

# Kupola Dioklecijanova mauzoleja u Splitu

## The dome of Diocletian's mausoleum in Split

Radoslav Bužančić  
Konzervatorski odjel u Splitu /  
Conservation Department in Split  
Porinova 2  
HR - 21000 Split  
radoslav.buzancic@min-kulture.hr

UDK: Dioklecijan:726.822(497.583Split)  
Andrić, V.005.934.4:726.822(397.583Split)  
055.591.4:728.84“06“  
Dioklecijan 351.791.1:726.822(497.593Split)

Izvorni znanstveni članak / Original scientific paper  
Primljeno / Received: 31. 5. 2023.  
Prihvaćeno / Accepted: 31. 7. 2023.

Precizni snimci, sonde i vrsno poznavanje rimske arhitekture potakli su Vicko Andrića na zamisao o rekonstrukciji izvornog izgleda mauzoleja kojem bi kalota kupole ostala vidljiva, učvršćena stepenastim prstenovima u podnožju s okulusom u tjemenu, ali znanstvena javnost do danas nije prihvatila njegov prijedlog izvornog izgleda odbacivši ga kao pretpostavku temeljenu na izgledu rimskog Panteona. U brojnim revizijama te sonde prsteni nisu nađeni jer su uništeni u prvom istraživanju. Njihovo otkriće u sjevernoj sondi 2023. potvrdilo je Andrićevu rekonstrukciju. Ekstrados kupole bio je vidljiv, pokriven metalnim pokrovom s prstenovima u podnožju. Okulus u tjemenu kupole još nije moguće čvrsto dokazati, ali su precizna mjerenja meridijana intradosa kupole registrirala lom na spoju tjemelog dijela kupole koji ima malo veću zakrivljenost. Potaknut novim nalazima, autor donosi prijedlog izvornog izgleda mauzoleja blizak Andrićevoj rekonstrukciji.

**Ključne riječi:** mauzolej, Dioklecijan, kupola, Split, carska palača.

Precise measurements, probes and exemplary knowledge of Roman architecture inspired Vicko Andrić's idea on reconstruction the original appearance of the mausoleum in which its cupola would remain visible, reinforced by stepped rings at the foot with an oculus at its zenith. However, to this day the scholarly public has not accepted his proposal for the original appearance, rejecting it as a presumption based on the appearance of the Roman Pantheon. In numerous audits of that probe, the rings were not found because they were destroyed in the first investigations. Their discovery in the northern probe in 2023 confirmed Andrić's reconstruction. The dome's extrados was visible, covered with metal roofing and with rings at its foot. The existence of an oculus in the cupola still has not been firmly proven, but precise measurements of the dome's intrados registered a fracture at the connection between the dome's cupola, which is slightly more curved. Prompted by new finds, the author puts forth a hypothesis on the mausoleum's original appearance which hews closely to Andrić's reconstruction.

**Key words:** mausoleum, Diocletian, dome, Split, imperial palace.



Dioklecijanovo doba obilježilo je drugu polovicu 3. st. reformama koje su zahvatile gotovo sve segmente života kasnog Rimskog Carstva. Vrijeme je to privremene stabilizacije društva uzdrmanog krizama, kojem je, nakon pola stoljeća vladavine vojničkih careva, vraćena sloga i mir te politička stabilnost nastala uvođenjem tetrahije, vladavine četvorice, sjedinjene pod geslom *Concordia dominorum*.

Među ostalim reformama, obnovljena je i ceremonija dvora u okviru reorganizacije carskog kulta, što je bilo popraćeno novim arhitektonskim i urbanističkim rješenjima. Jedan od najbolje sačuvanih primjera tetrahijske arhitekture je splitska Jovijeva vila u Saloni u kojoj je divinizirani car proveo posljednje dane života. Kao jedan od velikih arhitektonsko-urbanističkih pothvata, nastala je nakon golemih Dioklecijanovih projekata u Rimu te onih koji su slijedili u Antiohiji, Palmiri, Aleksandriji i Tebi, Nikomediji, Kirkezijsu, Kartagi, Durostorumu, Hisariji i Kastoriji, Peli i Sirmiju. Prema Saloni je krenuo nakon 3. svibnja 305. godine odbacivši carsko ime i svjetovnu titulu, te je u njoj boravio do svoje smrti kao Jovius, sin Jupitrov i *deus praesens* (sl. 1).

Splitska vila u mnogo čemu je nastavila kanonsku arhitekturu palača koje su njegovi arhitekti i graditelji već ranije gradili, poput onih u Nikomediji i Antiohiji. Bila je smještena u utvrđenom kastrumu u kojem se kroz *tetrapylon* i pojas hramova pristupalo rezidenciji živog boga i tako ona postaje prototip za *palatium sacrum*.<sup>1</sup> Pojas hramova i *palatium* zajedno su tvorili veliko svetište posvećeno tetrahiji kojem je *palatium* bio neka vrsta *celle*, a pojas svetišta pred njim s hramovima imao je funkciju prostranog portika namijenjena svečanostima, proslavama vječne pobjede i žrtvovanju bogovima kojima su u sklopu carskog kulta pripadali i tetrarsi.<sup>2</sup>

U toj posve novoj organizaciji palače kasnog Carstva, gradnja carskog mauzoleja, kao jednog od hramova svetišta, bila je presudna jer je sahrana pokojnika unutar gradskih bedema bila u suprotnosti s rimskim zakonima.<sup>3</sup> Za razliku od nekih kasnoantičkih palača tog razdoblja koje nisu sačuvane, ali ih poznajemo iz opisa suvremenika, izvorni opisi i nazivi dijelova splitske carske vile nisu sačuvani. Kako su njezine građevine do danas u iznimno dobrom stanju, istraživači koji su se stoljećima bavili Palačom za njih su koristili pojmove povezane s klasičnom rimskom kućom. Primjerice, dio koji se u Splitu naziva Peristilom, Glanville Downey, citirajući Malalasov opis Dioklecijanove palače u Antiohiji, naziva latinskom riječi *regia*, uspoređujući takav pristup palači s kratkom ulicom praćenom arka-

Diocletian's reign marked the latter half of the 3<sup>rd</sup> century with reforms that encompassed virtually every segment of life in the late Roman Empire. This was an era of temporary stabilization in a society rocked by crises, which, after fifty years of rule by barracks emperors, regained unity, peace and political stability which emerged after the creation of the tetrarchy, the rule of four, unified under the motto *Concordia dominorum*.

Among other reforms, the court ceremony was restored as part of the imperial cult's reorganization, which was accompanied by new architectural and urban planning solutions. One of the best preserved examples of tetrarchic architecture is the Villa of Jovius (Diocletian) in Salona (Split) in which the deified emperor spent the last days of his life. As one of his major architectural and urban planning feats, it appeared after Diocletian's immense projects in Rome and those that followed in Antioch, Palmyra, Alexandria and Thebes, Nicomedia, Circeium, Carthage, Durostorum, Hisarya and Castoria, Pella and Sirmium. He set off for Salona after 3 May 305, discarding his imperial name and secular title, and remained there until his death as Jovius, Jupiter's son and *deus praesens* (Fig. 1).

In many ways, the villa in Split continued the canonical architecture of the palaces that his architects and builders had already constructed earlier, such as those in Nicomedia and Antioch. It was situated in a fortified castrum in which the residence of the living god was approached through a tetrapylon and belt of temples, thus becoming the prototype for the *palatium sacrum*.<sup>1</sup> The belt of temples and *palatium* together created an immense holy space dedicated to the tetrarchy for which the *palatium* was some type of *cella*, while the belt of temples in front of it functioned as a spacious portico intended for ceremonies, celebrations of eternal triumph and sacrifices to the Gods which included the tetrarchs as part of the imperial cult.<sup>2</sup>

In this entirely new organization of palaces during the late Empire period, the construction of the imperial mausoleum as one of the temples of the sacred complex, was crucial because the interment of the deceased inside city walls was contrary to Roman law.<sup>3</sup> Unlike certain palaces of Late Antiquity which have not been preserved but are known based on the descriptions of contemporaries, the original descriptions and terms for sections of the imperial villa in Split have not been preserved. Since its structures are in exceptionally sound condition even today, researchers who have dealt with the Palace

1 Bužančić 2009, str. 245.

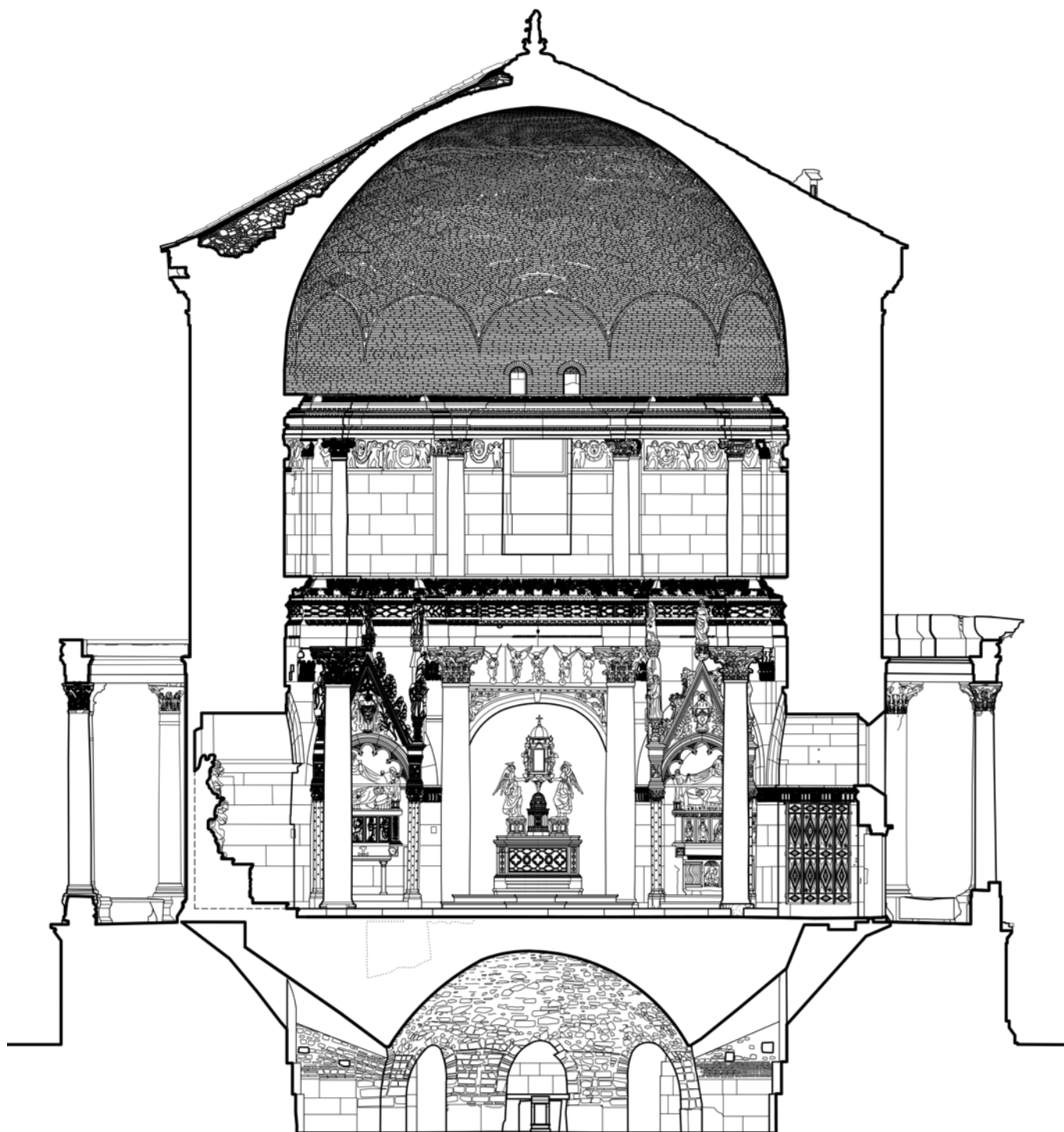
2 Cambi 1995, str. 253-264; Bužančić 2014, str. 119.

3 Primjeri gradnje vladarskih mauzoleja unutar grada bili su vrlo rijetki i vezani za istaknute osobe iz političkog života, heroje, bogate donatore javnih zgrada i vladare, poput oktogona u Efezu za koji se pretpostavlja da je grobnica Arsinoë IV. iz 41. g. pr. Kr., egipatske princeze iz roda Ptolomejevića.

1 Bužančić 2009, p. 245.

2 Cambi 1995, pp. 253-264; Bužančić 2014, p. 119.

3 Examples of the construction of rulers' mausoleums inside cities are quite rare and tied to distinguished personalities from political life, heroes, wealthy patrons of public buildings and rulers, such as the octagon in Ephesus, which is presumed to be the tomb in which Arsinoë IV, an Egyptian princess from the Ptolemy dynasty, was interred in 41 BC.



Slika 1.  
Presjek S – J kroz Dioklecijanov mauzolej (snimka Geographica d.o.o. Split, 2020.)

