–8.14, but, as they state, some common practices mirror a common thought and architectural conception.

25 Bessac, “Observations” (n. 14), p. 365.

26 See Cuneo, *Architettura armena* (n. 4).

AN ARCHAEOLOGICAL CATALOGUE
OF THE CUPOLA CHURCH (YGV4, AC2, B1)

E1: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

AC	Architectural Complex	u + †	Engravings	---	negative MSUs limits
B	Building	↓ ↓ ↓	abuts against	---	cracks
E	Elevation	∩	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to	---	MSUs limits
111	Negative MSUs Id. Number	---	MSUs limits		

Constructive phases legend

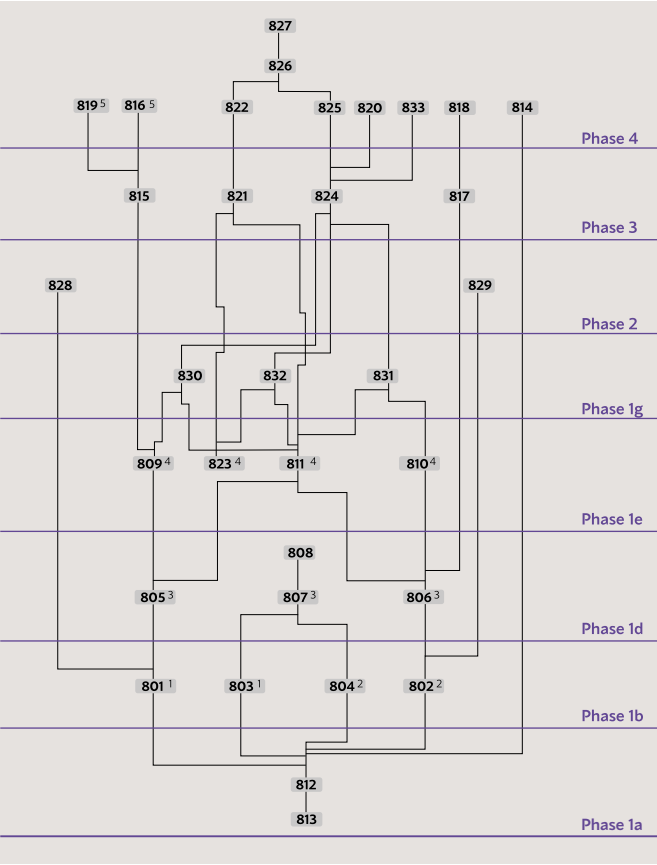
Phase 1a	Phase 1e	Phase 2
Phase 1b	Phase 1f	Phase 3
Phase 1c	Phase 1g	Phase 4
Phase 1d		

E1: LIST OF MSUS, CUPOLA CHURCH – E1

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
801	Portion of masonry in the lower left part of E1	812	805	803, 701 (E2)	
802	Portion of masonry in the lower right part of E1	812	806	804, 901 (E4)	
803	Left jamb of the entrance of B1 in E1	812	807	801	1103 (E5)
804	Right jamb of the entrance of B1 in E1	812	807	802	1102 (E5)
805	Portion of masonry near the left part of the door's arch in E1	801	809	807, 704 (E2)	

806	Portion of masonry near the right part of the door's arch in E1	802	810	807, 903 (E4)	
807	Arch of the entrance in E1	803, 804	808, 811	805, 806	
808	Lunette of the entrance in E1	803, 804	821		1107 (E5)
809	Portion of masonry in the upper left part of E1	805	815, 830	811	
810	Portion of masonry in the upper right part of E1	806	819, 830	811	
811	Molded cornice of the window in E1	805, 806	821, 830, 831, 832	809, 810, 823	
812	Platform of B1, in E1	801, 802, 803, 804	813	700 (E2), 900 (E4)	
813	Foundation element of B1, visible in the lower part of E1		812		
814	Steps for the entrance in E1	812			
815	Collapse of the left upper side of E1	809	816		705 (E4)
816	Filling of the collapse MSU 815 (reconstruction), in E1	815		706 (E2)	
817	Cut for the replacement of one ashlar in E	806	818		
818	Filling of the cut MSU 817 (one ashlar) in E1	817			
819	Molded lower left roof in E1	815		816, 709 (E2)	
820	Molded lower right roof in E1	824		825, 909 (E4)	
821	Collapse of the lintel of the window and the central portion of the arch MSU 807, in E1	808, 810	822		
822	Filling of the collapse MSU 821 (reconstruction) in E1	821	826		
823	Molded right jamb of the window in E1		821, 832	811	
824	Collapse of the whole upper part of E	830, 831, 832	825		907 (E4)
825	Filling of the collapse MSU 824 (reconstruction of the roof) in E1	824	826	908 (E4)	
826	Cut for the replacement of the molded left jamb of the window in E1	822, 825	827		
827	Filling of the cut MSU 826, in E1 (molded left jamb of the window)	826			
828	Engraved crosses in MSU 801			801	
829	Engraved crosses in MSU 802			802	
830	One ashlar on the right of the left of the window	809, 811	824	832	
831	One ashlar on the right of 832	810, 811	824	832	
832	Upper portion of the window	811, 823	824	830, 831	

E1: MATRIX



E2: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

AC	Architectural Complex	u †	Engravings	---	negative MSUs limits
B	Building	↓ ↓ ↓	abuts against	---	cracks
E	Elevation	∨	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to		
111	Negative MSUs Id. Number	—	MSUs limits		

Constructive phases legend

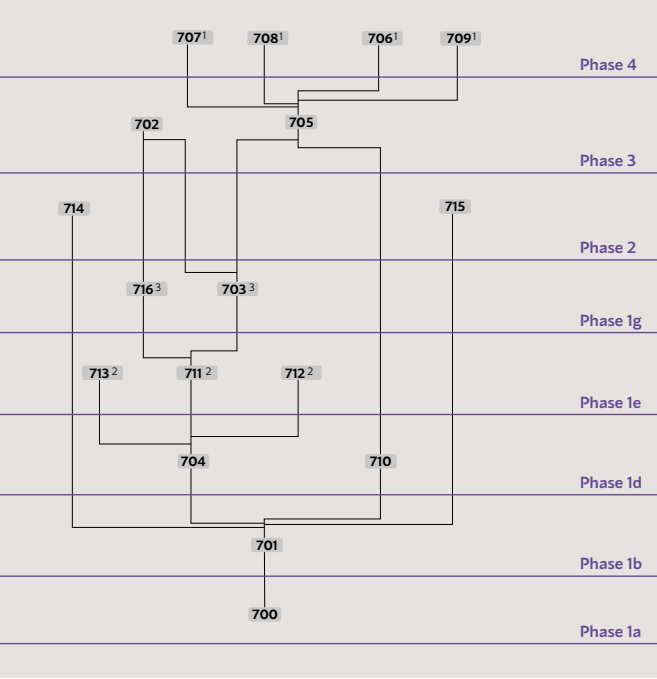
Phase 1a	Phase 1e	Phase 2
Phase 1b	Phase 1f	Phase 3
Phase 1c	Phase 1g	Phase 4
Phase 1d		

E2: LIST OF MSUS, CUPOLA CHURCH – E2

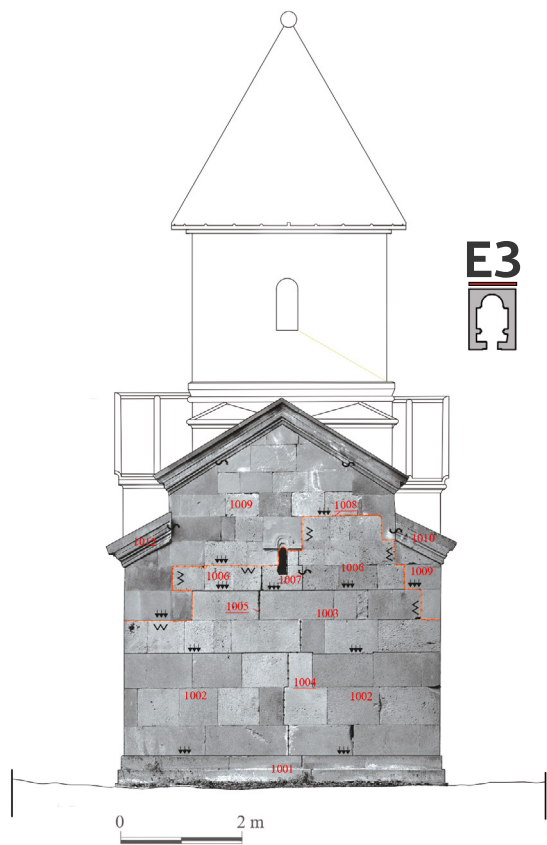
ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
700	Platform of B1, in E2		701	812 (E1), 1001 (E3)	
701	Masonry in the lower part of E2	700	704, 710	801 (E1), 1002 (E3)	
702	Erosion of the masonry above the window in E2	703, 716	705		
703	Portion of masonry above the window in E2	711, 713	702	716	
704	Portion of masonry in the central part of E2	701	711	805 (E1)	
705	Collapse of the upper part of E2	703, 710	706		815 (E1), 1008 (E3)

706	Filling of the cut MSU 705 (reconstruction) in E2	705		707, 708, 709, 816 (E1), 1009 (E3)	
707	Molded lower left roof in E2	705		706, 1010 (E3)	
708	Upper part of the molded roof in the center of E2	705		706	
709	Molded lower right roof in E2			706, 819 (E1)	
710	Two ashlar in the left part of E2	701	705	1003 (E1)	
711	Single-light window in E2	704	702	712, 713	
712	Portion of masonry in the upper right part of E2	704	705	711	
713	Portion of masonry in the upper left part of E2	704	705	711	
714	Engraved crosses on an ashlar of the second row of the elevation			701	
715	Engraved crosses on an ashlar of the third row of the elevation			701	
716	Lintel of the window	711	702	703	

E2: MATRIX



E3: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

AC	Architectural Complex	u.†	Engravings	---	negative MSUs limits
B	Building	↓↓↓	abuts against	---	cracks
E	Elevation	~	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to		
111	Negative MSUs Id. Number	---	MSUs limits		

Constructive phases legend

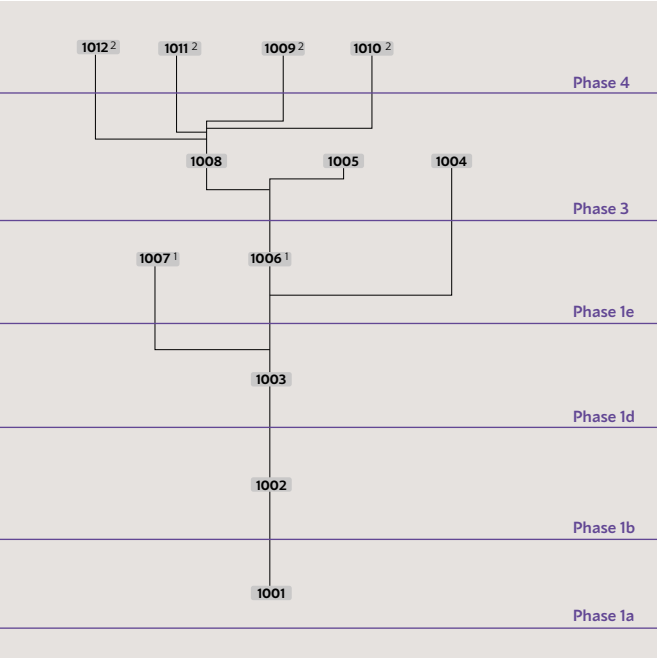
Phase 1a	Phase 1e	Phase 2
Phase 1b	Phase 1f	Phase 3
Phase 1c	Phase 1g	Phase 4
Phase 1d		

E3: LIST OF MSUS, CUPOLA CHURCH – E3

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1001	Platform B1, in E3		1002	700 (E2), 900 (E4)	
1002	Portion of masonry in the lower part of E3	1001	1003	701 (E2), 901 (E4)	
1003	Two rows of ashlar in the central part of E3	1002	1006	710 (E2), 903 (E4)	
1004	Vertical crack in the center of E3	1003			
1005	Vertical crack near the window MSU 1007, in E3	1006			
1006	Portion of masonry near the window MSU 1007 in E3	1003	1008	1007	
1007	Single-light window in E3		1008	1006	

1008	Collapse of the upper part of E3	1006	1009		705 (E2), 907 (E4)
1009	Filling of the collapse MSU 1008, reconstruction of the roof in E3	1008		1010, 1011, 1012, 706 (E2), 908 (E4)	
1010	Molded lower right roof in E3			1009, 707 (E2)	
1011	Molded upper central roof in E3			1009	
1012	Molded lower left roof in E3			1009, 904 (E4)	

E3: MATRIX



E4: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

AC	Architectural Complex	u. †	Engravings	---	negative MSUs limits
B	Building	+++	abuts against	---	cracks
E	Elevation	~	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to	---	MSUs limits
111	Negative MSUs Id. Number	---	MSUs limits		

Constructive phases legend

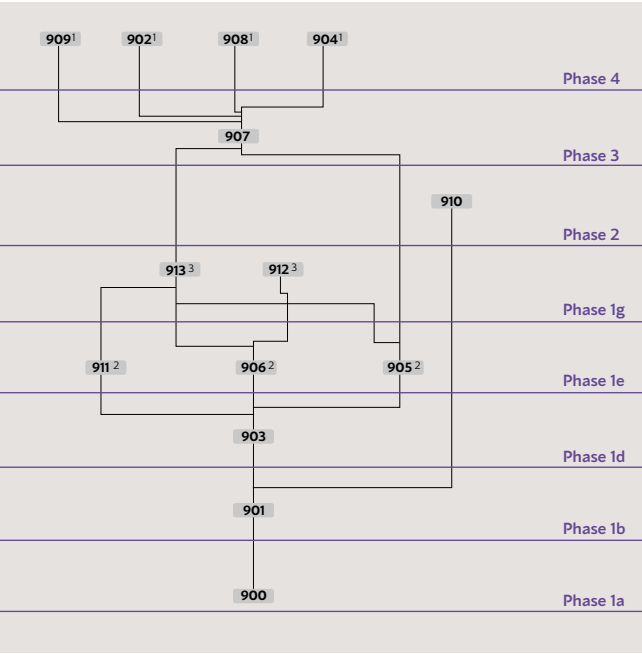
Phase 1a	Phase 1e	Phase 2
Phase 1b	Phase 1f	Phase 3
Phase 1c	Phase 1g	Phase 4
Phase 1d		