Figure 1.  
N-S cross-section through Diocletian's mausoleum (photograph by Geographica d.o.o. Split, 2020)

dama koja prema Libaniusovom opisu antiohijske palače vodi iz njezinog središta (*Libanius, Oratation XI.*).<sup>4</sup> Izvorna dedikacija četiriju hramova nije zajamčena izvorima i natpisima, ali čitavo svetište je po svojoj prilici, osim dvanaestorici rimskih bo-

over the centuries made use of terminology associated with the Classical Roman house. For example, the part that is called the Peristyle in Split was referred to by Glanville Downey, citing the description of Diocletian's Palace in Antioch by Malalas, with the Latin word *regia*, comparing this approach to the palace with the short street accompanied by arcades, which according to the description of the Antioch palace by Liba-

4 Downey 1953, str. 114.

gova, bilo posvećeno slozi tetrarha, što sugerira broj hramova i razvitak carskog kulta Dioklecijanova doba.<sup>5</sup>

Među hramovima palače, koji su dio jednog jedinstvenog svetišta, okružena jednim temenosom, pozornost stoljećima privlači onaj najveći, ujedno i Jovijev mauzolej, koji na svojoj iznimnoj sačuvanosti može zahvaliti ranoj konverziji u kršćansku crkvu.<sup>6</sup> Frane Bulić, koji donosi antičke izvore vezane za mauzolej, piše da se u njima najprije nazivao *templum* ili *heroum Iovii*, a odatle dolazi naziv *templum Iovis* u srednjovjekovnim tekstovima.<sup>7</sup> O mauzoleju i carevom grobu postoji opsežna rasprava u literaturi koja nije u potpunosti odgovorila na neka davno postavljena pitanja, a to su vrsta i položaj groba u mauzoleju, kao i vrijeme kada je uništen.<sup>8</sup>

U mauzoleju se, prema svjedočanstvu Amijana Marcelina, sve do 356. godine održao carski kult. Neka žena, prema spomenu u njegovom *Rerum gestarum*, optužila je svog muža Danusa za oskrvnuće careva groba jer je *velamen purpureum a Diocletiani sepulcro furatus*, te je on, zbog uvrede cara, bio osuđen na smrt. Prema tom navodu, krajem 4. st. u mauzoleju je još postojao Jovijev *sepulchrum* (*Ammiani Marcellini Rerum gestarum libri*, XVI, 8.).<sup>9</sup> Nenad Cambi pretpostavlja da je u Mauzoleju mogao biti luksuzni sarkofag, možda čak *bisomus*,<sup>10</sup> ako se car odlučio za inhumaciju sebe i žene, umjesto incineracije. Ako je Dioklecijan pak bio kremiran, tada bi kripta bila prikladno mjesto za smještaj njegovog pepela.<sup>11</sup>

Sidonije Apolinar, polovinom 5. st., o Jovijevom grobu piše *cuius bustum Dalmaticae vident Salonae* (*Sidonii Apollinaris Sollowii Carmina*, XXIII.), nazivajući ga *bustum*, što podrazumijeva sahranu incineracijom.<sup>12</sup> U tom je slučaju kripta mauzoleja ide-

nus led from its centre (Libanius, *Oration XI*).<sup>4</sup> The original dedication of four temples is not certain based on sources and inscriptions, but the entire sacred complex was, besides the twelve Roman Gods, likely dedicated to the unity of the tetrarchs, which is suggested by the number of temples and the development of the imperial cult in Diocletian's era.<sup>5</sup>

Among the palace's temples, which are part of a single, unified sacred complex surrounded by a single temenos, for centuries the most attention was garnered by the largest, also the mausoleum of Diocletian/Jovius, which can thank its early conversion to a Christian church for its exceptional state of preservation.<sup>6</sup> Frane Bulić, who cited Classical sources tied to the mausoleum, wrote that in them it was initially called a *templum* or the *heroum Iovii*, hence the term *templum Iovis* in medieval texts.<sup>7</sup> There has been considerable discourse on the mausoleum and the emperor's tomb in the scholarly literature that has not fully answered certain questions posed long ago, and these are the type and position of the tomb in the mausoleum, as well as the time when it was destroyed.<sup>8</sup>

According to Ammianus Marcellinus, the imperial cult was maintained in the mausoleum until 356 AD. A woman, according to a record in his *Rerum gestarum*, accused her husband Danus of desecrating the emperor's tomb because he *velamen purpureum a Diocletiani sepulcro furatus*, and because of this insult to the emperor he was sentenced to death. According to this record, at the end of the 4<sup>th</sup> century Diocletian's *sepulchrum* still existed (*Ammiani Marcellini Rerum gestarum libri*, XVI, 8).<sup>9</sup> Nenad Cambi presumed that the Mausoleum

5 U Antiohiji je Konstantin Veliki podigao oktogonalni hram posvećenik mauzoleju splitske palače, koji antički izvori 5. st. nazivaju ὁμόνοια (*Concordia*). Mada se povezuju pojmovi *Concordia Apostolorum* s carskom sintagmom *Concordia Augustorum*, u nazivu Zlatnog hrama Antiohije mogao je biti zadržan i toponim ranijeg svetišta tetrarhije, a nekadašnja *Concordia Dominorum* dobila je novi smisao u pojmu *Concordia Apostolorum*.

6 Pitanje je li splitski oktagon hram ili mauzolej, nasuprot pretpostavci da je istodobno hram i mauzolej, odavno je podvojilo znanstvenu javnost i postoji opsežna rasprava na tu temu. Francuska arheološka škola osporavala je poznatu Hébrardovu rekonstrukciju mauzoleja, usp. Duval 2002, str. 290. S druge strane brojni znanstvenici ne dvoje oko funerarne namjene splitskog oktogona (Adler, Conze, Brunn, Glavinić, Freeman, Bulić, Jelić, Hébrard, Niemann, Karaman, Kähler, Marasović, Marin, Cambi), usp. Cambi 1995, str. 253-264.

7 Bulić 1923, str. 5; Bulić, Karaman 1927, str. 70-75.

8 Bulić 1923, str. 9; Bulić, Karaman 1927, str. 90, bilj. 133. Bulić drži da među fragmentima nema ostataka Dioklecijanova sarkofaga. Tezu o carevom sarkofagu ponovno donose Kähler 1974, str. 809-819, T. 271; Rendić-Miočević 1992, str. 104; Marin 2006, str. 371-390; Buljević 2019, str. 429-441.

9 Belamarić 2019, str. 409-427.

10 Na frizu u unutrašnjosti su likovi njega i žene Priske, pa je moguće da je mauzolej bio građen za oboje.

11 Cambi 2021, str. 68, bilj. 331.

12 *Ustrinum* Dioklecijanova zeta Galerija i njegove majke Romule, os-

4 Downey 1953, p. 114.

5 In Antioch, Constantine the Great erected an octagonal temple similar to the mausoleum in the Split palace, which is called ὁμόνοια (*Concordia*) in Classical sources. Although the term *Concordia Apostolorum* and the imperial phrase *Concordia Augustorum* are often associated, the designation *Domus Aurea* in Antioch may also retain the toponym of the tetrarchy's earlier sanctuary, while the former *Concordia Dominorum* obtained a new meaning in the term *Concordia Apostolorum*.

6 The question as to whether the Split octagon is a temple or mausoleum, in contrast to speculation that it was simultaneously a temple and mausoleum, has long divided the scholarly public and there have been extensive debates on this topic. The French school of archaeology has contested Hébrard's well-known reconstruction of the mausoleum, cf. Duval 2002, p. 290. On the other hand, many scholars do not doubt the funerary purpose of the Split octagon (Adler, Conze, Brunn, Glavinić, Freeman, Bulić, Jelić, Hébrard, Niemann, Karaman, Kähler, Marasović, Marin, Cambi), cf. Cambi 1995, pp. 253-264.

7 Bulić 1923, p. 5; Bulić, Karaman 1927, pp. 70-75.

8 Bulić 1923, p. 9; Bulić, Karaman 1927, p. 90, note 133. Bulić maintained that the fragments did not contain the remains of Diocletian's sarcophagus. The theory about the emperor's sarcophagus was once more put forth by Kähler 1974, pp. 809-819, Pl. 271; Rendić-Miočević 1992, p. 104; Marin 2006, pp. 371-390; Buljević 2019, pp. 429-441.

9 Belamarić 2019, pp. 409-427.

alno mjesto za carev porfirni grob u kojem je sahranjen pepeo njegovoga tijela.<sup>13</sup>

Konverzija mauzoleja u crkvu dogodila se godinama nakon napuštanja carskog kulta u zapuštenom i opljačkanom hramu. Prema Tomi Arhiđakonu, Salona je bila razorena u vrijeme Gota koje je vodio Totila u prvoj polovini 6. st. Ušavši u mauzolej cara Dioklecijana, Arijanci su srušili i uništili carske iskle-sane natpise i razorili jedan dio te građevine.<sup>14</sup> Tragovi provale još su vidljivi u unutrašnjosti kriptе. Prema Arhiđakonu, sarkofag je stradao u toj provali, Ostrogoti su opustošili carsku vilu i njezine hramove, a obnova hrama i konverzija u crkvu zbila se stotinjak godina poslije, tek u 7. st.<sup>15</sup>

Brojni porfirni ulomci, koje su neki istraživači pokušali povezati s ostatcima carskog sarkofaga, vjerojatno potječu iz istraživanja stare zgrade biskupije, sjeveroistočno od mauzoleja, koja je izgorjela u požaru 1924. godine.<sup>16</sup> Ulomci porfira također su pronađeni u novim istraživanjima 2017. godine, između poda nekadašnjeg mauzoleja i kupole njegove kriptе.<sup>17</sup>

Arhitektura hrama i mauzoleja inovativno je oblikovno rješenje nadahnuto ranijom sirijskom i Hadrijanovom arhitekturom. Centralni peripter osmerokutnog tlocrta podignut je nad visokom krepidomom periptera s prostilnim stubištem. Peripter mauzoleja, naspram nekadašnjih 24, danas ima 19 izvorno sačuvanih i smještenih stupova jer je 5 uklonjeno gradnjom kora, kapele sv. Mateja i zvonika (sl. 1). Stupovi od crvenog i sivog egipatskog granita, prokoneškog mramora, breče i vapnenca nose kamene grede s mjestimice sačuvanim vijencem i lakunarijem kasetiranog kamenog stropa. Na zapadu je izvorni portal mauzoleja s jonskim konzolnim volutama kroz koji se ulazi u celu.

Cilindrična unutrašnjost cele natkrivene kupolom raščlanjena je na naizmjenično polukružnim i četvrtastim nišama među kojima su stupovi u dvama nizovima, jedan iznad drugoga, koji nose vijence profilirane bogatom, dekorativnom plastikom. Crveni granitni stupovi su korintskog reda, kao i četiri u gornjem nizu koji su od crvena porfira, dok su ostala dva nasuprotna para gornjih stupova s kompozitnim kapitelima granitni. U pozadini gornjeg reda stupova smješten je reljefni friz s

tatci lomača na kojima su spaljena njihova tijela, pronađeni su u arheološkim istraživanjima Gamzigrada, pa bi bilo za očekivati da se Dioklecijan u apoteozu nakon smrti dao spaliti poput njegova Cezara.

33 Pored brojnih ulomaka od crvenog porfira pronađenih na mjestu srušene zgrade biskupije, neposredno uz sjeverni zid mauzoleja, nedavno su za vrijeme istraživanja poda mauzoleja pronađeni veliki ulašteni ulomci od istog materijala. Nalazili su se u praznom prostoru među dvije kupole, odnosno između kriptе i cele hrama.

14 Toma Arhiđakon 2003, VII. 3, str. 31.

15 *Ibidem*, XI. 4.

16 Kähler 1965, str. 107, bilj. 33. Porfirni ulomci iz tog istraživanja sačuvani su u Arheološkom muzeju u Splitu. Vidi Buljević 2019, str. 429–441.

17 Arheološka istraživanja vodile su Vanja Kovačić i Milka Mrduljaš, a porfirni ulomci izloženi su u Riznici splitske katedrale.

may have contained a luxurious sarcophagus, perhaps even a *bisomus*,<sup>10</sup> insofar as the emperor had opted for interment of himself and his wife instead of cremation. If Diocletian had in fact been cremated, then the crypt would have been a suitable place to deposit his ashes.<sup>11</sup>

In the mid-5<sup>th</sup> century, Sidonius Apollinaris wrote about Diocletian's tomb, i.e., "*cuius bustum Dalmaticae vident Salona*" (*Sidonii Apollinaris Sollii Carmina*, XXIII), calling it *bustum*, which implies a cremation burial.<sup>12</sup> In this case, the mausoleum's crypt was an ideal location for the emperor's porphyry tomb in which the ashes of his body were deposited.<sup>13</sup>

The conversion of the mausoleum into a church occurred during the years after the abandonment of the imperial cult in the deserted and looted temple. According to Thomas the Archdeacon, Salona had been destroyed by the Ostrogoths under Totila's leadership in the first half of the 6<sup>th</sup> century. After entering Emperor Diocletian's mausoleum, these Arians tore down and destroyed the carved imperial inscriptions and demolished a part of this structure.<sup>14</sup> Traces of the incursion are still visible in the crypt's interior. According to the archdeacon, the sarcophagus was damaged during this assault, as the Ostrogoths devastated the imperial villa and its temples, while the temple's restoration and its conversion into a church occurred roughly a century later, in the 7<sup>th</sup> century.<sup>15</sup>

The numerous porphyry fragments, which some researchers have attempted to link to the remains of the emperor's sarcophagus, probably came from the excavations of the old diocesan building north-east of the mausoleum, which burned down in a fire in 1924.<sup>16</sup> Porphyry pieces were also found in new excavations in 2017, between the former mausoleum's floor and the dome of its crypt.<sup>17</sup>

The architecture of the temple and mausoleum reflects

10 Images of him and his wife Prisca are on the inside frieze, so the mausoleum was possibly built for both.

11 Cambi 2021, p. 68, note 331.

12 The *ustrinum* of Diocletian's son-in-law Galerius and his mother Romula, the remains of the pyre on which their bodies were cremated, was found during archaeological excavations at Gamzigrad, so it was to be expected that in the apotheosis after his death, Diocletian's had his remains cremated just like his Caesar.

13 Like the numerous fragments of red porphyry found at the site of the demolished diocesan building immediately adjacent to the mausoleum's north wall, during recent excavations of the mausoleum's floor large polished fragments made of the same material were found. They were situated in an empty room between the two domes, i.e., between the crypt and the temple cella.

14 Toma Arhiđakon 2003, VII. 3, p. 31.

15 *Ibidem*, XI. 4.

16 Kähler 1965, p. 107, note 33. The porphyry fragments from these excavations are held in the Archaeological Museum in Split. See Buljević 2019, pp. 429–441.

17 The archaeological excavations were led by Vanja Kovačić and Milka Mrduljaš, while the porphyry fragments are on display in the Split cathedral's Treasury.