E4: LIST OF MSUS, CUPOLA CHURCH – E4

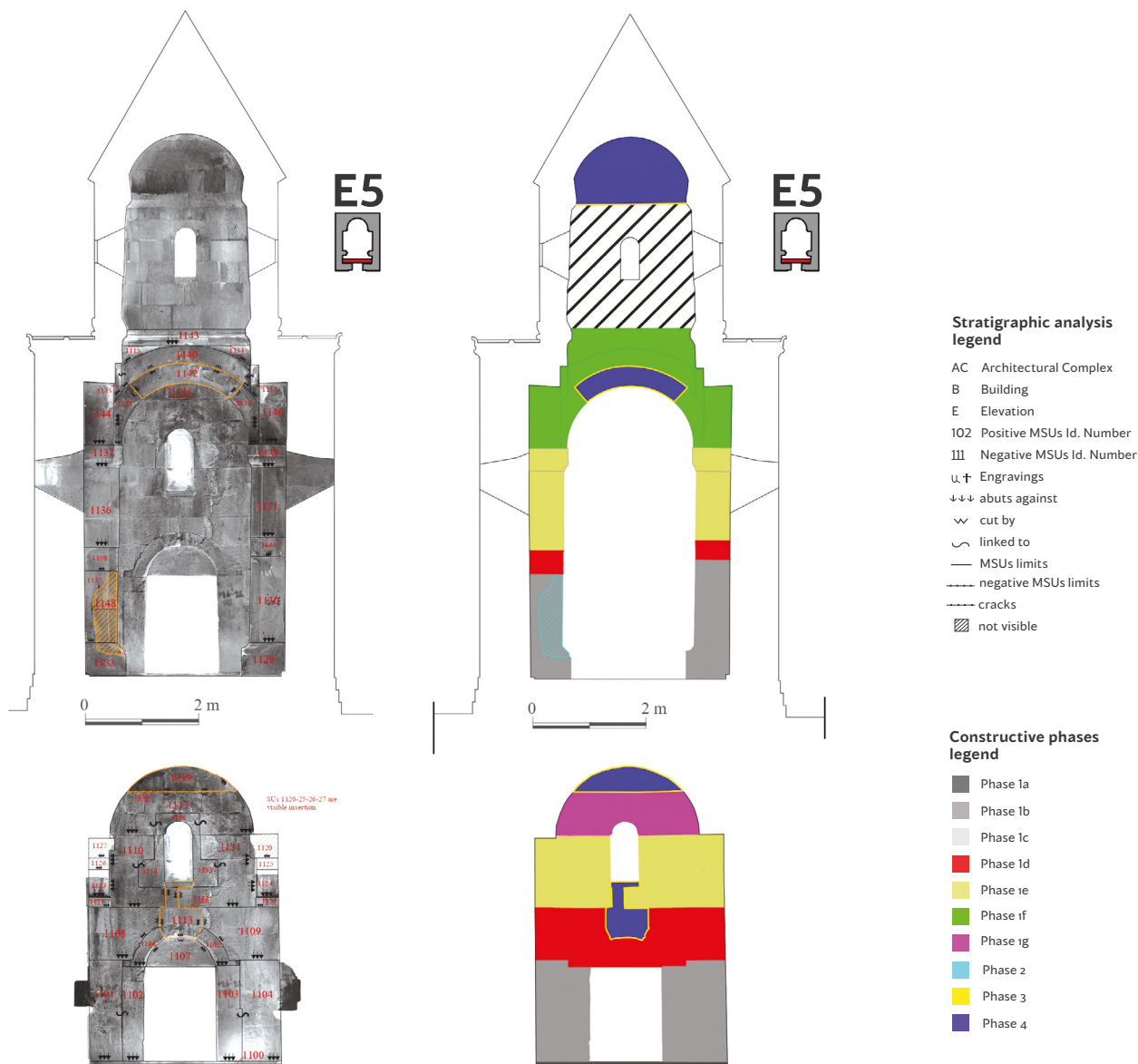
ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
900	Platform in E4		901	812 (E1), 1001 (E3)	
901	Masonry in the lower part of E4	900	903	802 (E1), 1002 (E3)	
902	Molded central roof in E4	907		908	
903	Central portion of masonry in E4	901	905, 906, 911	806 (E1), 1003 (E3)	
904	Molded lower roof in the right side of E4	907		908, 1012 (E3)	
905	Portion of masonry on the right of the window in E4	903	913	906	
906	Single-light window in E4	903	912, 913	905, 911	

907	Collapse of the upper part of E4	913	908		824 (E1), 1008 (E3)
908	Filling of the collapse MSU 907 (reconstruction of the roof) in E4	907		902, 904, 909, 825 (E1), 1009 (E3)	
909	Molded lower roof in the left part of E4			908, 820 (E1)	
910	Engraved crosses in MSU 901			901	
911	Portion of masonry on the left of the window	903	913	906	
912	Lintel of the window	906		913	
913	Upper portion of the elevation	905, 906, 911	907	912	

E4: MATRIX



E5: ARCHAEOLOGICAL ANALYSIS



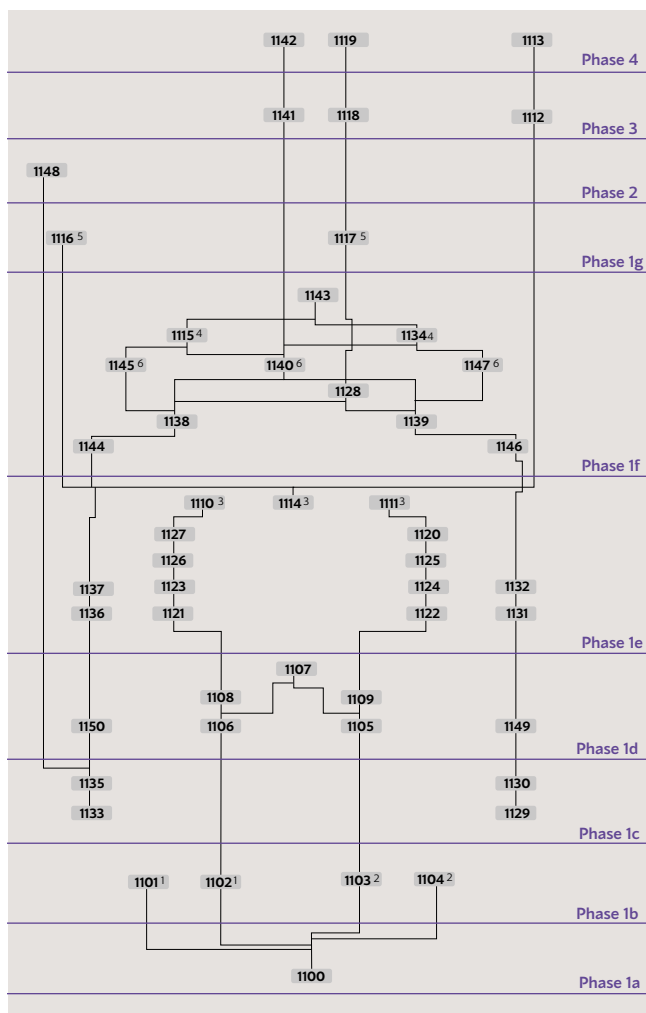
E5: LIST OF MSUS, CUPOLA CHURCH – E5

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1100	Inside crepidoma step visible in E5		1101, 1102, 1103, 1104	1200 (E6), 1400 (E8)	
1101	Masonry on the left of the access to the church	1100	1108, 1404 (E8)	1102	
1102	Left jamb of the access to the church	1100	1106	1101	804 (E1)
1103	Right jamb of the access to the church	1100	1105	1104	803 (E1)
1104	Masonry on the right of the access to the church	1100	1109, 1202	1103	

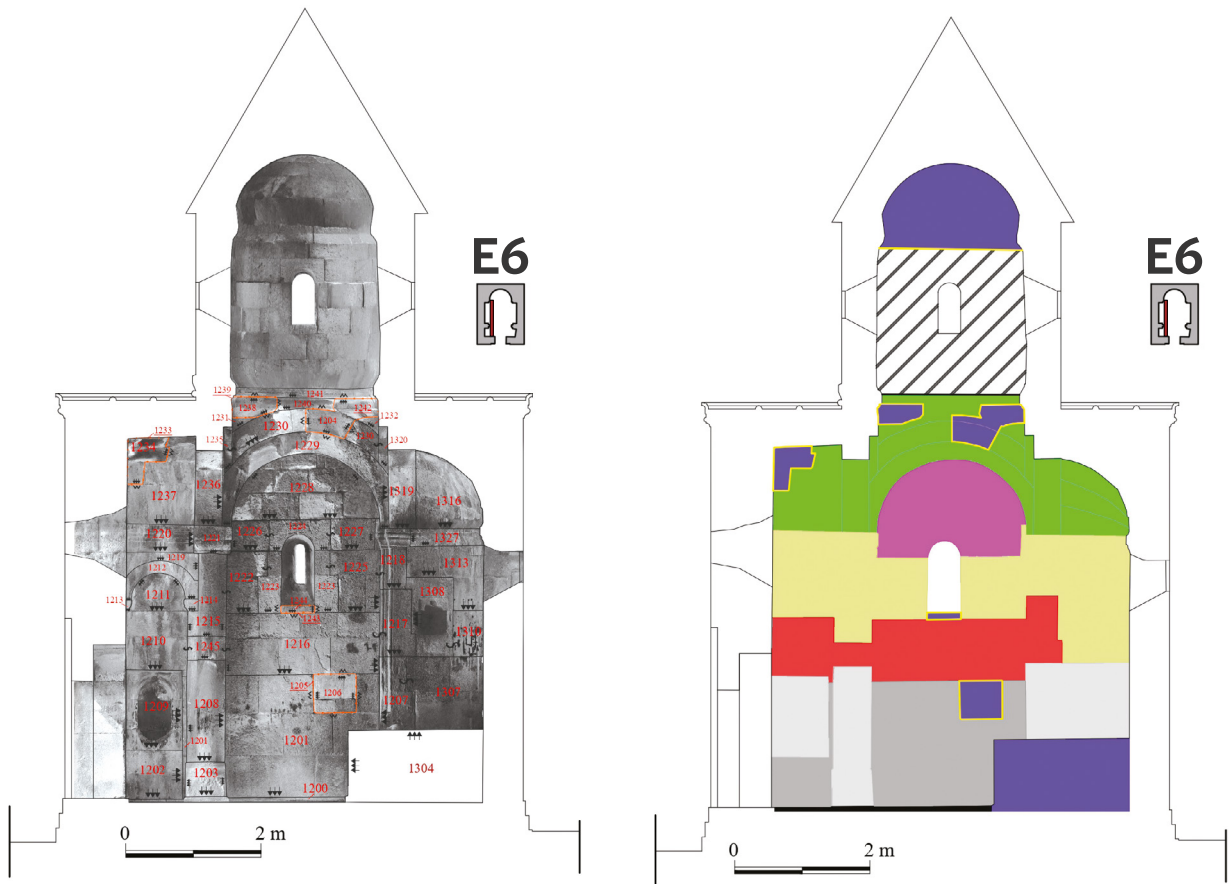
1105	Right portion of the arch of the access to the church	1103	1109		
1106	Left portion of the arch of the access to the church	1102	1108		
1107	Lunette of the access to the church	1105, 1106			808 (E1)
1108	Portion of masonry on the left of the arch MSU 1106	1106	1121	1407 (E8)	
1109	Portion of masonry on the right of the arch MSU 1105	1105	1122	1210 (E6)	
1110	Portion of masonry on the left of the window	1127	1117	1114	
1111	Portion of masonry on the right of the window	1120	1117	1114	
1112	Collapse of part the arch of the access, of the windowsill and the masonry between them	1114	1113		
1113	Reconstruction of the collapse MSU 1112	1112			
1114	Jambs of the single-light window		1112, 1116	1110, 1111	
1115	Left squinch above the upper arch of the west side of the church	1140, 1145	1143	1134	1429 (E8)
1116	Lintel of the window	1114		1117	
1117	Portion of masonry under the vault of the vestibule	1128	1118	1116	
1118	Collapse of some ashlar of the vault of the vestibule and the elevation E5	1117	1119		1233 (E6), 1436 (E8)
1119	Reconstruction of the collapse MSU 1118	1118			1234, 1437
1120	Cornice of the northern side of the vestibule	1125	1111, 1128		1220 (E6)
1121	Shelf of the southern side of the vestibule	1108	1123		1410 (E8)
1122	Shelf of the northern side of the vestibule	1109	1124		1213 (E6)
1123	Arch of the southern side of the vestibule	1121	1126		1411 (E8)
1124	Arch of the northern side of the vestibule	1122	1125		1212 (E6)
1125	Masonry above the arch MSU 1124	1124	1120		1219 (E6)
1126	Masonry above the arch MSU 1123	1123	1117		1431 (E6)
1127	Cornice of the southern side of the vestibule	1126	1110, 1128		1432 (E6)
1128	Vault of the vestibule	1138, 1139	1117		1237 (E6), 1433 (E8)
1129	Base of the northern pilaster	1200	1130		1203 (E6)
1130	First monolithic ashlar of the northern pilaster	1130	1149		1208 (E6)
1131	Upper part of the northern pilaster	1149	1132		1215 (E6)
1132	Capital of the northern pilaster	1131	1146		1221 (E6)
1133	Base of the southern pilaster	1400	1135		1402 (E8)
1134	Right squinch above MSU 1140	1140, 1147	1143	1115	1231 (E6)
1135	First ashlar of the southern pilaster	1133	1150		1403 (E8)
1136	Upper part of the southern pilaster	1150	1137		1412 (E8)
1137	Capital of the southern pilaster	1136	1144		1424 (E8)
1138	Left portion of the lower western arch	1144	1128, 1140, 1145		1434 (E8)
1139	Right portion of the lower western arch	1146	1128, 1140, 1147		1236 (E6)
1140	Upper western arch	1138, 1139	115, 1134	1145, 1147	1235 (E6), 1435 (E8)
1141	Cut in the lower western arch	1140	1142		
1142	Replaced ashlar of the lower western arch	1141			

1143	Cornice under the tambour	1115, 1134			1241 (E6), 1342 (E7), 1430 (E8), 1500 (E9)
1144	Southern lower arch	1137	1138		1426 (E8)
1145	Upper southern arch	1138	1115	1140	1427 (E8)
1146	Lower northern arch	1132	1139		1229 (E6)
1147	Upper northern arch	1139	1134	1140	1230 (E6)
1148	Erosion of the ashlar MSU 1135 (southern pilaster)	1135			1438 (E8)
1149	One ashlar of the northern semi-pilaster	1130	1131		1245 (E6)
1150	One ashlar of the southern semi-pilaster	1135	1136		1439 (E8)

E5: MATRIX



E6: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

AC	Architectural Complex	u +	Engravings	---	negative MSUs limits
B	Building	+++	abuts against	---	cracks
E	Elevation	v	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to		
111	Negative MSUs Id. Number	---	MSUs limits		

Constructive phases legend

Phase 1a	Phase 1e	Phase 2
Phase 1b	Phase 1f	Phase 3
Phase 1c	Phase 1g	Phase 4
Phase 1d		

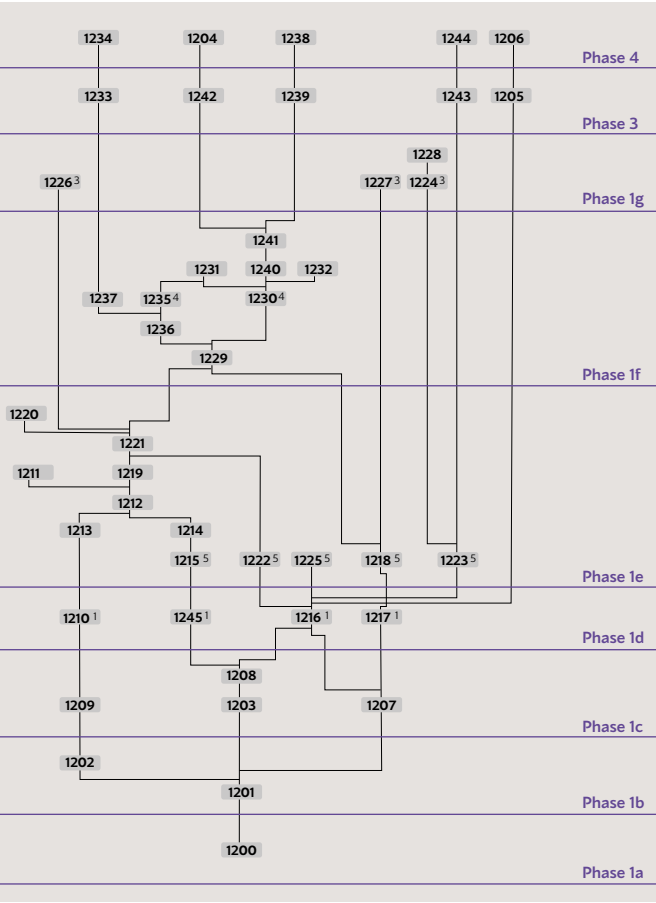
E6: LIST OF MSUS, CUPOLA CHURCH – E6

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1200	Inside <i>crepidoma</i> step under the elevation E6		1201	1100 (E5)	
1201	Three rows of big ashlars between the pilasters in E6	1200	1203, 12007		
1202	Portion of masonry under the niche (MSU 1209) on the left side of E6	1201	1209		
1203	Base of the left pilaster of E6	1201	1208		1129 (E5)
1204	Filling of the cut MSU 1242 in the right squinch upon the arch MSU 1230	1242			