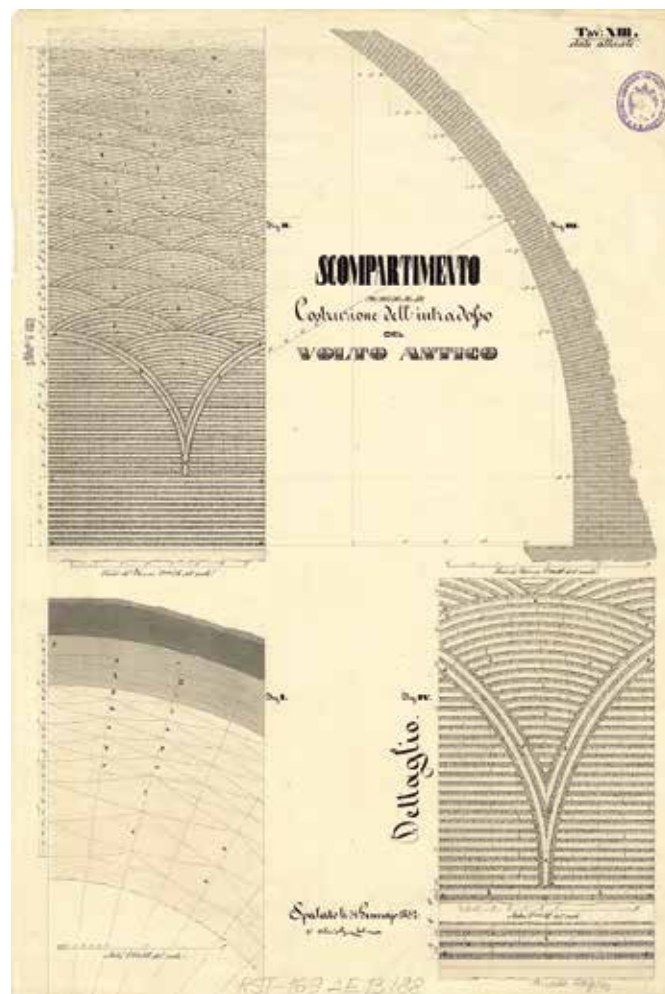
prikazima lova na carsku divljač i likovima Dioklecijana i njegove žene Priske.

Unutrašnjost cele iznimno je dobro sačuvana unatoč radikalnoj restauraciji s konca 19. st.<sup>18</sup> Kalota kupole je od opeka, radijusom doseže trećinu ukupne visine mauzoleja koja iznosi 66 stopa, a njegov kružni tlocrt promjera je 44 stope. Njezini mali sferni lukovi, poredani jedan povrh drugoga, ljuskasta su mreža vodilica za gradnju dvije trećine kalote, zidane dvama slojevima opeke ukupne širine 68 cm (sl. 2). Dva sloja opeka kupole mauzoleja povezana su radijalnim metalnim sponama i hidrauličkim vapnenim mortom među sljubnicama. Tjeme kupole zidano je koncentričnim prstenovima dvostruke opeke. Na krivulji presjeka po meridijanu kupole može se primijetiti lom na spoju gornje kalote s donjom sagrađenom metodom ljuski, koji može biti posljedica promjene tehnike gradnje, ili je možda trag izvornog okulusa u tjemenu koji je poslije bio zazidan.

Kupola kripte, u donjem dijelu građevine, je dvoslojna. Donji dio kupole, vidljiv u prostoru kripte, kalota je zidana tehnikom *opus mixtum*, a iznad nje je još jedan svod od osam segmentnih, trokutastih svodova raspoređenih između plitkih lukova (kišobranski svod) koji spajaju nasuprotne baze unutrašnjih stupova. Kripta je vjerojatno ipak bila grobna komora mauzoleja, također natkrivena dvoslojnom kupolom, kako je to otkriveno istraživanjem.

Arhitektura palače i njezinih rimskih građevina stoljećima je privlačila pozornost velikog broja istraživača. Oni su tragali za izgledom i konstrukcijom rimskih građevina, posebno palače i hramova koji su iznimno dobro sačuvani. Mauzolej kojem su brojne dogradnje tijekom povijesti dijelom pokrile izvorni izgled, bio je predmet posebno velikog zanimanja. Značajan pothvat u 18. stoljeću ostvario je Robert Adam objavom kapitalnog djela *Ruins of the Palace of the Emperor Diocletian at Spalatro* u Londonu 1764. godine, u kojem donosi crteže dijelova palače, kao i grafičku interpretaciju ruševina antičke arhitekture oslobođene naknadnih gradnji.

Stoljeće kasnije Vicko Andrić izradio je detaljni snimak splitske katedrale koju je počeo proučavati i istraživati 1848. zanimajući se za arhitekturu mauzoleja konvertiranog u kršćansku crkvu, stolnu crkvu splitskih nadbiskupa. Andrićevi nacrti katedrale, koje mu je pomogao izraditi suradnik Dujam Marcocchia, izradeni su 1852. godine i pohranjeni u mapu.<sup>19</sup> Za potrebe mjerenja i snimanja provedena su tada i neka istraživanja konstrukcije. Među ostalim, 18. veljače 1851. otvorena je sonda u krovu radi istraživanja gornje strane kalote mauzoleja (ekstrasdos). Komisija formirana na njegov zahtjev pregledala



Slika 2.  
Vicko Andrić, segment konstrukcije intradosa antičke kupole s detaljem gradnje, arhiv Konzervatorskog odjela u Splitu, T. XIII, 1852. (snimio Ž. Bačić)

Figure 2.  
Vicko Andrić, segment of the intrados structure on the Roman-era dome with construction detail, archive of the Conservation Department in Split, pl. XIII, 1852 (photograph by Ž. Bačić)

an innovatively formulated solution inspired by earlier Syrian and Hadrianic architecture. The central peripteros with an octagonal floor-plan was raised above the high crepidom of the peripteros with a prostyle staircase. The mausoleum's peripteros, in contrast to its former 24, today has 19 original, preserved and situated columns, because 5 were removed to build the choir, the Chapel of St. Matthew and campanile (Fig. 1). The columns made of red and gray Egyptian granite, Proconnesian marble, breccia and limestone bore the stone beams with the partially preserved cornice and lacunaria on the coffered stone ceiling. The mausoleum's original portal with Ionic console volutes, through which the cella was entered, is to the west.

The cylindrical interior of the cella covered by a dome is broken down into semi-circular and rectangular niches, among which there are columns in two rows, one above the other,

18 Radovi su prema projektu Aloisa Hausera izvedeni od 1880. do 1885. godine.

19 Mapa pod naslovom „Tempio di Giove nel Palazzo di Diocleziano in Spalato – Anno 1852“ čuva se u arhivu Konzervatorskog odjela u Splitu.

je nalaz sa skele podignute uz zapadni zid nasuprot zvoniku i zaključila: *Prema svemu može se utvrditi da antički svod kako danas postoji, neizmijenjen u svojoj izvornosti, nije bio sagrađen da bude pokriven današnjim krovom.*<sup>20</sup> Precizni snimci, sonde i vršno poznavanje rimske arhitekture potakli su Vicka Andrića na zamisao o rekonstrukciji izvorne kupole mauzoleja kojoj bi se uklonio pokrov od crijepa kako bi kalota kupole ostala vidljiva, učvršćena stepenastim prstenovima u podnožju (sl. 3). Prihvatio je ponudu Dalmatinske vlade da obnovi mauzolej u izvornom izgledu istodobno čuvajući u njemu tisućljetnu tradiciju prvostolne crkve. Andrić je izradio projekt obnove koji je 4. veljače 1854. bio odobren. Projektom je prezentirana izvorna antička konstrukcija krova s otvorom u tjemenu, koji je ujedno trebao biti jedini izvor dnevnog svjetla u njezinoj unutrašnjosti, jer su se svi ostali naknadni otvori trebali zazidati. Pored svih dozvola, takva obnova nije ostvarena zbog otpora dijela splitskih kolega, na čelu s Franjom Lanzom, koji su je smatrali preradikalnom i temeljenom na nedovoljno dokazanom izvornom stanju. Obnova katedrale provedena je tek nakon Andrićeve smrti, 1880. – 1885. prema zamisli Aloisa Hausera. Projekt je u restauratorskom smislu bio vrlo invazivan, izmijenila se velikim dijelom unutrašnja kamena plastika, brojni kapiteli, a ujedno i donji dio unutrašnjeg sloja kupole građen od cigle. Petnaestak godina poslije Georg Niemann objavio je 1910. godine u Beču monografiju o Dioklecijanovoj palači u kojoj je ponudio svoje viđenje rekonstrukcije mauzoleja Dioklecijanove palače.<sup>21</sup> Za razliku od Andrićeve rekonstrukcije, prema Niemannu je kupola bila pokrivena strmim osmerokutnim krovom s pokrovom od keramičkih ploča (tegula) koje su se spuštale sve do kamenog vijenca. U svrhu istraživanja i u njegovo je doba sondiran krov, jer piše kako su crijepovi bili skinuti na jednom mjestu blizu akroterija i na drugom blizu nadozida, a prostor između kupole i krova po tom je nalazu bio ispunjen sedrom kao i nadozid vijenca. Temeljem toga zaključuje: *Nisam našao oslonac za pretpostavku da je kupola bila vidljiva izvana i da je po primjeru Panteona bila stepenasto obzidana; stoga je u pretpostavljenom izvornom stanju nacrtan šatorasti krov, koji bi nakon uklanjanja postojećega nadozidanog dijela iznad vijenca nužno morao ispasti strmiji od današnjeg.*<sup>22</sup>

Hébrard, par godina nakon Niemann, izdaje svoju monografiju o Dioklecijanovoj palači u kojoj precizno opisuje mauzolej tumačeći među ostalim i konstrukciju kupole.<sup>23</sup> On, kao i Niemann, piše da debljina kupole, izmjerena sondiranjem, iznosi 0,66 m, što je jednako širini dviju opeka dimenzija 0,33 m x 0,33 m, debljine 0,035 m. U nastavku piše da polukružna kupola ima središte na 1,25 m iznad drugog vijenca te da teh-

which bear cornices moulded with rich, decorative sculpture. The red granite columns are of the Corinthian order, like the four in the upper row which are made of red porphyry, while the remaining two opposite pairs of upper columns with composite capitals are made of granite. A relief frieze with a scene of the hunt for the emperor's wild game and images of Diocletian and his wife Prisca are in the background of the upper row of columns.

The cella's interior is exceptionally well preserved despite the radical restoration works done at the end of the 19<sup>th</sup> century.<sup>18</sup> The dome's cupola is made of brick; its radius extends over a third of the mausoleum's total height of 66 feet, and its circular ground-plan has a diameter of 44 feet. Its small spherical arches, squamae, set one above the other, form a scaled grid of guidelines for the construction of two-thirds of the cupola, made of two layers of brick with a total width of 68 cm (Fig. 2). The two brick layers of the mausoleum's dome are connected by radial metal clamps and hydraulic limestone mortar in the joints. The dome's zenith consists of concentric rings of double brickwork. A fracture is noticeable on the curve of the dome's meridian in section at the point where the upper cupola meets the lower section built by the scale method, which may have been the result of a change in the construction technique, or perhaps a vestige of the original oculus on the zenith which was built subsequently.

The crypt's dome in the lower part of the structure, has two layers. The dome's lower section, visible inside the crypt, has a cupola built by the *opus mixtum* technique, while above it is another vault consisting of eight segments, triangular vaults set between shallow arches (umbrella vault) that connect the facing bases of the internal columns. The crypt was nonetheless probably the mausoleum's tomb chamber, also covered by a double-layer dome, as revealed by research.

The palace's architecture and its Roman buildings have attracted the attention of numerous researchers over the centuries. They searched for the original appearance and structure of the Roman buildings, particularly the palace itself and the temples, which are exceptionally well-preserved. The mausoleum, whose original appearance has been partially obscured by numerous additional construction works, has been the focus of particular interest. A significant development came in the 18<sup>th</sup> century, when Robert Adam published his paramount work *Ruins of the Palace of the Emperor Diocletian at Spalatro* in London in 1764, which contained drawings of sections of the palace and a graphic interpretation of the ruins of the Roman-era architecture free from subsequent additions.

A century later, Vicko Andrić conducted a detailed inspection of the Split cathedral, which he had begun to study and

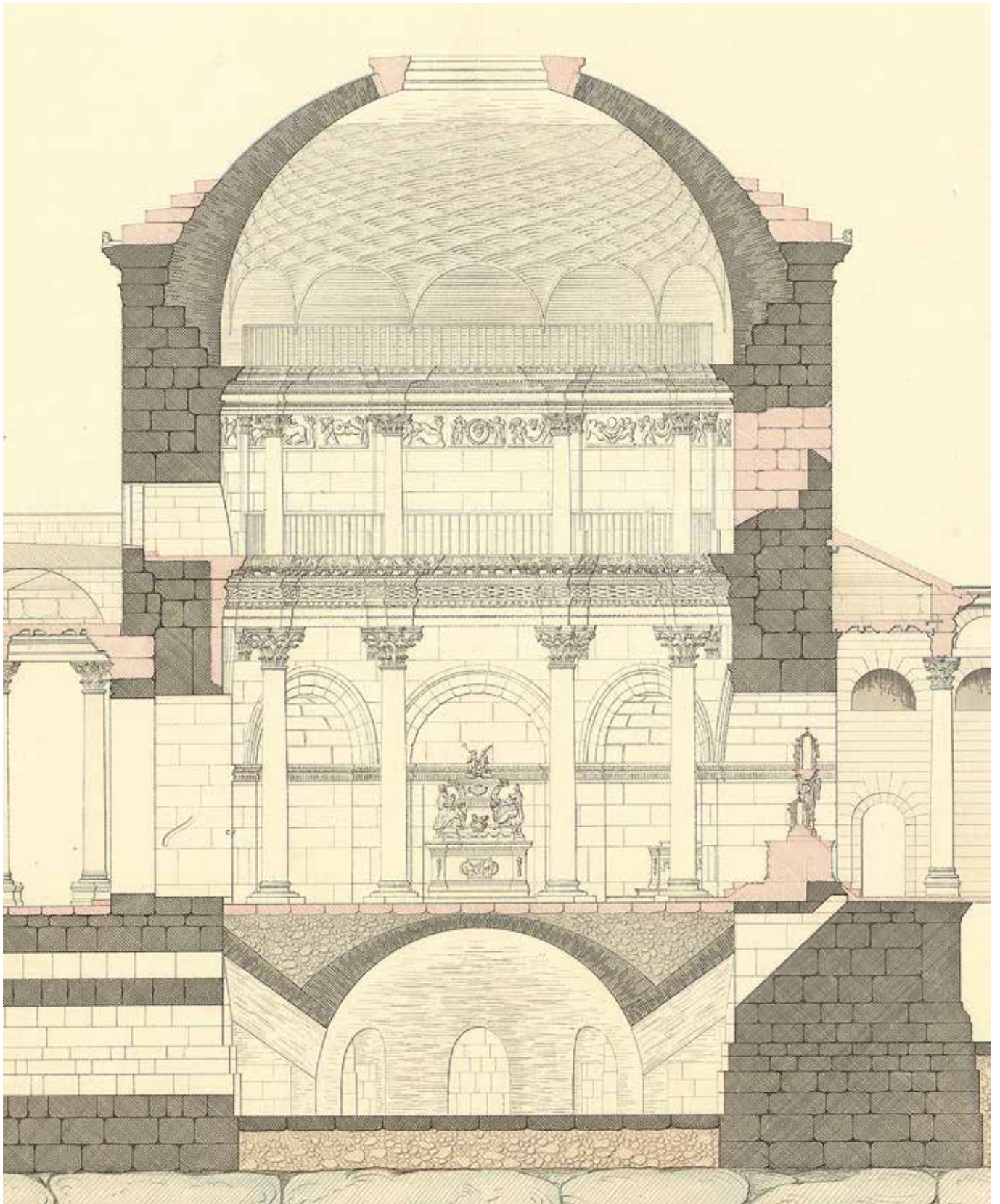
20 Kečkemet 1993, str. 108.