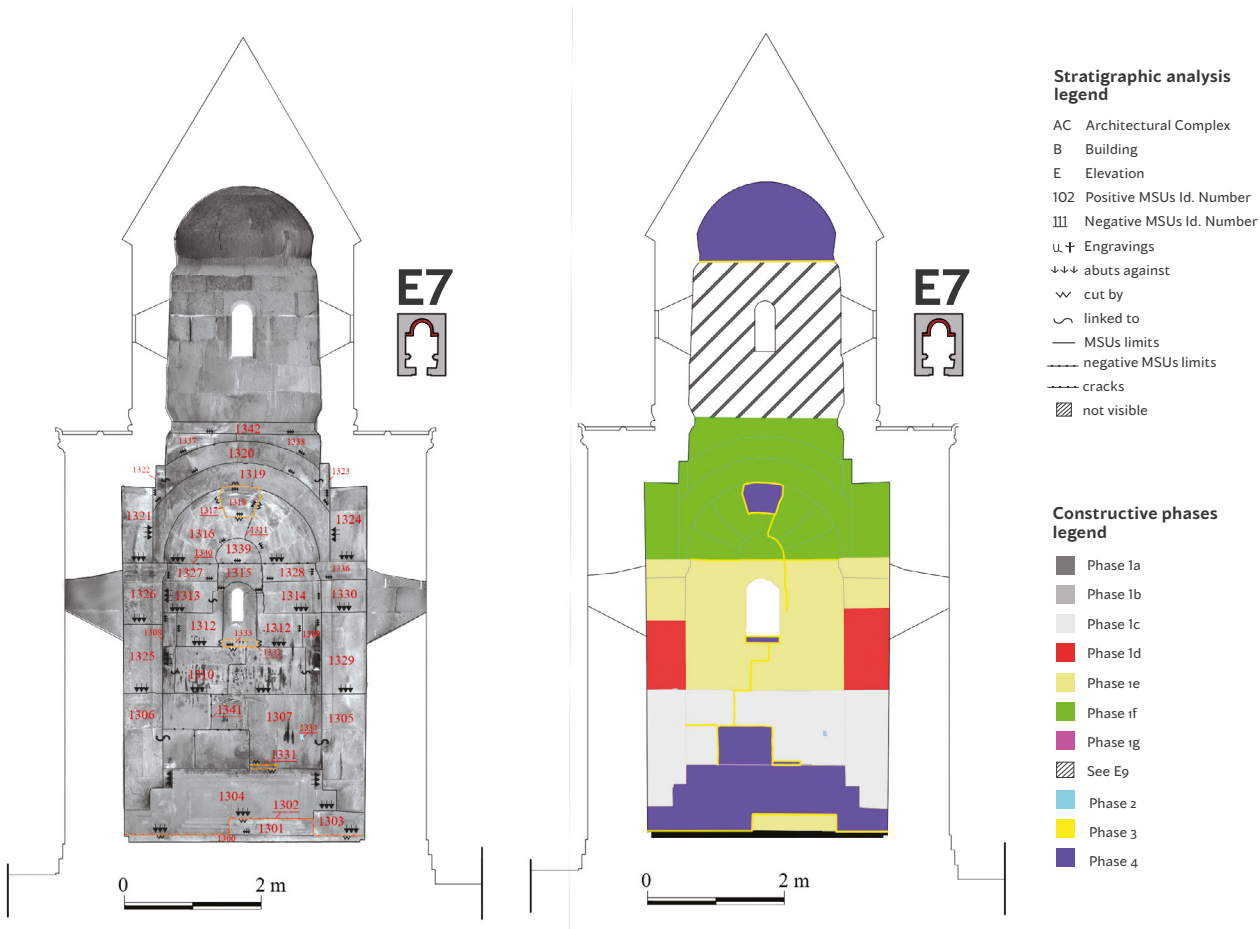
1205	Squared cut in MSU 1201	1216	1206		
1206	Filling of the cut MSU 1205	1205			
1207	First ashlar of the semi-pilaster on the right of E6	1201	1217	1307 (E7)	1306 (E7)
1208	First ashlar upon the base of the left pilaster in E6	1203	1245		1130 (E5)
1209	Stoup on the left of E6	1202	1210		
1210	Portion of masonry upon the stoup MSU 1209	1209	1213, 1215	1245, 1109 (E6)	
1211	Portion of masonry under the little arch on the left of E6	1212			
1212	Little arch between the counter façade and the left pilaster of E6	1213, 1214	1211, 1219		1124 (E5)
1213	Left shelf of the arch MSU 1212	1210	1212		1122 (E5)
1214	Right shelf of the arch MSU 1212	1215	1212		
1215	Upper portion of the left pilaster of E6	1210, 1245	1214	1222	1131 (E5)
1216	Portion of masonry under the window	1207, 1208	1205, 1223	1217, 1245	
1217	Central portion of the right semi-pilaster on the right of E6	1207	1218	1216	1325 (E7)
1218	Upper portion of the semi-pilaster (with cornice) on the right of E6	1217	1227	1225, 1313 (E7), 1327 (E7)	1326 (E7)
1219	Portion of masonry upon the arch MSU 1212	1212	1221		1125 (E5)
1220	Cornice of the northern side of the vestibule (left part of E6)	1221	1237		1120 (E5)
1221	Capital of the pilaster on the left of E6	1219, 1222	1220, 1226		1132 (E5)
1222	Portion of masonry on the left of the window in E6	1216	1221	1215, 1223	
1223	Jambs of the single-light window of E6	1216	1224, 1243	1222, 1225	
1224	Lintel of the window of E6	1223	1228	1226, 1227	
1225	Portion of masonry on the right of the window in E6	1216	1227	1218, 1223	
1226	Ashlar on the left of the lintel of the window	1221	1228	1224	
1227	Two ashlar on the right of the lintel of the window	1218	1228	1224	
1228	Portion of masonry under the arch MSU 1229	1224, 1229			
1229	Lower arch of E6	1218, 1221	1230		1146 (E5), 1321 (E7)
1230	Upper arch of E6	1229	1231, 1232, 1240	1235, 1320	1147 (E5), 1322 (E7)
1231	Left squinch upon MSU 1230 in E6	1230, 1235	1239		1134 (E5)
1232	Right squinch upon MSU 1230 in E6	1230, 1320	1242		1337 (E7)
1233	Collapse of some ashlar of the vault of the vestibule	1237	1234		1118 (E5)
1234	Reconstruction of the collapse MSU 1233	1233			1119 (E5)
1235	Upper arch of the western side of the church	1236	1231	1230	1140 (E5)
1236	Lower arch of the western side of the church	1229	1235, 1237		1139 (E6)
1237	Vault of the vestibule	1236	1233		1129 (E5)
1238	Filling of the cut MSU 1339 in the left squinch in E6	1239			
1239	Collapse of two ashlar of the left squinch of E6	1241	1238		
1240	Two ashlar between the arch MSU 1230 and the cornice under the tambour	1230	1241		
1241	Cornice under the tambour	1240	1239, 1242		1143 (E5), 1342 (E7), 1430 (E8), 1500 (E9)

1242	Collapse of two ashlar of the right squinch of E6	1241	1204		
1243	Cut for the replacement of the sill of the window in E6	1223	1244		
1244	Replaced windowsill in E6	1243			
1245	One ashlar of the left semi-pilaster upon MSU 1208	1208	1215	1210, 1216	1149 (E5)

E6: MATRIX



E7: ARCHAEOLOGICAL ANALYSIS

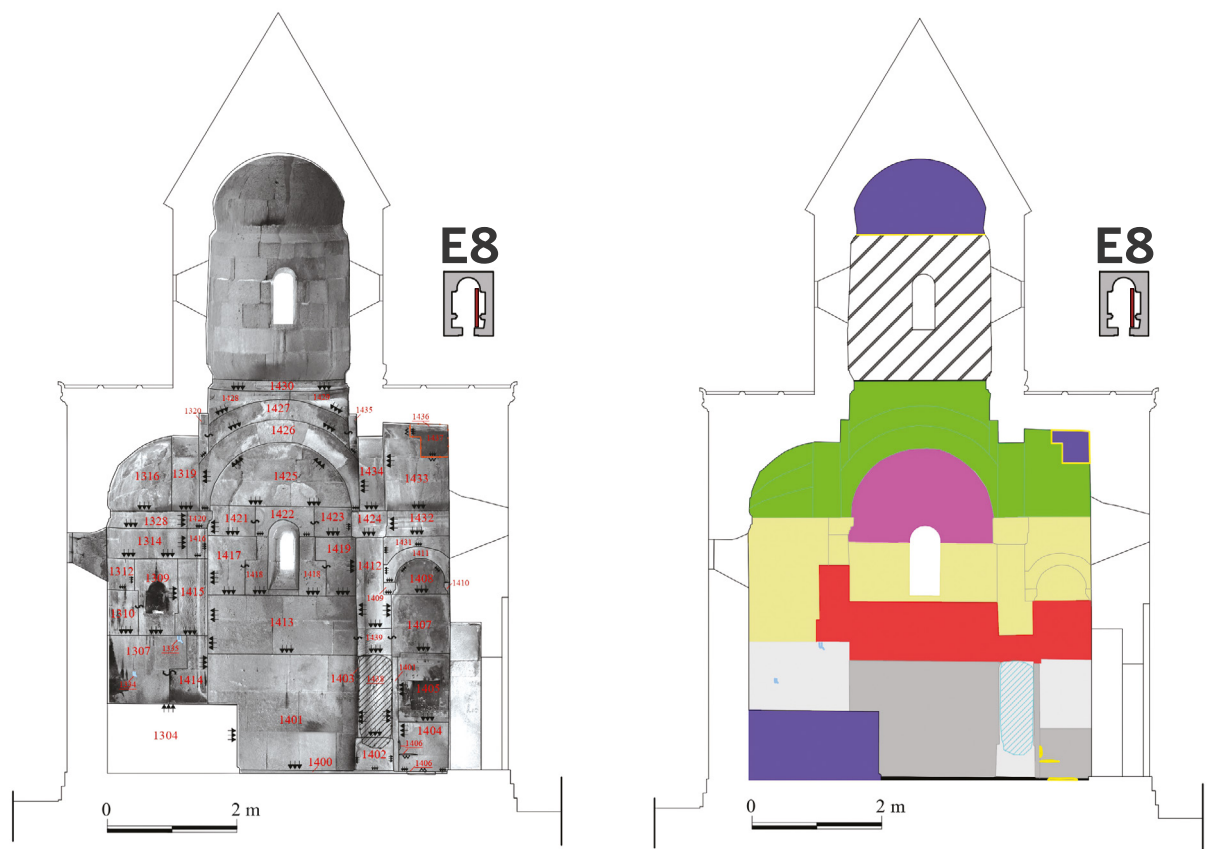


E7: LIST OF MSUS, CUPOLA CHURCH – E7

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1300	Inside crepidoma' step under the elevation in E7	1200 (E6), 1400 (E8)	1301		
1301	Remains of the original bema	1300	1302		
1302	Cut in the bema	1301	1303		
1303	Two replacer ashlar of the right stars of the bema	1302	1304		
1304	Reconstructed bema	1303			
1305	First ashlar of the right semi-pilaster	1401 (E8)	1329	1307	1414 (E8)
1306	First ashlar of the left semi-pilaster	1201	1325	1307	1207 (E6)
1307	First two visible rows of the apse		1325, 1329, 1331	1305, 1306, 1334, 1335	
1308	Left niche of the apse	1326	1312	1310	
1309	Right niche of the apse	1329	1312	1310	

1310	Portion of masonry between the niches	1307	1312	1308, 1309	
1311	Crack in the center of the apse	1316	1317		
1312	Single-light window of the apse	1310	1315, 1322		
1313	Masonry on the left of the window MSU 1312	1312	1327	1315	
1314	Masonry on the right of the window MSU 1312	1312, 1330	1328	1315	
1315	Lintel of the window of the apse	1312	1327	1313, 1314	
1316	Semidome of the apse	1339	1319		
1317	Collapse of three ashlar of the semidome	1319	1318		
1318	Reconstruction of the collapse MSU 1317 in the semidome	1317			
1319	Lower arch of E7	1316	1317, 1321, 1324		
1320	Upper arch of E7	1321, 1324	1337, 1338	1322, 1323	
1321	Lower arc of the northern side of the church	1319	1320, 1322		1229 (E7)
1322	Upper arch of the northern side of the church	1321	1337	1320	1230 (E7)
1323	Upper arch of the southern side of the church	1324	1338	1320	1427 (E8)
1324	Lower arch of the southern side of the church	1319	1320, 1323		1426 (E8)
1325	Central portion of the left semipilaster in E7	1306, 1307	1326	1216 (E6)	1217 (E6)
1326	Upper portion of the left semipilaster in E7	1325	1308	1225 (E6)	1218 (E6)
1327	Left portion of the cornice of the apse	1315	1316, 1340		
1328	Right portion of the cornice of the apse	1315, 1336	1316, 1340		
1329	Central portion of the right semipilaster of E7	1305, 1307	1309, 1330	1413 (E8)	1415 (E8)
1330	Upper portion of the right semipilaster of E7	1329	1314, 1336	1417 (E8)	1416 (E8)
1331	Cut of one ashlar in MSU 1307	1307			
1332	Cut for the replacement of the sill of the window	1312	1333		
1333	Replaced window' sill	1332			
1334	Engraved 𐌺 (A) in one ashlar of MSU 1307 (first row)			1307	
1335	Engraved 𐌺 (A) in one ashlar of MSU 1307 (second row)			1307	
1336	Cornice of the right semipilaster of E7	1330	1328		1240 (E6)
1337	Left squinch of E7	1320, 1322	1342		
1338	Right squinch of E7	1320, 1323	1342		
1339	Key vault of the semidome	1315	1316		
1340	Cornice's ashlar's decay	1327, 1328			
1341	Vertical crack under the window that caused the break of the corners of some ashlar	1310			
1342	Cornice under the tambour decorated with a Seljuk style motif	1337, 1338			1143 (E5), 1241 (E6), 1430 (E8), 1500 (E9)

E8: ARCHAEOLOGICAL ANALYSIS



Stratigraphic analysis legend

- AC Architectural Complex u + † Engravings --- negative MSUs limits
B Building ↓ ↓ ↓ abuts against --- cracks
E Elevation w cut by ▨ not visible
102 Positive MSUs Id. Number ~ linked to
111 Negative MSUs Id. Number — MSUs limits