21 Niemann 1910, str. 73.

22 Sonda je vjerojatno izvedena na zapadnom zidu kao i Andrićeva, jer je tu najlakše podignuti skelu s terase zvonika.

23 Hébrard, Zeiller 1912, str. 93.

18 The works, based on Alois Hauser's designs, were carried out from 1880 to 1885.



Slika 3.  
Vicko Andrić, Presjek Z – I kroz Dioklecijanov mauzolej s pretpostavljenim vidljivim ekstradosom i okulusom na vrhu, arhiv Konzervatorskog odjela u Splitu, T. IX, 1852. (snimio Ž. Bačić)

Figure 3.  
Vicko Andrić, W-E cross-section through Diocletian's mausoleum with presumed visible extrados and oculus on top, archive of the Conservation Department in Split, pl. IX, 1852 (photograph by Ž. Bačić)

nika njezine gradnje koristi niz trompica koje prenose opterećenje jedna na drugu. Na taj je način podignut svod do dvije trećine visine bez oplata koja je postavljena samo za izgradnju preostale trećine kalote; još uvijek se vide dvostruke rupe nad drugim vijencem koje su služile za postavljanje glavnih gređa skele, piše u nastavku. Za vrijeme spomenute Hauserove restauracije, petnaestak godina prije Hébrardove monografije, na nekima od tih opeka nađene su oznake tvornice DALMATI, što bi moglo potvrditi da su ovdje i proizvedene.

Hébrard u nastavku piše da je sadašnji krov postavljen na naboju koji nije antički, jer je slabo povezan s vijencem. Na vijencu je primijetio rupe u razmaku od 0,40 m sugerirajući kako njihovi razmaci vjerojatno odgovaraju dimenzijama antičkih crjepova koji su bili nanovo upotrijebljeni za sadašnji krov. Crjepovi nose oznaku Q. CLOD AMBROSI (SI povezano), Q. Clodi(us) Ambrosi(us). Prema Hébrardu je antički krov nedvojbeno bio pokriven crjepovima, a ako se donekle i razlikovao od sadašnjeg krova, osnovne su linije bile iste. Nije pratio konture kupole koju je opisivao pa zaključuje: *kao što je unutarnja rotonda bila ugrađena u osmerokutni zid, tako je i okrugla kupola s vanjske strane bila sakrivena pod krovom istog oblika*. Na vrhu krova je vjerojatno bio neki akroterij, poput onog iz srednjeg vijeka, piše Hébrard.

On je također pretpostavio da je unutrašnjost kupole bila prekrivena mozaikom, onakvim kakav je u malom segmentu nađen u kupoli vestibula, vjerojatno u nešto mekšem tonu, kojem su odgovarali mozaici na tlu. Za razliku od Niemann, smatrao je da su dijelovi pronađenog poda u tehnici *opus sectile* iz Dioklecijanovog doba.<sup>24</sup> Odbacio je, kao i Niemann, Andrićevu pretpostavku o okulusu na tjemenu kupole vjerujući da je svo svjetlo u unutrašnjost mauzoleja ulazilo kroz jedini prozor na spomeniku, zapadnu lunetu nad portalom.

Spomenuta istražna sonda, koju je 1851. na krovu napravio Vicko Andrić, bila je otvorena još nekoliko puta, jednom su je pregledali T. G. Jackson i F. Bulić između 1882. i 1885. godine,<sup>25</sup> otvorena je ponovno u vrijeme radova na zvoniku 1891. godine te u vrijeme obnove krova 1996. godine. Protezala se po sredini zapadnog segmenta krova od akroterija do rimskog kamenog vijenca u širini od 85 cm. Bočne strane sonde bile su učvršćene mortom da se materijal ispune između kupole i pokrova ne bi urušavao, a kako se ne bi zatrpavala nasipom, radi lakše revizije, na drvene su grede bile postavljene kupe kanalice. Na jednoj drvenoj gredi koja je podržavala krov iznad sonde pronađena je olovkom zapisana 1891. godina.<sup>26</sup>

Iako su sonde na krovu rađene u nekoliko navrata, one su uglavnom ponavljane uvijek na istom mjestu s težnjom da

explore in 1848 when he took an interest in the architecture of the mausoleum converted into a Christian church, the cathedral of the Split archdiocese. Andrić's technical drawings of the cathedral, which were drafted with assistance from his associate Dujam Marcocchia, were done in 1852 and stored in a folder.<sup>19</sup> Some investigations into its structure were also conducted for the needs of measurement and documentation. Among other things, on 18 February 1851, an exploratory probe was cut into the roof in order to examine the external side of the mausoleum's dome (extrados). A commission assembled at his request evaluated the find from a scaffold erected along the western wall opposite the campanile and came to the following conclusion: "By all indications, it may be asserted that the Roman-era vault as it exists now, unaltered in its original form, was not built to be covered by the present-day roof."<sup>20</sup> Precise measurements, probes and exemplary knowledge of Roman architecture inspired Vicko Andrić's idea to reconstruct the original appearance of the mausoleum so that the tiles would be removed from the roofing in order to ensure that the cupola would remain visible, reinforced by stepped rings at its foot (Fig. 3). He accepted an offer from the Dalmatian Government to restore the mausoleum's original appearance while simultaneously preserving its millennial tradition of use as a cathedral. Andrić drew up a draft design for this restoration, which was approved on 4 February 1854. The design presented the original Roman-era structure with an opening at the dome's zenith, which was also supposed to be the sole source of daylight in its interior, because all subsequently made openings were to be bricked over. Despite securing all permits, this restoration was not done due to resistance from some of his colleagues in Split, headed by Francesco Lanza, who considered it too radical and based on insufficient evidence of the original appearance. Reconstruction of the cathedral was only conducted after Andrić's death, in 1880-1885, based on Alois Hauser's designs. The project was quite invasive in restoration terms, a considerable portion of the internal sculpted stone, numerous capitals, and also the upper and lower sections of the dome's internal layer made of brick were altered. Roughly fifteen years later, in 1910, Georg Niemann published a monograph in Vienna about Diocletian's Palace.<sup>21</sup> As opposed to Andrić's reconstruction, according to Niemann the dome was covered with a steep octagonal roof with tile (tegula) covering, which descended to the stone cornice. For the sake of research, the roof had a probe cut into it in his time as well, because he wrote that the tiles were removed near the acroteria at one place and near the parapet at another, while

24 Niemann 1912, str. 63. Autor navodi da se radi o srednjovjekovnom popločenju.

25 Jackson 1887, str. 38.

26 Nikšić 1995, str. 118.

19 The folder entitled "Tempio di Giove nel Palazzo di Diocleziano in Spalato – Anno 1852" is held in the archive of the Conservation Department in Split.

20 Kečkemet 1993, p. 108.

21 Niemann 1910, p. 73.

otvore gornju površinu kamenog vijenca u podnožju kupole, čime bi se ustanovilo eventualno postojanje stepenastih prstenova u podnožju ekstradosa i moguće antičke kamene atike nad vijencem, koja je tu mogla biti umjesto ožbukanozida. Međutim, kako je već u prvom istraživanju 1851. uklonjen izvorni rimski sloj uz vijenac zidan nad podnožjem kupole, ne čudi da su se svi istraživači nakon Andrića, ponovnim promatranjem iste sonde koja je vjerojatno već u njegovo vrijeme produbljena i devastirana radi ispitivanja dubljeg sloja, složili kako on nije donio ispravan zaključak u pogledu postojanja stepenastih prstenova u podnožju.

Prihvaćajući Niemannovu rekonstrukciju izvornog antičkog krova, Goran Nikšić zaključuje kako je on bio prestrm, s kutom većim od 40°, zbog čega je crijep klizao, te nije bilo druge nego iznad kamenog vijenca nadograditi atiku zidanjem ožbukanozida u visini od oko 80 cm. Kamenu romanički akroterij s četiri lava koji podržavaju florealnu dekoraciju datira tu intervenciju u 13. stoljeće, za vrijeme velike romaničke obnove katedrale.<sup>27</sup> Don F. Bulić je, potaknut velikim brojem antičkih tegula u pokrovu, držao da je sadašnji krov izvorni rimski, pa tako i njegov kamenu akroterij, mada se s tom pretpostavkom nisu slagali njegovi suvremenici.<sup>28</sup>

Prihvativši hipotezu da je antički krov mauzoleja izvorno oktogonala piramida pokrivena crijepom, svi su se istraživači složili da Andrić griješi u svojoj studiji u kojoj na vrhu kupole mauzoleja crta okulus u prikazu postojećeg stanja, kao i u rekonstrukciji u kojoj Dioklecijanova građevina nije imala pokrov te da je ekstrados kupole bio vidljiv. Isto tako, stepenasto podnožje kupole, koje crta u presjeku konstrukcije, pripisuju njegovom uvjerenju da su kupole rimskog Panteona i splitske katedrale slične, a ne rezultatima sondiranja.

Mjerenja koja su provedena u srpnju 2012. za vrijeme istraživanja i obnove unutrašnjosti kupole donijela su nove spoznaje o zakrivljenosti kupole i navela na pomisao kako bi trebalo preispitati stav o olako odbačenim Andrićevim snimkama postojećeg stanja i hipotetskoj rekonstrukciji kupole jer su one nastale kao rezultat studioznog rada i dugotrajnog posvećenog istraživanja prvog konzervatora.<sup>29</sup> Suvremeno lasersko skeniranje pokazuje kako zakrivljenost kružne kalote donjeg dijela s mrežom sfernih lukova nije identična gornjem dijelu kalote, pa je uočljiv neznatan lom po meridijanu na spoju donjeg i gornjeg dijela intradosa. Čišćenje površine pokazalo je još neke do sada nepoznate detalje u kupoli. Pronađeni su željezni štapovi profila cca 10 mm raspoređeni radijalno po cijeloj kupoli. Pitanje je jesu li imali konstruktivnu svrhu ili su pridržavali neki dekorativni element unutar kupole?<sup>30</sup>

the space between the dome and roof according to this finding was filled with tuff, like the cornice's parapet. Based on this he concluded: "I found nothing to support the presumption that the dome had been visible from the outside and that, based on the example of the Pantheon, that it had been built in a stepped fashion; therefore, a pitched roof was sketched into the assumed original appearance, which after removal of the existing parapet section above the cornice necessarily had to be steeper than the current situation."<sup>22</sup>

A few years after Niemann, Hébrard published his own monograph on Diocletian's Palace in which he meticulously described the mausoleum, among other things interpreting the dome's structure.<sup>23</sup> Like Niemann, he wrote that the thickness of the dome, measured by probing, is 0.66 m, which is the same as the width of two bricks with dimensions of 0.33 m x 0.33 m, and a thickness of 0.035 m. He went on to write that the hemispherical dome had its centre 1.25 m above the second cornice and that its construction technique involved the use of a series of small squinches that transferred the load from one to another. In this manner, the vault was raised up to two thirds of its height without the cladding that was installed only to construct the remaining third of the cupola; double holes are still visible on the second cornice that were used to set the main scaffold beams. During Hauser's aforementioned restoration, roughly fifteen years prior to Hébrard's monograph, the factory designations DALMATI were found on some of the bricks, which may confirm that they had been made here as well.

Hébrard further wrote that the roof of the time had been installed on a base that did not date to the Roman era, because it is poorly connected to the cornice. He observed holes on the cornice at 0.4 m intervals, suggesting that their intervals likely corresponded to the dimensions of the Roman tiles that had been reused for the then present roof. The tiles bear the designation Q. CLOD AMBROSI (the SI are combined), Q. Clodi(us) Ambrosi(us). According to Hébrard, the Roman roof was undoubtedly covered with tiles, and even if it differed somewhat from the then current roof, the basic contours were the same. It did not adhere to the contours of the dome which it encircled, so he concluded: "just as the internal rotunda was built in an octagonal wall, so too was the round dome concealed from the outside by a roof of the same shape." There was likely an acroterion at the peak of the roof, like those from the Middle Ages, Hébrard wrote.

He also assumed that the dome's interior was covered with a mosaic of the type found in a small segment of the vesti-

27 *Ibidem*, str. 121.

28 Bulić, Karaman 1927, str. 79, 85.

29 Bužančić 2013, str. 161.

30 Kada su željezni štapovi pronađeni u istraživanjima koje sam video 2013. smatrao sam ih konstruktivnim elementom koji pove-

22 The probe was probably cut in the western wall as Andrić's had been, because this was the most convenient place to raise a scaffold from the campanile's terrace.

23 Hébrard, Zeiller 1912, p. 93.

Prilika da se preispita izvorna površina ekstradosa kupole ukazala se više od deset godina kasnije, u vrijeme pripreme za obnovu krova mauzoleja koji je 25 godina od obnove mjestimice vlažio. Za potrebe planiranja restauratorskog zahvata otvorena je sonda u krovu na sjevernom, najugroženijem dijelu krovišta, potpuno nalik onoj koju je Vicko Andrić otvorio 1851., ali na mjestu koje do sada nije ispitano. To kontrolno ispitivanje, praćeno analizama, donijelo je nove spoznaje o izvornoj konstrukciji kupole carskog mauzoleja.<sup>31</sup> Sonda je pokazala da je Andrićev snimak utemeljen i točan te da pri dnu ekstradosa postoje četiri stepenice zidane od cigle i kamena, mjestimice građene kao *opus spicatum*. Ta konstrukcija nipošto ne može biti povezana s današnjim krovom koji je romanički i pripada velikom obnoviteljskom zahvatu katedrale nadbiskupa Bernarda završenom na dan sv. Jurja 1214. godine, postavljanjem drvenih vratnica majstora Andrije Buvine.<sup>32</sup> Upravo suprotno, stepenasti završetak pripada podnožju kupole mauzoleja kojij je ekstrados bio vidljiv, kako sugerira Andrić, te je u antičko doba vjerojatno bio pokriven metalnom kupolom.

Konstrukcija kupole Dioklecijanovog mauzoleja iznimno je značajno djelo rimskog graditeljstva, kako zbog stupnja sačuvanosti, tako i zbog velike vještine rimskih graditelja koji su savladali tehniku gradnje složenih arhitektonskih konstrukcija. Već je koncem 19. st. Émile Bertaux pretpostavio kako je kupola Dioklecijanovog mauzoleja građena bez upotrebe potporne skele.<sup>33</sup>

Kupole su u rimskoj arhitekturi bile čest motiv. Hram Ve-

---

zuje dvostruku ljsku kupole građenu od kvadratne opeke širine 30 cm. Dvije ljske, svaka debljine 30 cm, potpuno su neovisno građene jedna uz drugu bez vežnjaka koji bi ih povezivali te su potpuno drugog uzorka slaganja što dodatno otežava njihov zajednički rad. Štapovi su iznimno važni u gornjim dijelovima kupole kada kut zidanja prstenova postaje vrlo strm i gotovo okomit u samom tjemenu pa prijeti opasnost pada i kod najmanjeg potresa. Nasuprot tome postoje i druga mišljenja prema kojima su oni služili za pričvršćivanje mozaika na intrados, što nije uobičajen postupak, usp. Nikšić 2015, str. 208.

31 Istraživanja su pod vodstvom konzervatora Radoslava Bužančića 20. ožujka 2023. proveli Ana Doljanin i djelatnici tvrtke Art Core d.o.o. iz Splita. Za raniji restauratorski zahvat na intradosu kupole usp. Doljanin, Ajduković, Gjerga Bratić 2013, str. 71-92.

32 Vjerojatno je tada, u duhu cistercitske jednostavnosti, izvedena drvena konstrukcija kojoj su ležišta uklesana u blokovima vanjskog kamenog zida, što nije tipična rimska konstrukcija, da bi se peripter hrama pokrio crijepom. Kosi krov periptera posebno je problematičan na pročelju koje Niemann zamišlja sa sirijskim lukom poput onog na protironu. Moguće je da je luk iznad vrata mauzoleja rasteretni luk, piše Hébrard, ali zašto onda nema i ulogu prozora? Dakle, da je postojao zabat sa sirijskim lukom na pročelju prostaze, osvijetljenje bi s te strane bilo nemoguće. Usp. Hébrard 1912, 83. Hébrard i Niemann crtaju kosi krov s pokrovom od tegula nad peripterom tetrahijskog mauzoleja, ali on ničim nije zajamčen. Vjerojatno je ipak pokrov periptera bio isto metalan poput pokrova ekstradosa kupole.

33 Bertaux 1899, str. 3.

bule's vault, probably in a somewhat softer tone, which would have corresponded to the mosaics on the floor. As opposed to Niemann, he believed that the segments found on the floor and done in the *opus sectile* technique date to Diocletian's time.<sup>24</sup> Like Niemann, he also rejected Andrić's hypothesis about the oculus atop the dome, believing that all light entered the mausoleum's interior through the sole window on the monument, the western lunette above the portal.

The aforementioned exploratory probe made by Vicko Andrić in 1851 was opened several more times; once it was inspected by T. G. Jackson and F. Bulić between 1882 and 1885,<sup>25</sup> and it was opened again during works on the campanile in 1891 and also during the roof's reconstruction in 1996. It extended down the middle of the roof's western segment from the acroterion to the Roman stone cornice at a width of 85 cm. The lateral side of the probe was secured with mortar so that the filler material between the dome and roof would not collapse, and extruded roofing tiles were placed on the wooden beams so that it would not be filled with debris and to facilitate revisionary inspections. The year 1891 written in pencil was found on a wooden beam that bore the roof above the probe.<sup>26</sup>

Even though probes on the roof were done on several occasions, they were generally cut at the same place with the intention of opening the upper surface of the stone cornice at the foot of the dome and thereby ascertain the potential existence of a stepped ring at the foot of the extrados and a possible stone attic above the cornice, which may have been here instead of the plastered parapet. However, since the original Roman layer along the cornice built above the dome's foot was already removed during the first inspection in 1851, it comes as no surprise that all researchers after Andrić, once more observing the same probe which had probably already been deepened and devastated in his time to inspect the deeper layer, agreed that he did not draw the correct conclusion in the sense of the existence of stepped rings at the foot.

Accepting Niemann's reconstruction of the original Roman roof, Goran Nikšić concluded that it was too steep, with an angle exceeding 40°, causing the tiles to slip, so that there was no other option to add an attic above the stone cornice by building a mortared wall with a height up to roughly 80 cm. The Romanesque stone acroterion with four lions which held the floral decorations dates this intervention to the 13<sup>th</sup> century, during the time of the great Romanesque restoration of the cathedral.<sup>27</sup> Don Frane Bulić, prompted by the high number of Roman tegulae on the roof, maintained that the then current roof was the original Roman one, including its stone

---

24 Niemann 1912, p. 63. He alleged that this was medieval tile work.

25 Jackson 1887, p. 38.

26 Nikšić 1995, p. 118.

27 *Ibidem*, p. 121.

ste u Rimu sagrađen je na prelasku iz 2. u 3. st. kao tolos koji je nad celom imao kupolu promjera 8,6 m. U Balbeku je cela Venerinog hrama iz 3. st. bila natkrita kupolom 8 m raspona, dok je rimski dekaogonalni nimfej, poznat kao Minerva Medica, imao poligonalnu kišobrasku kupolu s rebrima, raspona 24 m. Najveća i najznačajnija među sličnim konstrukcijama je kupola rimskog Panteona sagrađena između 118. i 128. god. Upotreba kupole kao arhitektonske konstrukcije u rimsko doba nije bila neuobičajena, ali je kod Panteona njezina dimenzija s rasponom od 43,4 m veća od svih do tada poznatih (sl. 4). Takozvani „Merkurov hram“, dio termalnog kompleksa Baiae kod Napulja, imao je među ranijim kupolama vjerojatno najveću, ali veličinom od 21,5 m nije bila ni približna rasponu kupole Panteona. Karakterističnu konstrukciju kupole Panteona čine betonski kasetirani svod intradosa, stepenasti prstenovi u podnožju ekstradosa i otvor u zenitu kupole.

Istražujući mauzolej splitske palače, V. Andrić otvorio je dio krovništva, izmjerio debljinu kupole i došao do zaključka kako je ona, iako skromnijih dimenzija, bila sagrađena na isti način kao ona rimskog Panteona, sa zenitalnim otvorom i stepenastim prstenovima u podnožju ekstradosa. Sonda koju je otvorio bila je na zapadu, nasuprot zvoniku. Očišćeni segment krova, od podnožja do tjemena kupole, pokazao je najzanimljivije konstruktivne elemente koji su ključ nosive konstrukcije svoda. Kupola je dvostruka ljuska građena od dvaju slojeva kvadratne opeke dimenzije 30 cm. Tjeme kupole zidano je različitim vezom od njezinog podnožja, opeka je postavljena u koncentričnim prstenovima, za razliku od donjeg dijela gdje je do dvije trećine visine opeka slagana poput ljuski ili sfernih trokuta. Po analogiji s rimskim primjerima Andrić je na vrhu kupole pretpostavio golemi okulus. Vjerojatno ga je tom zaključku vodila i ruševina kupole Vestibula kojoj je tjeme bilo otvoreno. Pretpostavlja se da je u podnožju ekstradosa pronašao tragove stepenastih prstenova, koji su kasnije oštećeni ili uklonjeni, a različiti istraživači koji su sondu revidirali nekoliko puta nakon toga nisu ih spomenuli. Njihov pronalazak u sjevernoj sondi 2023. potvrdio je Andrićevu pretpostavku (sl. 5). Ekstrados kupole bio je vidljiv i pokriven metalnim pokrovom. Okulus u tjemenu kupole još nije moguće čvrsto dokazati, ali precizna mjerenja meridijana intradosa kupole mogu to nagovijestiti. Čemu su služili stepenasti prstenovi? Poznato je da izgradnja kupole Panteona nije tekla bez problema. U njezinom podnožju već su se u vrijeme gradnje pojavile meridijalne pukotine zbog iznimno velikog opterećenja, pa je gradnja stepenastih prstenova vezana za sanaciju građevine već tijekom radova. Graditelji su iskustveno pribjegli izvedbi obruča oko kupole kako bi je zategli u području djelovanja vlačnih sila. Njihova zidarska izvedba vjerojatno je trebala osigurati postavljanje golemih metalnih obruča, prstenastih zatega, kako oni ne bi klizali po ekstradosu kupole. Suvremena računalna istraživanja sila u podnožju kupole Panteona pokazala su da rimski graditelj nije posjedovao analitičke alate za ovu vrstu procjene te da je konfiguracija bez prstena strukturalno pouzdanija od

acroterion, even though his contemporaries did not agree with his hypothesis.<sup>28</sup>

Having accepted the hypothesis that the mausoleum's Roman-era roof was originally an octagonal pyramid covered by tiles, all researchers agreed that Andrić had been mistaken in his study, in which he sketched an oculus atop the mausoleum's dome in the depiction of the current situation, as in the reconstruction in which Diocletian's structure did not have roofing and that the dome's extrados was visible. By the same token, the dome's stepped foot, which he drew into the structure's cross-section, was ascribed to his conviction that the domes of the Roman Pantheon and the Split cathedral were similar, and not the result of his probing.

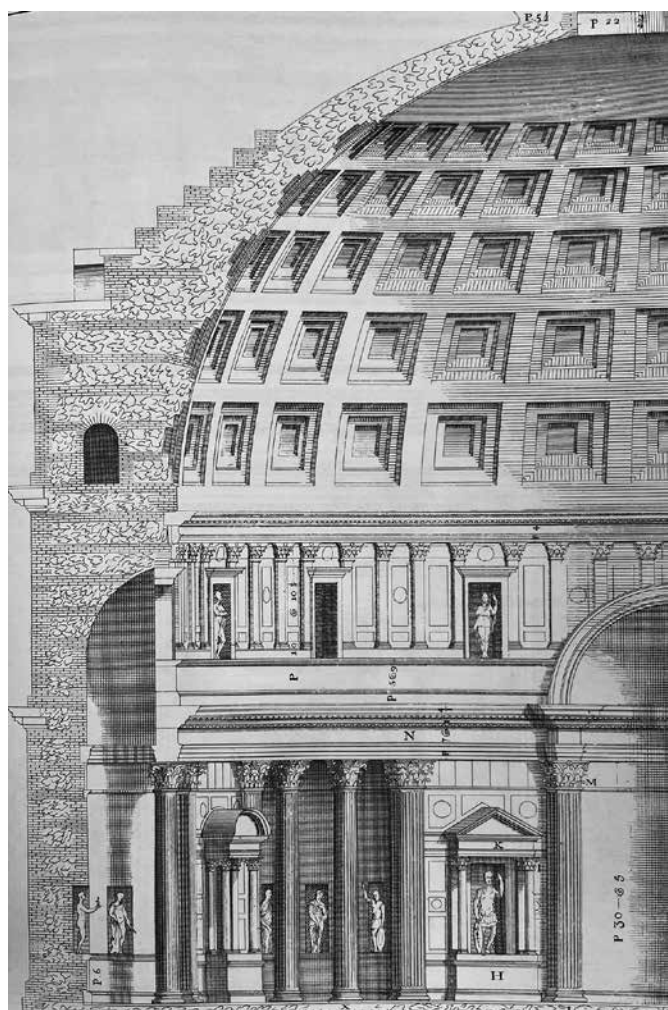
The measurements taken in July 2012 during examinations and restoration of the dome's interior yielded new insights into the dome's curvature and prompted the thought that it is perhaps time to re-examine the Andrić's documentation of the existing situation and his hypothetical reconstruction of the dome that had been so easily discarded, because they emerged as a result of the meticulous work and long-term dedicated research by this first conservator.<sup>29</sup> Modern laser scanning shows that the curvature of the circular cupola of the lower section with the grid of spherical arches is not identical to the cupola's upper section, so a negligible fracture is visible along the meridian at the connection between the lower and upper intrados. Cleaning of the surface has shown some thus far unknown details in the dome. Iron rods with a profile of ca. 10 mm were found arranged radially over the entire dome. The question is whether they had a constructive purpose or were some sort of decorative element inside the dome.<sup>30</sup>

An opportunity to re-examine the original surface of the extrados presented itself over ten years later, during the preparation of the mausoleum's roof for renovation, which had been gathering moisture for 25 years since the preceding restoration. A probe was opened in the roof on the northern, most threatened part of the roof structure for the needs of planning the restoration works, and it entirely resembled the

28 Bulić, Karaman 1927, pp. 79, 85.

29 Bužančić 2013, p. 161.

30 When the iron rods were found during the investigations that I had conducted in 2013, I considered them a construction element that linked the dome's double shell built using rectangular bricks with a width of 30 cm. The two shells, each 30 cm thick, had been built entirely independently of each other with no bonds to connect them, and they have entirely different assembly pattern which additionally renders their joint functioning difficult. The rods are exceptionally important in the upper sections of the dome when the angle of constructing the rings became rather steep and virtually horizontal at the very top, threatening to collapse during even the most minor earthquake. By contrast, there are other opinions according to which they were used to secure the mosaic to the intrados, which was not the customary procedure, cf. Nikšić 2015, p. 208.



Slika 4.  
Presjek Panteona u Rimu (iz  
A. Palladio, *I Quattro Libri  
dell' Architettura*, Venezia  
1570., prema engleskom  
izdanju Isaaca Warea iz 1738.,  
T. LVII)

Figure 4.  
Cross-section of the Pantheon  
in Rome (from A. Palladio,  
*I Quattro Libri dell' Architettura*,  
Venezia 1570, according to  
English edition by Isaac Ware  
from 1738, Pl. LVII)

ovog dodatka, iako druge studije o prednastvenom razvoju konstrukcija navode na misao kako je dizajner Panteona možda ipak imao dobre tehničke razloge za izradu stepenastih prstenova.<sup>34</sup> U splitskom primjeru oni su bili plod tradicije i primjene modela koji je nastao nekoliko stoljeća ranije.