Constructive phases legend

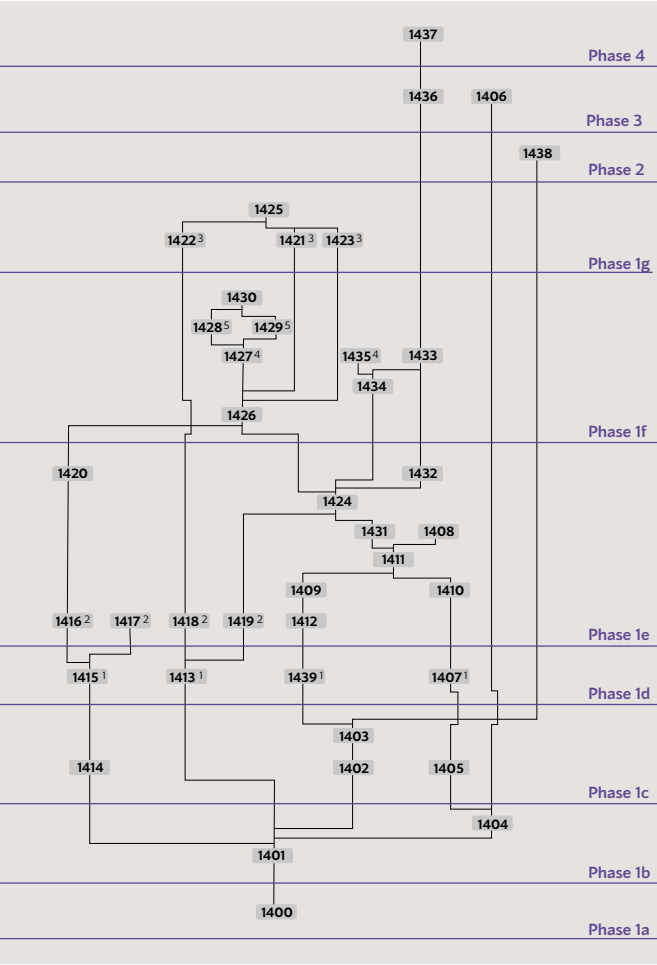
- Phase 1a Phase 1e Phase 2
Phase 1b Phase 1f Phase 3
Phase 1c Phase 1g Phase 4
Phase 1d See E9

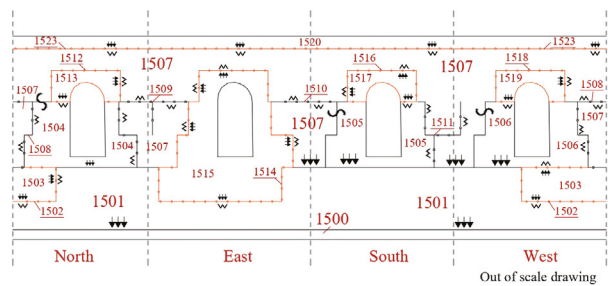
E8: LIST OF MSUS, CUPOLA CHURCH – E8

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1400	Inside crepidoma step under the elevation E8		1401	1100 (E5)	
1401	Three rows of big ashlar between the pilasters of E8	1400	1402, 1404, 1414		
1402	Base of the pilaster on the right of E8	1401	1403		1133 (E5)
1403	First ashlar of the right pilaster of E8	1402	1438, 1439		1135 (E5)
1404	Portion of masonry under the niche MSU 1405 in the right portion of E8	1401, 1101 (E5)	1405, 1406		
1405	Niche in the right portion of E8	1404	1407		
1406	Cuts in the ashlar of MSU 1404	1404			

1407	Portion of masonry upon the niche MSU 1405	1405	1409, 1410	1439, 1108 (E5)	
1408	Portion of masonry under the little arch MSU 1411 in the right part of E8	1411			
1409	Left shelf of the arch MSU 1411	1412	1411		
1410	Right shelf of the arch MSU 1411	1407	1411		1121 (E5)
1411	Little arch in the right portion of E8	1409, 1410	1408, 1431		1123 (E5)
1412	Upper portion of the right pilaster	1439	1409, 1419	1419	1136 (E5)
1413	Portion of masonry (two rows) under the window in E8	1401	1418	1414, 1415, 1439	
1414	Lower portion of the left semipilaster in E8	1401	1415	1307	1305 (E6)
1415	Central portion of the semipilaster on the left of E8	1414	1417	1413	1329 (E6)
1416	Upper ashlar of the left semipilaster of E8	1415	1420	1417	1330 (E6)
1417	Portion of masonry on the left of the window in E8	1415	1421	1416, 1418	
1418	Single-light window in E8	1413	1422	1417, 1419	
1419	Portion of masonry on the right of the window in E8	1412	1424	1418, 1439	
1420	Cornice of the semi pilaster on the left of E8	1416	1426, 1319 (E7)		1336 (E6)
1421	Two ashlars on the left of the lintel of the window in E8	1426	1425	1422	
1422	Lintel of the window	1418	1425	1421, 1423	
1423	One ashlar on the right of the lintel of the window	1426	1425	1422	
1424	Capital of the pilaster on the right of E8	1419, 1431	1426, 1432		1137 (E5)
1425	Portion of masonry under the lower arch (MSU 1426) in E8	1421, 1422, 1423			
1426	Lower arch in E8	1319, 1420, 1424	1421, 1423, 1427, 1434		1144 (E5), 1324 (E7)
1427	Upper arch of E8	1427	1428, 1429	1435	1145 (E5), 1323 (E7)
1428	Left squinch above the arch MSU 1427	1427	1430	1429	1338 (E7)
1429	Right squinch above the arch MSU 1427	1427	1430		1115 (E5)
1430	Cornice under the tambour	1428, 1429			1143 (E5), 1241(E6), 1342 (E8), 1500 (E9)
1431	Portion of masonry upon the little arch MSU 1411	1411	1424		1126 (E5)
1432	Cornice of the southern side of the vestibule	1424	1433		1127 (E5)
1433	Vault of the vestibule	1432, 1434	1436		1129 (E5)
1434	Lower arch of the western side of the church	1424	1433, 1435		1138 (E5)
1435	Upper arch of the western side of the church	1434	1429	1427	1140 (E5)
1436	Collapse of some ashlars of the vestibule's vault	1433	1437		1118 (E5)
1437	Reconstruction of the collapse of the vault MSU 1436	1436			1119 (E5)
1438	Erosion of the first ashlar of the right pilaster of E8	1403			
1439	Ashlar of the right semi pilaster, upon MSU 1403	1403	1412	1407, 1413	1150 (E5)

E8: MATRIX



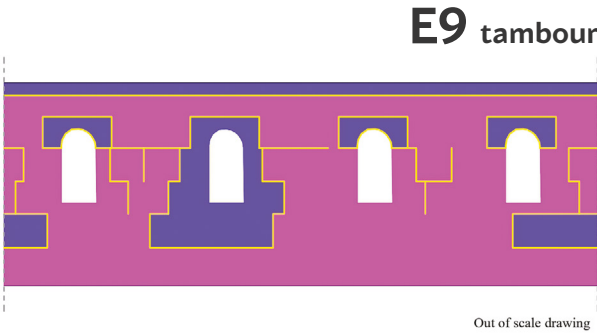


Stratigraphic analysis legend

AC	Architectural Complex	u +	Engravings	-----	negative MSUs limits
B	Building	↓ ↓ ↓	abuts against	-----	cracks
E	Elevation	∩	cut by	▨	not visible
102	Positive MSUs Id. Number	~	linked to		
111	Negative MSUs Id. Number	—	MSUs limits		

Constructive phases legend

■	Phase 1a	■	Phase 1e	■	Phase 2
■	Phase 1b	■	Phase 1f	■	Phase 3
■	Phase 1c	■	Phase 1g	■	Phase 4
■	Phase 1d				