Arhitektura splitskog mauzoleja temeljena je na iskustvima velikih ranijih ostvarenja antike. Jedno od njih je efeški oktagon, vjerojatno mauzolej Arsinoë IV., sestre Kleopatre VII., koja je umrla 41. g. pr. Kr. Oktagon je to iz vremena ranog Rim-

one opened by Vicko Andrić in 1851, albeit at a location thus far not investigated. This control testing, accompanied by analyses, yielded new insights into the original structure of the dome on the emperor's mausoleum.<sup>31</sup> The probe showed that Andrić's documentation was well-founded and accurate and that there were four steps made of brick and stone at the bottom of the extrados, partially rendered as *opus spicatum*. This structure can in no way be associated with the present-day roof which is Romanesque and was a component of the major restoration works on the cathedral commissioned by Archbishop Bernard and completed on the Feast of St. George in 1214 when the wooden portal was made by the master craftsman Andrija Buvina.<sup>32</sup> Precisely the opposite in fact, as the stepped termination belongs to the foot of the mausoleum's dome on which the extrados was visible, as Andrić had suggested, and in Antiquity it was likely covered with a metal dome.

The structure of the dome on Diocletian's mausoleum was an exceptionally significant accomplishment of Roman architecture, both due to the degree of its preservation and the considerable expertise of Roman builders who had mastered the techniques of constructing complex architectural structures. Already at the end of the 19<sup>th</sup> century, Émile Bertaux speculated that the dome of Diocletian's mausoleum had been constructed without the use of support scaffolds.<sup>33</sup>

Domes were a common motif in Roman architecture. The Temple of Vesta in Rome was built at the turn of the 2<sup>nd</sup> into the 3<sup>rd</sup> century as a tholos which had an 8.6 m dome over its cella. The cella of the 3<sup>rd</sup> century Temple of Venus in Baalbek was covered with dome that had an 8 m span, while the Roman decagonal nymphaeum, better known as the Temple of Minerva Medica, had a polygonal umbrella dome with ribs and a span of 24 m. The largest and most important among similar structures is the dome of the Roman Pantheon, built be-

31 Research under the leadership of conservator Radoslav Bužančić was conducted on 20 March 2023 by Ana Doljanin and the staff of the company Art Core d.o.o. from Split. For the earlier restoration works on the dome's intrados, cf. Doljanin, Ajduković, Gjerga Bratić 2013, pp. 71-92.

32 At the time, probably in the spirit of Cistercian simplicity, a wooden structure was made for which slots were carved into the blocks of the outer wall's stone, which was not a typical Roman technique, in order to cover the temple's peripteros with roof tiles. The slanted roof of the peripteros is particularly problematic on the frontispiece that Niemann conceived on a Syrian arch, such as that on a prothyrum. It is possible that arch above the mausoleum's door is a load-bearing arch, as Hébrard wrote, but then why does it not also function as a window? Thus, if there had been a pediment with Syrian arch on the frontispiece of the prothesis, lighting from this side would have been impossible. Cf. Hébrard 1912, p. 83. Hébrard and Niemann drew a slanted roof with tile covering above the peripteros of the tetrarchic mausoleum, but there is nothing to confirm this. It is nonetheless likely that the peripteros roofing was also metal, like the roofing on the dome's extrados.

33 Bertaux 1899, p. 3.

34 Mark, Hutchinson 1986, str. 29. Autori smatraju da prstenovi nisu bili namijenjeni statičkoj sanaciji, već da konstrukcijsku prednost imaju samo kao okomita oplata za vanjsku konturu koja bi olakšala postavljanje betona u područjima gdje su prirodni dodatci kupole bili pod velikim nagibom.



Slika 5.  
Sonda na sjevernoj strani krova splitske katedrale (Dioklecijanov mauzolej) s pogledom na ekstrados (snimio R. Bužančić)

Figure 5.  
Probe on the northern side of the roof of the Split cathedral (Diocletian's mausoleum) with view of the extrados (photograph by R. Bužančić)

skog Carstva, koji je po prvi put u neki gradski kulturni krajo-lik unio spoj funerarne građevine i poligonalnog monoptera piramidalnog krova, okružena stupovima korinskog reda.<sup>35</sup> Arhitektura Dioklecijanove palače pod snažnim je utjecajem Hadrijanove; njegovi arhitekti koriste bogato graditeljsko iskustvo nastavljača Apolodorova djela. Kupole, svodovi, skladne kompozicije trjemova i kriptoportici vile u Tivoliju predložak su racionalnog i istodobno raskošnog rječnika splitske Jovijeve vile. Utjecaj splitskog oktogona na graditeljstvo kasne anti-ke bio je isto tako iznimno velik. U Milanu, Solunu, Antiohiji i Konstantinopolu taj će predložak donijeti brojna rješenja koja, nažalost, za razliku od Dioklecijanova mauzoleja, nisu u dovoljno sačuvanom stanju, pa ih je teško komparirati. Oktogon Galerijeve palače u Solunu pripada arhitektonskom sklopu koji se sastojao od triju zgrada, svaka s različitom namjenom, koje su, zajedno s bazilikom i hipodromom, izgrađene na ostatcima ranije arhitekture helenističkog doba.

Oktogon je u unutrašnjosti imao sedam polukružnih niša, a bio je pokriven, kako se pretpostavlja, kupolom unutarnjeg promjera 23 m.<sup>36</sup> Ako je kalota kupole bila oslonjena na oktogonalni tlocrt, prijelaz na krug trebao je omogućiti niz trompa u uglovima oktogona, iako je kupola mogla biti i segmentna, oktogonalna (sl. 6). Njegova izvorna namjena nije poznata, a po analogiji sa splitskim primjerom moglo bi se pretpostaviti da je zajedno s trijemom pripadao sklopu carskog triklinija Galerijeve palače do njegove smrti 311. godine. Naime, Galerijevom smrću rad na Oktogonu je zaustavljen, a nastavljen je tek nakon Milanskog edikta 313. godine, vjerojatno za vrijeme vladavine Konstantina Velikog. Tijekom razdoblja careva boravka u gradu zgrada je morala biti dovršena, a onda je preuređena u kršćanski hram.

Slijedeći tradiciju tetrahijske arhitekture, Konstantin Veliki podigao je nekoliko hramova koji nastavljaju i imitiraju djela Dioklecijanovih arhitekata. Najznačajniji takav primjer je Velika crkva ili Zlatni oktogon u Antiohiji na Orontu, poznata još kao Concordia (327. – 341.).

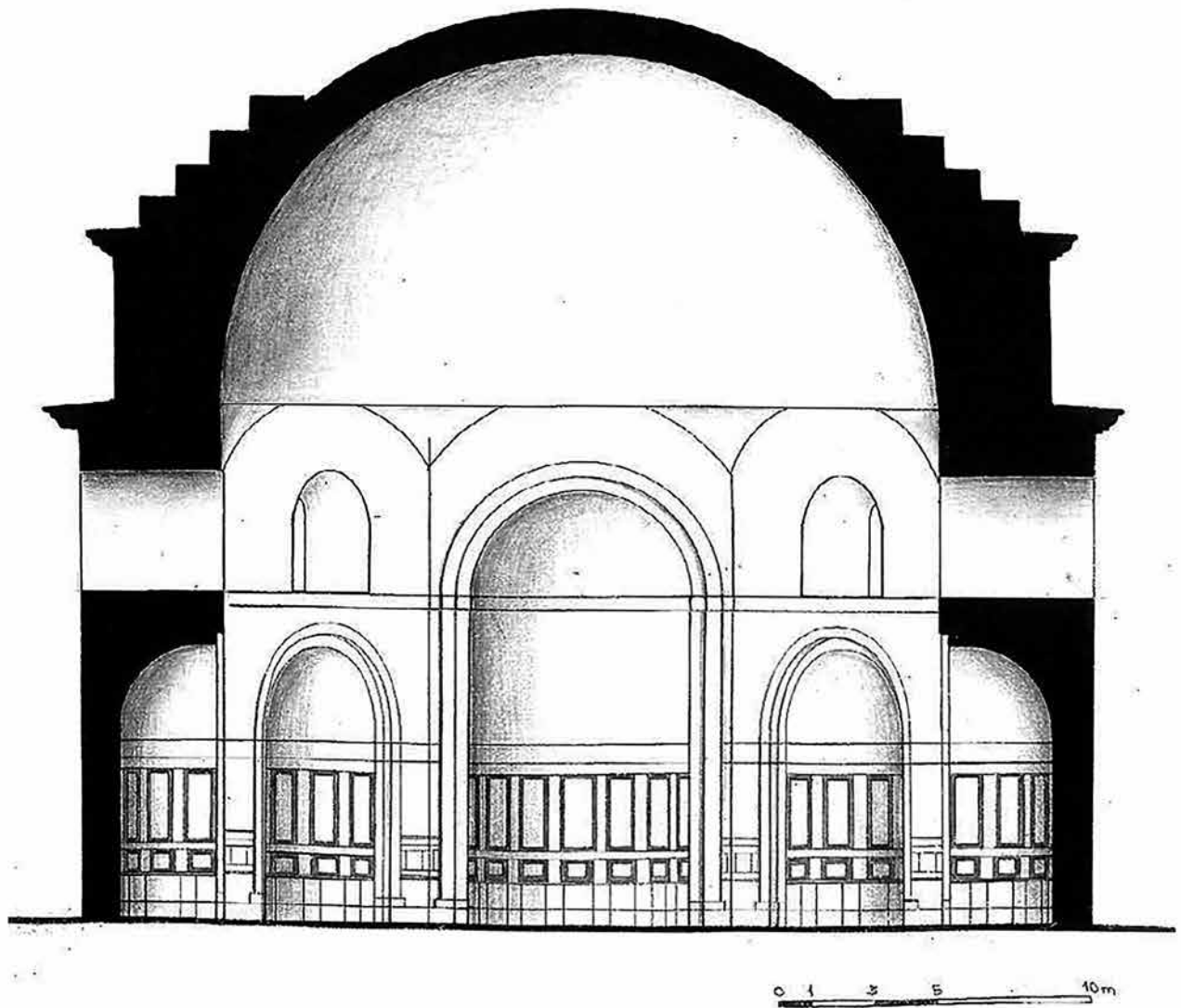
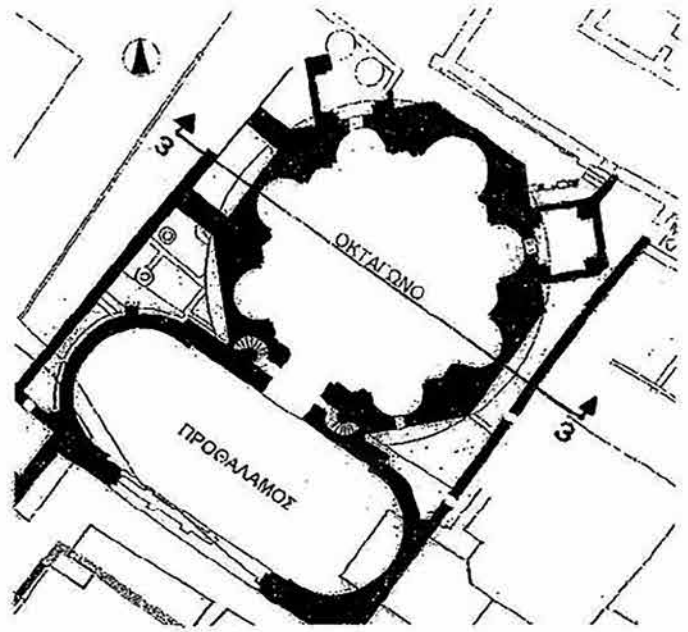
Palaču u Antiohiji Dioklecijan je dovršavao malo prije početka gradnje splitske te je potpuno jasno da su te građevine poslužile kao neposredni uzor jedna drugoj. Libanije navodi da je palača u Antiohiji zauzimala četvrtinu otoka. Usporedimo li to s Dioklecijanovom gradnjom u Splitu, možemo zaključiti da se u oba primjera termin palača odnosi na *palatium sacrum* jer su u oba slučaja one zauzimala četvrtinu utvrđenog prostora unutar zidova carskog dvorca. Sudeći po analogiji, i u antiohijsku se palaču ulazilo kroz prostor hramova na kraju ulice koju, kako je prije spomenuto, Malalas naziva Regia. Gotovo je sigurno da se na tom prostoru nalazila osmerokutna građevina koju kasniji izvori spominju kao glavni Konstantinov spome-

tween 118 and 128 AD. The use of domes as architectural structures in the Roman era was not unusual, but at the Pantheon its dimensions, with a span of 43.4 m, are greater than all other known examples (Fig. 4). Among the earlier domes, the so-called ‘Temple of Mercury’, a part of the thermal complex of Baiae near Naples, had the largest, but its span of 21.5 is nowhere near the span of the Pantheon’s dome. The typical structure of the Pantheon’s dome consists of a concrete cellular vault on the intrados, stepped rings at the foot of the extrados and an opening at the dome’s zenith.

When examining the Split palace’s mausoleum, Andrić opened a part of the roof structure, measured the thickness of the dome and drew the conclusion that it, although having more modest dimensions, had been built in the same manner as the Roman Pantheon, with a zenithal opening and stepped rings at the base of the extrados. The probe that he opened was on the western side, opposite the campanile. The cleaned segment of the roof, from the dome’s foot to its zenith, exhibited the most interesting constructive elements that are the key to the vault’s load-bearing structure. The dome is a double shell made of two layers of square bricks with dimensions of 30 cm. The dome’s zenith was assembled with a bonding material that differed from that used at its foot, the bricks were set in concentric rings, as opposed to the lower section where up to two thirds of the height the bricks were laid like scales or spherical triangles. Based on analogies to Roman examples, Andrić presumed that there was an enormous oculus at the dome’s zenith. He was probably further led to this conclusion by the ruin of the Vestibule’s dome, on which the zenith was open. It assumed that he had found traces of stepped rings at the foot of the extrados that were later damaged and removed, while the various researchers who re-examined the probe on several occasions did not mention them. Their discovery in the northern probe in 2023 confirmed Andrić’s hypothesis (Fig. 5). The dome’s extrados was visible and covered with metal roofing. The existence of an oculus at its zenith still cannot be proven with certainty, but precision measurements of the meridian of the intrados may point to this. What was the purpose of the stepped rings? That the construction of the Pantheon’s dome did not proceed without problems is well known. Meridional cracks already appeared at its foot during construction due to the exceptionally heavy load, so the construction of stepped rings is associated with the repair of the structure already during the initial works. Based on past experience, the builders resorted to the rendering of rings around the dome in order to tighten it at the point of tensile stress. Their masonry work probably had to be reinforced by large metal brace rings so that it would not slide down the dome’s extrados. Contemporary IT simulations of the forces at work on the foot of the Pantheon’s dome showed that the Roman builder did not possess any analytical tools for this type of assessment and that the configuration without the rings was structurally more reliable than this addition, although other studies on the pre-sci-

35 Yoncaci 2007, str. 94.

36 Αθανασίου *et al.* 2015, str. 287.