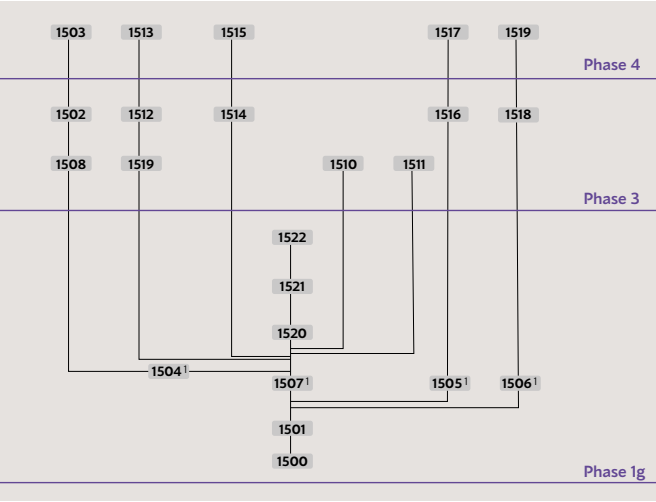


E9: LIST OF MSUS, CUPOLA CHURCH – E9

ID MSU	Definition	Later than	Earlier than	Contemporary with	Equal to
1500	Cornice under the tambour with Seljuk style motif		1501		1143 (E5), 1241(E6), 1342 (E7), 1430 (E8)
1501	First two rows of the tambour	1500	1507		
1502	Cut under the western window	1508	1503		
1503	Filling of MSU 1502	1502			
1504	Jambs of the northern window	1501	1508	1507	
1505	Jambs of the southern window	1501	1510, 1511	1507	
1506	Jambs of the western window	1501	1508	1507	
1507	Masonry between and over the windows	1501	1508, 1509, 1510, 1511, 1520	1504, 1505, 1506	
1508	Crack between the western and the northern windows	1507	1502		
1509	Crack between the northern and the eastern window	1507	1512		
1510	Crack between the eastern and the southern windows	1507			
1511	Crack between the southern and the western windows	1507			
1512	Cut for the replacement of the lintel of the northern window	1509	1513		
1513	Replaced lintel of the northern window	1512			
1514	Collapse of the eastern window	1507	1515		
1515	Reconstructed eastern window	1514			
1516	Cut for the replacement of the lintel of the southern window	1505	1517		

1517	Replaced lintel of the southern window	1516			
1518	Cut for the replacement of the lintel of the western window	1506	1519		
1519	Replaced lintel of the western window	1518			
1520	Cornice under the dome	1507	1521		
1521	Dome	1520	1522		
1522	Key of the dome	1521			

E9: MATRIX



APPENDIX

THE CUPOLA CHURCH: AN ARCHITECTURAL DESCRIPTION²⁷

Cecilia Luschi, Marta Zerbini

This church takes its name from its architectural structure. Its original dedication is not known, but various other names have been applied to it in scholarly literature and by the local population, such as *Surb Karapet* (Holy Precursor) and *Surb Nshan* (Holy Sign).²⁸ The church is dated to the last decades of the thirteenth century and is located in the northeastern part of the village of Yeghegis. The three churches of Yeghegis – the *Zorats'*, the *Cupola*, and the church of the *Mother of God* (*Astuatsatsin*) are connected in a territorial alignment. More precisely, the *Cupola Church* stands between the church of *St Astuatsatsin* to the west and *Zorats' Church* to the east.

One does not have the perception of approaching this building until one is exactly in front of it, when the church reveals itself fully, almost unexpectedly. Its architectural structure is in a good state of conservation thanks to the restoration work carried out in the 1970s, which provided much-needed static consolidation. Some of its collapsed parts were rebuilt.

The church is oriented on an east–west axis and is built in a raised position compared to the street level. It is placed on a rectangular base made of stone ashlar, structured in three steps of 4.7 centimeters / 5.2 centimeters in profundity and 21.0 centimeters / 21.8 centimeters / 21.8 centimeters / 21.8 centimeters in height.

The church belongs to the type of a “domed church with a longitudinal plan” according to Paolo Cuneo’s typological catalogue of Armenian churches.²⁹

Externally, the four façades delimit the rectangular base structure: the west and east façades correspond to the short sides of the church, while the north and south ones occupy the longer sides of the perimeter. To further differentiate the two pairs of elevations, there is a difference in the inclination angle of the roofs in the four corners, which consequently determines two different types of profiles. While the corner of the roof in the shorter elevations (west and east) has an inclined profile, the south and north elevations appear as a straight line, running along to the eaves of the roof.

The entrance to the main, western façade is composed of large monolithic stone blocks placed as jambs, whose exterior features a closed round arch corresponding to an interior lowered arch (respectively of six stone ashlar and three stone ashlar). The two arches are built in adherence to a single semicircular monolithic ashlar that performs the function of an architrave.

Above the door opening, there is a small window framed by specially shaped stone cornices. The architrave of this window is modeled in a semicircular shape, both internally and externally. To the right of the opening, there is a carved element with a floral motif.

The southern façade is characterized by the presence of a little opening in the center. The window is externally decorated with a frame carved in the ashlar. At the top, there is a stone decoration depicting two snakes, while at the bottom, there is a stone decoration resembling a peacock tail or a floral motif, with the function of a sundial.

Both eastern and northern elevations have an opening at the center, with the architrave ashlar modeled in a semicircular shape. On the same ashlar, there is a cornice sculpted in the form of an omega.

All four windows open towards the inside with a splay, and on the four façades, there are various cruciform sculpted symbols and stonemasons.

The church masonry is characterized by smoothed stone ashlar, while the openings are delimited through monolithic ashlar modeled *ad hoc*. It is surmounted by a tambour made of stone ashlar,

27 The graphic representation of the architectural survey has been geometrically verified. However, the reader must be warned that photomaps of rounded surfaces do not have a high metric reliability and are, therefore, graphically differentiated. Architectural surveys and their representations included in this analysis – plans, façades, sections, photomaps, and 3D models – have been produced by the *DIDA* Research Group of the University of Florence, including: *DIDA* Mission Director Cecilia Luschi, and collaborators Laura Aiello, Beatrice Stefanini, Francesco Trovatielli, Alessandra Vezzi, Marta Zerbini, Sara Masi, Filippo Prodi, and Domenico Rivetti. Surveying operations were carried out according to an integrated method that combines direct and photogrammetric surveying, developing the 3D digital reworking of the object.

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Marta Zerbini, University of Florence (*DIDA* Department), marta.zerbini@unifi.it

28 For a discussion of these names, see Zaroui Pogossian, “The Golden Age of Yeghegis in the 13th and 14th centuries” in this volume, pp. 68–80

29 Cuneo, *Architettura armena* (n. 4), pp. 28–57.

internally vaulted with a circular cap, and externally covered by a conical roof in stone slabs. Internally, a 5–6 centimeters stone base runs along the inner perimeter of the church, serving as a plinth on which walls and pillars are placed. The flooring is made of stone slabs.

The interior of the church is composed of a small vestibule, a room, and a semicircular apse (or presbytery). The vestibule is surmounted by a barrel vault. On its north side, there is a recess with a stoup decorated externally with a peacock tail carved in bas-relief and painted with white and purple colors. On the south side of the vestibule, there is a recess in the wall. Above those recesses, two round arches are placed on the wall, surmounted by the frame of the arches of coverage.

The vestibule is separated from the central hall by a pair of pillars that are positioned against either side of the wall. The pillars are composed of large, shaped stone ashlar, extending to the impost of the

cornice, which serves as the point of support for four arches that in turn support the spherical-vaulted drum. The tambour is marked by a cornice decorated with weaving patterns carved and painted with red and black colors. The same bichrome and alternating decoration is present in the last circle of ashlar that close the cap of the tambour. The apse level is elevated by an altar, which is accessed via three lateral steps on the right and left. These steps are constructed from monolithic stone ashlar and are adorned with bas-reliefs that feature frames.

The apsidal basin ends with a semicircular cap with an inverted closure, which is structurally realized with a series of concentric arches of decreasing radius and terminates with a single ashlar above the window on the eastern side. The apse cap is a “false” one due to this peculiar structure. The entire interior of the cap is carved in bas-relief with a large peacock’s tail, with remnants of painting visible. The closing stone is also carved in bas-relief with the same motif.