Slika 6.  
Rekonstrukcija presjeka kroz oktagon Galerijeve palače u Solunu  
(prema Athanasiou *et. al.* 2015.)

Figure 6.  
Reconstruction of the cross-section through the Octagon of the  
Galerius Palace in Thessaloniki (after Athanasiou *et. al.* 2015)

nik u Antiohiji.<sup>37</sup> Osmerokutna Velika crkva, *Domus Aurea*, koju je prema predaji započeo Konstantin, a dovršio njegov sin Konstancije, mogla je biti zamišljena ili započeta još u Dioklecijanovo vrijeme iako za to nema nikakvih potvrda osim iznimne sličnosti s mauzolejom splitske palače. Opisuje se kao građevina neobične veličine i ljepote, u tlocrtu je oktogonalna, okružena „ἐξέδραξ τε ἐν κύκλῳ“, bila je zatvorena unutar zidova poput svetišta antičkih hramova ograđenih temenosom. Eksekre koje spominje Euzebije mogle bi biti niše u kružnoj unutrašnjosti poput onih u splitskom mauzoleju.<sup>38</sup> Posebno je impresivna bila kalota kupole koja je bila visoko podignuta i, čini se, drvene konstrukcije. Njezin ekstrados bio je pokriven pozlaćenim ornamentiranim pokrovom, vjerojatno brončanim. Unutrašnjost hrama bila je ukrašena kipovima, ulaštenim mramorima i stupovima te mjedenim i zlatnim ukrasima, a pod je bio popločan kamenim pločama.

Konstantinovu crkvu u Antiohiji prikazuje Yakto mozaik (sl. 7). Premda položaj crkve nije izričito naveden ni u jednom literarnom izvoru, i premda joj iskapanjima još nije pronađen nikakav trag, izvjesno je da je stajala na otoku u Orontu, u „Novom gradu“ i da je postavljena u blizini carske palače. To se dijelom može zaključiti iz rasporeda zgrada na Yakto mozaiku, a dijelom iz analogije povezanosti crkava s carskim palačama u Konstantinopolu, Salonu i Solunu. Margina Yakto mozaika, koja ilustrira topografiju Antiohije i Dafne, prikazuje, na otoku, poligonalnu građevinu s kupolom koja je očito Konstantinova crkva. Ova je crkva bila najpoznatija poligonalna građevina s kupolom u gradu te je za očekivati da će ona biti prikazana u mozaičkom obrubu ovakva sadržaja bez obzira na to je li on trebao prikazati sve glavne građevine grada ili samo izbor njegovih karakterističnih spomenika. Ispred zgrade je arkada koja bi mogla odgovarati peribolu, temenosu, crkve spomenute u Euzebijevom opisu, ili bi mogla prikazivati kolonadu oko trga na kojem je bila smještena crkva. Euzebije donosi opis antiohijskog oktogona zadivljen njegovom ljepotom i raskošnim detaljima. Prema njemu je bio iznimne visine, sagrađen kao oktoedar, okružen prstenom u prizemlju i na prvom katu te okrunjen obiljem zlata, bronce i svim vrstama dragocjenosti.<sup>39</sup> Taj opis, iako panegiričan, sumaran i bez detalja, ipak spominje krune kojima su vijenci obje razine vanjštine oktogona bili ukrašeni. Vijenac splitskog oktogona također je, prema Andri-

tific structural development indicate that the Pantheon's designer perhaps had sound technical reasons for adopting the stepped rings.<sup>34</sup> In this Split example, they were the result of tradition and application of a model that had emerged several centuries earlier.

The architecture of the Split mausoleum is rooted in the experiences of the earlier major achievements of Antiquity. One of these is the Ephesian octagon, possibly the mausoleum of Arsinoë IV, the sister of Cleopatra VII, who died in 41 BC. This is an octagon from the time of the early Roman Empire, which was the first time that a combination of a funerary structure and polygonal monopteros with a pyramidal roof and encircled by Corinthian columns was introduced into an urban cultural landscape.<sup>35</sup> The architecture of Diocletian's Palace was strongly influenced by Hadrian's; its architects made use of the rich architectural experience of those who continued the work of Apollodorus. The domes, vaults and harmonious composition of the porticos and cryptoporticos of the villa in Tivoli serve as the model for the rational yet simultaneously luxurious vocabulary of the villa of Jovius in Split. The influence of the Split octagon on the architecture of Late Antiquity was exceptionally great to the same degree. This model would bring numerous solutions in Milan, Thessaloniki, Antioch and Constantinople which in contrast to Diocletian's mausoleum, were not, unfortunately, sufficiently preserved, so it is difficult to compare them. The Octagon of the Galerius Palace in Thessaloniki belongs to an architectural complex that consisted of three buildings, each with a different purpose, which together with a basilica and hippodrome, had been built on the remains of earlier Hellenistic architecture.

The Octagon's interior had seven semicircular niches and was covered, it is assumed, with a dome that had an interior span of 23 m.<sup>36</sup> If the dome's cupola rested on an octagonal ground-plan, then the transition to a circle had to be facilitated by a series of squinches, even though the dome may have also been segmented and octagonal (Fig. 6). Its original purpose is not known, but by analogy to the example in Split one may presume that together with the portico it belonged to the imperial triclinium complex in the palace of Galerius until his death in 311 AD. Namely, after the latter's death, work on the Octagon ceased, and continued only after the Edict of Milan in 313, probably during the reign of Constantine the Great. During the period of the emperor's residence in the city the building had to be completed, and it was then converted into a Christian temple.

37 Eusebius, *Vita III*. 50; *Laudes IX*. 15. Euzebije dvaput spominje i sažeto opisuje veliku i veličanstvenu osmerokutnu crkvu u Antiohiji, koju ubraja među Konstantinove gradnje, ali ni Euzebije ni bilo koji drugi autor ne ukazuju na mjesto ovog svetišta i ne objašnjavaju njegovo podrijetlo.

38 *Eusebii Pamphili de vita Constantini, libri IV. et panegyricus atque Constantini ad sanctorum coetum oratio, ex nova recognitione cum integro Henrici Valesii commentario selectis readingi strothii aliorumque observationibus*, Leipsig 1830, 207. <https://archive.org/details/eusebiipamphiliotheingoog/page/206/mode/2up>.

39 *Ibidem*.

34 Mark, Hutchinson 1986, p. 29. The authors believed that the rings were not intended to be structural, but rather that they only had a constructional advantage as vertical formwork for their outer contour which facilitated the placing of concrete in regions where the natural extrados of the dome was highly sloped.

35 Yoncaci 2007, p. 94.

36 Αθανασίου *et al.* 2015, p. 287.



Slika 7.  
Prikaz Konstantinovog oktogona u Antiohiji na Yakto mozaiku, konac 5. – poč. 6. st., Arheološki muzej u Antaliji ([https://upload.wikimedia.org/wikipedia/commons/c/cd/Megalopsychia\\_mosaic\\_border\\_Great\\_Church](https://upload.wikimedia.org/wikipedia/commons/c/cd/Megalopsychia_mosaic_border_Great_Church))

Figure 7.  
Depiction of Constantine's octagon in Antioch on the Yakto mosaic, end of 5<sup>th</sup> – beginning of 6<sup>th</sup> c., Archaeological Museum in Antalya ([https://upload.wikimedia.org/wikipedia/commons/c/cd/Megalopsychia\\_mosaic\\_border\\_Great\\_Church](https://upload.wikimedia.org/wikipedia/commons/c/cd/Megalopsychia_mosaic_border_Great_Church))

ću, bio okrunjen dodatnim ukrasima. Potaknut pronalaskom rupa na gornjoj površini, zamislio je vrh mauzoleja ukrašen samostojećim palmetama i kipovima koje crta gusto raspoređene iznad kamenog vijenca. Na vijencu su i kod novog sondiranja 2023. godine pronađene iste rupe u razmaku od cca 0,30 do 0,40 m, a jedna od njih zalivena je olovom iz vremena gradnje (sl. 8). Karakteristično je da prema rupama uklesanim u kameanu ne vode žljebovi za lijevanje rastopljenog metala, što znači da nisu služile za trnove kojima bi se učvrstili kameni dekorativni elementi. Prema Hébrardu su služile za fiksiranje antičkih crjepova, što pouzdano nije slučaj jer novo otkriće stepenastih prstenova pri dnu ekstradosa nedvosmisleno odbacuje crijep kao mogući izvorni pokrov kupole. Rupe su služile da se učvrste metalni dijelovi pokrova, pozlaćena bronca koja je na rubu vijenca mogla imati pozlaćenu brončanu krunu poput one iz Euzebijeva opisa antiohijskog oktogona. Na završnom vijencu trebalo je učvrstiti pokrov i riješiti odljev kišnice zbog čega je ukras bio ažuriran brojnim rigalicama. Okrunjen obiljem zlata i bronce, vrh oktogona bio je vidljiv iz raznih kutova unutar i izvan palače te se vidio i iz perspektive promatrača kojem je građevina uglavnom bila skrivena trjemovima i zidovima peribola svetišta.

Grabar skromno dokumentirani antiohijski oktogon uspoređuje sa splitskim, smještajući ga u središte antiohijske palače na otoku rijeke Oront. On piše da bi se Konstantinov oktogon ubrojio među ona arhitektonska djela koja su bila u više ili manje bliskim vezama s carskim rezidencijama. U nastavku navodi kako je poput oktogona u Splitu gdje se nalazi Dioklecijanov mauzolej-heroum, kulturna građevina osmerokutnog tlocrta, izvedena u ograđenom dijelu u samom središtu palače.<sup>40</sup>

Navedeni primjeri jedinstvenog su obrasca gradnje tetra-

Following the tradition of tetrarchic architecture, Constantine the Great erected several temples that continued to imitate the work of Diocletian's architects. The most notable such example is the Great Church in Antioch on the Orontes River, also known as the Concordia (327-341).

Diocletian had completed the palace in Antioch slightly prior to the beginning of the Split palace's construction, and it is entirely clear that these buildings served as direct models for each other. Libanius stated that the palace in Antioch covered a fourth of the island. If this is compared to Diocletian's building in Split, we may conclude that in both cases the term palace pertains to *palatium sacrum*, because in both cases they covered a fourth of the confirmed space inside the walls of the imperial palace. Judging by the analogy, the Antioch palace was also entered through the temple area at the end of a street that, as noted above, Malalas referred to as the *Regia*. It is virtually certain that an octagonal building existed in this space, one mentioned in later sources as Constantine's primary monument in Antioch.<sup>37</sup> The octagonal Great Church, the *Domus Aurea*, whose construction, according to lore, had been initiated by Constantine and completed by his son Constantius, may have been conceived or even begun already during Diocletian's era, although there are no confirmations for this besides its exceptional similarity to the mausoleum in the Split palace. It has been described as a building of unusual size and beauty, with an octagonal ground plan, surrounded by "ἐξέδρας τε ἐν κύκλῳ," and enclosed inside walls like the sanctuaries of Classical temples bordered by a temenos. The exedras mentioned

37 Eusebius, *Vita* III. 50; *Laudes* IX. 15. Eusebius twice mentioned and concisely described the large and magnificent octagonal church in Antioch, which he counted among Constantine's architectural feats, but neither Eusebius nor any other writer specified the site of this sanctuary and explained its origin.

40 Grabar 1946, str. 219.



Slika 8.  
Gornja strana vijenca Dioklecijanova mauzoleja s uklesanim rupama za brončanu krunu s dekorativnim frizom (snimio R. Bužančić)

Figure 8.  
Upper side of the cornice in Diocletian's mausoleum with carved holes on the bronze crown with decorative frieze (photograph by R. Bužančić)

hijskog hrama monoptera s kupolom kojoj je ekstrados, poput Panteona, bio pokriven pozlaćenim metalnim pokrovom. Nastali su u tradiciji antičkih mauzoleja-heroa, grobova ili hramova heroja, obično kružnog tlocrta, koji su često podizani utemeljiteljima gradova, poput najpoznatijeg helenističkog heroöna Aleksandra Velikog nazvanog Sema (Soma), sagrađenog u središtu Aleksandrije na raskrižju dviju glavnih ulica (Strabo, 17, 794; Zenob, III. 94).

Taj vrlo stari grčki običaj, čast počivanja u srcu grada, davao se heroju koji je posebno zadužio grad, a prije svega njegovu utemeljitelju. Pauzanija spominje heroön Haradre u Fokidi podignut na agori, Batusov Heroon podignut je u Cireni, dok je prisutnost diviniziranog Aleksandra u gradu čuvala Aleksandriju. Običaj je preuzeo Rim, na čijem je forumu grobnica utemeljitelja Romula.

Temeljem istog načela Filip Arapin je u Shahbi/Philippopolisu, koji je osnovao, dao podići heroön u središtu grada između ulaza u svoju palaču i središnjeg tetrastila, to jest otprilike na istom mjestu gdje je Dioklecijanov mauzolej-heroön

by Eusebius may be the niches in the circular interior such as those in the Split mausoleum.<sup>38</sup> The dome's cupola was particularly impressive, as it was raised high and, it would appear, constructed with wood. Its extrados was covered with gilded ornamented roofing, probably bronze. The temple's interior was adorned with statues, polished marble and columns as well as brass and gold ornaments, while the floor was covered with stone tiles.

Constantine's church in Antioch is depicted in the Yakto mosaic (Fig. 7). Although the church's position is never specified in any literary source and no traces of it have been found in any excavations, it is certain that it stood on an island on

<sup>38</sup> *Eusebii Pamphili de vita Constantini, libri IV. et panegyricus atque Constantini ad sanctorum coetum oratio, ex nova recognitione cum integro Henrici Valesii commentario selectis readingi strothii aliorumque observationibus*, Leipsig 1830, 207. <https://archive.org/details/eusebiipamphiliotheingoo/page/206/mode/2up>.



Slika 9.  
Arhitektonska snimka segmenta ekstradosa kupole Dioklecijanova mauzoleja (Geographica d.o.o. Split, 2023.)

Figure 9.  
Architectural schematic of a segment of the dome's extrados on Diocletian's mausoleum (Geographica d.o.o. Split, 2023)

smješten u Splitu, između predvorja kojim se ulazi u *palatium sacrum* i tetrastila (sl. 9). Moguće je stoga, smatra Grabar, da je Dioklecijan mogao imati pravo, protivno rimskim običajima, svoj mauzolej-heroum sagraditi u srcu grada koji je osnovao.<sup>41</sup> Dioklecijana su arhitekturom imitirali Konstantin Veliki i njegovi nasljednici, ali više od nasljedovanja Jovijevih reformi, mogući model koji su obojica slijedila bio je primjer Aleksandrije u čijem je centru počivalo tijelo osnivača grada. Aleksandru Velikom je hram-mauzolej podignuo Ptolomej I. Soter učinivši ga jednim od najznačajnijih i najglasovitijih heroon Starog vijeka.

the Orontes River, in the "New City," and that it was situated near the imperial palace. This may be partially concluded from the layout of the buildings on the Yakto mosaic, and partially based on analogies drawn from the links between the churches with imperial palaces in Constantinople, Salona and Thessaloniki. The margin of the Yakto mosaic, which illustrates the topography of Antioch and Daphne, shows a polygonal structure with a dome on the island that is obviously Constantine's church. This church was the best-known polygonal building with a dome in the city and it is to be expected that it would be depicted in a mosaic bordure with such content regardless of whether it was supposed to show all of the city's main buildings or just a selection of its typical monuments. An arcade in front of the building may correspond to the peribolos, temenos, of the church mentioned in the description by Eusebius, or it may show the colonnade around the square on which the church was situated. Eusebius provided a description of the Antioch octagon, impressed by its beauty and luxuriant details. According to him it was exceptionally high, constructed like an octahedron, surrounded by a ring at the ground level and first floor and crowned with an abundance of gold, bronze and all manner of valuables.<sup>39</sup> This description, although panegyric, concise and lacking detail, nonetheless mentions the crowns with which the cornices at both levels of the octagon's exterior were adorned. The cornice of the Split octagon was

41 *Ibidem*, str. 232.

39 *Ibid.*

also, according to Andrić, crowned with additional ornaments. Prompted by the discovery of holes on the upper surface, he speculated that the top of the mausoleum was adorned with detached palmettes and statues which he sketched as densely arranged above the stone cornice. During the new probing in 2023, the same holes were found at intervals of approximately 0.3 to 0.4 m, and one of them was cast with lead at the time of construction (Fig. 8). It is typical that grooves to pour the molten metal do not lead to the holes carved into stone, which means that they were not used for pegs that would have fastened stone decorative elements. According to Hébrard, they were used to hold the Roman roof tiles in place, which certainly was not the case as the new discovery of the stepped rings at the base of the extrados unambiguously eliminates roof tiles as the dome's possible original roofing. The holes were used to reinforce the metal components of the roofing, the gilded bronze which may have had a gilded bronze crown at the edge like those in the description of the Antioch octagon by Eusebius. The roofing had to be reinforced on the final cornice and resolve the drainage of precipitation, which is why the ornamentation was updated with numerous drain outlets. Crowned by an abundance of gold and bronze, the top of the octagon was visible at various angles inside and outside the palace and it was seen from the point of view of the observer for whom the structure was generally concealed by porticos and the walls of the sanctuary's peribolos.

Grabar compared the modestly documented Antioch octagon to the one in Split, placing it in the middle of the Antioch palace on the island on the Orontes River. He wrote that Constantine's octagon could be counted among those architectural works that were more or less closely tied to the imperial residences. He went on to state that like the octagon in Split, which housed Diocletian's mausoleum/heroön, a cult structure with an octagonal ground-plan, it was done in a walled-off section in the very heart of the palace.<sup>40</sup>

The aforementioned examples follow the simple construction formula for a tetrarchic monopteros temple with domes on which the extrados, like the Pantheon, was covered with gilded metal roofing. They emerged on the basis of the Roman mausoleum/heroön, tombs or temples to heroes, ordinarily with a circular layout, which were often built to the founders of cities, such as the best known Hellenistic heroön to Alexander the Great called the Sema (Soma), built in the centre of Alexandria at the intersection of the two main streets (Strabo, 17, 794; Zenob, III, 94).

This very old Greek custom, honouring eternal rest in the heart of a city, was done for a hero who did something notable for the city and above all for its founder. Pausanias mentioned the heroön of Charadra in Phocis raised in the agora and the

---

<sup>40</sup> Grabar 1946, p. 219.

heroön to Battus raised in Cyrene, while the presence of the deified Alexander was fostered in Alexandria. The custom was assumed by Rome, where the tomb to its found Romulus is in the forum.

Based on that same principle, Philip the Arab raised a heroum in the centre of Shahba/Philippopolis, which he had founded, between the entrance to his palace and the central tetrastyle, at roughly the same place where Diocletian's mausoleum/heroum is situated in Split, between the vestibule used to enter the *palatium sacrum* and the tetrastyle (Fig. 9). It is therefore possible, Grabar believed, that Diocletian, contrary to Roman custom, may have been correct to have his mausoleum/heroum built in the heart of the city which he had founded.<sup>41</sup> Diocletian was imitated in terms of architecture by Constantine the Great and his successors, but even more than inheriting his reforms, the possible model that both followed was the example of Alexandria, in whose centre the body of the city's founder rested. The temple/mausoleum to Alexander the Great was raised by Ptolemy I Soter, making it one of the most important and renowned heroon of the Ancient World.

---

41 *Ibid.*, p. 232.

**Izvori / Sources**

Ammianus Marcellinus, s engleskim prijevodom Johna C. Rolfea, London 1935. [https://archive.org/stream/ammianusmarcellio1ammiiuoft/ammianusmarcellio1ammiiuoft\\_djvu.txt](https://archive.org/stream/ammianusmarcellio1ammiiuoft/ammianusmarcellio1ammiiuoft_djvu.txt).

Eusebius Caesariensis, De laudibus Constantini [https://www.documentacatholicaomnia.eu/03d/0265-0339,\\_Eusebius\\_Caesariensis,\\_De\\_lauidibus\\_Constantini\\_\[Schaff\],\\_EN.pdf](https://www.documentacatholicaomnia.eu/03d/0265-0339,_Eusebius_Caesariensis,_De_lauidibus_Constantini_[Schaff],_EN.pdf).

Eusebius Caesariensis, Vita Constantini <https://archive.org/details/eusebiipamphilio1heingoo/page/206/mode/zup>.

*Ioannis Malalae Chronographia*, Corpus Fontium Historiae Byzantinae (CFHB) 35, Berlin – New York 2000.

Libanius, Oration XI, G. Downey, *Libanius' Oration in Praise of Antioch (Oration XI)*, Proceedings of the American Philosophical Society 103 (5), New Jersey 1959, 652-686.

Sidonius Apollinaris, Carmina <http://data.perseus.org/citations/urn:cts:latinLit:stoa0261.stoa0001.perseus-lat1:1>.

Strabo, *Geography*, 17 [https://penelope.uchicago.edu/Thayer/E/Roman/Texts/Strabo/17A1\\*.html](https://penelope.uchicago.edu/Thayer/E/Roman/Texts/Strabo/17A1*.html).

Zenobiou Epitome, *Corpus paroemiographorum graecorum*, Gottingae 1839, 1-175. <https://archive.org/details/corpusparoemiogo2schngoog/page/81/mode/zup>.

**Literatura / Bibliography**

**Aθανασίου et al. 2015**  
Φ. Αθανασίου et al., *Η αποκατάσταση των ερειπίων του Γαλεριανού συγκροτήματος στη Θεσσαλονίκη (1994 – 2014)*, Τεκμηρίωση και επεμβάσεις, Τόμος Α', Θεσσαλονίκη 2015.

**Belamarić 2019**  
J. Belamarić, *Profanacija Dioklecijanova groba po Amijanu Marcelinu (XVI, VIII, 3-7)*, Prilozi povijesti umjetnosti u Dalmaciji 44 (Cambijev zbornik I), Split 2019, 409-427.

**Bertaux 1899**  
É. Bertaux, *Un viaggio artistico sulle rive dell'Adriatico – Spalato, Venezia e Bizanzio*, Bullettino di archeologia e storia dalmata, Spalato 1899, prilog.

**Bulić 1923**  
F. Bulić, *Il sepolcro di Diocleziano a Split (Spalato)*, Vjesnik za arheologiju i historiju dalmatinsku 46, Split 1923, 3-9.

**Bulić, Karaman 1927**  
F. Bulić, Lj. Karaman, *Palača cara Dioklecijana u Splitu*, Zagreb 1927.

**Buljević 2019**  
Z. Buljević, *Dioklecijanov porfirni sarkofag (?)*, Prilozi povijesti umjetnosti u Dalmaciji 44 (Cambijev zbornik I), Split 2019, 429-441.

**Bužančić 2009**  
R. Bužančić, *Diocletian's Palace*, in: Buzov, M. et. al. (eds.), *Dioklecijan, tetrahija i Dioklecijanov*

*palača o 1700. obljetnici postojanja*, Zbornik radova s međunarodnog simpozija održanog od 18. do 22. rujna 2005. u Splitu, Split 2009, 235-278.

**Bužančić 2013**  
R. Bužančić, *Restoration of Diocletian's mausoleum in Split*, in: *Built Heritage 2013 – Monitoring Conservation Management*, International Conference, Milano 2013, 156-162.

**Bužančić 2014**  
R. Bužančić, *Svetište Dioklecijanove palače*, Istorijski zapisi 87 (1-2), Podgorica 2014, 107-124.

**Cambi 1995**  
N. Cambi, *On the Dedication of the Prostyle Temple of the Diocletian's Palace in Split*, in: *Orbis Romanus Christianusque ab Diocletiani aetate usque ad Heraclium: Travaux sur l'Antiquité Tardive rassemblés autour des recherches de Noël Duval*, Paris 1995, 253-264.

**Cambi 2021**  
N. Cambi, *Split u antici: Dioklecijanov palača – Dioklecijan nakon abdikacije – Bilješke uz neka otvorena pitanja*, Split 2021.

**Doljanin, Ajduković, Gjerga Bratić 2013**  
A. Doljanin, P. Ajduković, I. Gjerga Bratić, *The dome of the Diocletian's mausoleum. Conservation and restoration works*, in: *AIS3: Italian – Serbian Bilateral Workshop on "Science for Cultural Heritage"*, Belgrade 2013, 71-92.

**Downey 1953**

G. Downey, *Palace of Diocletian at Antioch*, Les Annales Archéologiques de Syrie 3 (1-2), Damascus 1953, 106-116.

**Duval 2002**

N. Duval, in: A. Jacques, S. Verger, C. Virlouvet (eds.), *Italia antiqua. Envois degli architetti francesi (1811-1950). Italia e area mediterranea*, Parigi – Rome 2002.

**Grabar 1946**

A. Grabar, *Martyrium: Architecture vol. 1*, Paris 1946.

**Hébrard, Zeiller 1912**

E. Hébrard, J. Zeiller, *Spalato, le Palais de Dioclétien*, Paris 1912.

**Jackson 1887**

T. G. Jackson, *Dalmatia, The Quarnero and Istria vol. 2*, Oxford 1887.

**Kähler 1965**

H. Kähler, *Split i Piazza Armerina: Rezidencije dvaju careva tetrarha*, Urbs 4 (1961/1962), Split 1965, 97-109.

**Kähler 1974**

H. Kähler, *Domkirche*, in: Mansel'e armağan. *Mélanges Mansel 2*, Ankara 1974, 809-820.

**Kečkemet 1993**

D. Kečkemet, *Vicko Andrić, arhitekt i konzervator 1793. – 1866.*, Split 1993.

**Marin 2006**

E. Marin, *Dioklecijanova grobnica*, Folia archaeologica Balcanica 1, Skopje 2006, 371-390.

**Mark, Hutchinson 1986**

R. Mark, P. Hutchinson, *On the Structure of the Roman Pantheon*, Art Bulletin 68 (1), 1986, 24-34.

**Niemann 1910**

G. Niemann, *Der Palast Diokletians in Spalato*, Wien 1910.

**Nikšić 1995**

G. Nikšić, *Prilog o arhitekturi Dioklecijanovog mauzoleja i rekonstrukciji splitske katedrale u 13. st.*, Prilozi povijesti umjetnosti u Dalmaciji 35 (Prijeteljev zbornik I), Split 1995, 105-121.

**Nikšić 2015**

G. Nikšić, *The use of brick in Diocletian's Palace at Split*, in: *Archeologia dell'Architettura XX, Il Laterizio nei cantieri imperiali. Roma e il Mediterraneo, atti del I workshop "Laterizio" (Roma, 27 – 28 novembre 2014)*, Roma 2015, 206-209.

**Rendić-Miočević 1992**

D. Rendić-Miočević, *O uništenom središnjem motivu friza Dioklecijanova mauzoleja u Splitu*, Prilozi povijesti umjetnosti u Dalmaciji 32 (Prijeteljev zbornik I), Split 1992, 99-115.

**Toma Arhidakon 2003**

Toma Arhidakon, *Historia Salonitana: Povijest salonitanskih i splitskih prvosvećenika*, prevela i priredila O. Perić, Split 2003.

**Yoncaci 2007**

P. Yoncaci, *Roman Urban Space Framed by Colonnades: Mediating Between Myth, Memory and History in Ephesus*, A Thesis submitted to the Graduate School of Social Sciences of Middle East Technical University, Ankara 2007.

*Mediating Between Myth, Memory and History in Ephesus*, A Thesis submitted to the Graduate School of Social Sciences of Middle East Technical University, Ankara 2007.

