In the decade of the 1310s a project to connect the recently completed west portal block and the chevet with a new, Gothic transept and nave was begun. A new perimeter was laid out around the Romanesque nave that included a transept, which the Romanesque structure lacked. Famine, plague, military strife and general economic stagnation disrupted the continuity of the new program. In 1359 English-sponsored forces seized and sacked Auxerre. Two sections of
the program were vaulted before that disruption, the high vault in the south arm of the transept, and the nave side aisles.

Dendrochronological analysis indicates that timbers in the roof of the south arm were felled in 1328-29.\(^1\) The earliest timbers remaining in the adjoining crossing area were felled in 1324-25.\(^2\) These dates furnish a *terminus post quem* for the south arm upper envelope and vaulting program. Although a crossing vault may have been projected at this time, the extant crossing vault was not constructed until the end of the 14\(^{th}\) century. Therefore the south arm vault was comparatively isolated in relation to the other high vaults at the cathedral.

The squarish area comprising the south arm is covered by a 6-part vault, the only example of this solution at the cathedral. It might seem odd to find this type of vault employed in the 14\(^{th}\) century, since it is mostly associated with Early Gothic practices. However, there are good reasons for its use in this location. Normal points of attachment and alignment for quadripartite vaulting solutions are lacking. The crossing arch summit is not aligned with the summit of the south exterior arch, and the new nave program is not strictly aligned with the earlier chevet elements. Two distinct programs, separated by nearly a century, face off across the south arm. Two quadripartite vaults would call attention to the problems of alignment, as they do in the later north arm vaults. The sexpartite schema emphasizes the center of the vaulting compartment, somewhat disguising the alignment difficulties. Perhaps even more importantly, Robert Mark has shown that one sexpartite vault weighs less than two quadripartite vaults and produces less lateral force on the intermediate section of the clerestory wall.\(^3\) By the time the perimeter walls of the south arm had been completed, it might have been clear to the builders that the upper walls would remain relatively isolated for some time. This, the innate stability of the sexpartite schema must have been a point in its favor.

The south arm vault measures 8.36 m in height. Its summit is 80 cm higher than the average summit in the chevet vaults. In the vault’s north-south sense, its crown is flat within a tolerance of 5 cm. The broad north and south voutains are among the most regularly developed at the cathedral. On the other hand, the four narrower east-west voutains are irregular in shape and development, since each one has a somewhat different task in connecting lateral elements in the vaulting zone. Web courses in the lateral voutains are laid up aligned with the voutain angle toward the keystone, thus they meet the outer walls at various angles, a non-normative, *ad hoc* solution. Even the false joint painting in these voutains mimics the underlying coursing pattern. The south arm vault seems to the eye to be slightly awkward; in fact it is a mixture of very regular voutains in the north-south sense, and purposefully *ad hoc* voutains in the east-west sense, which combine to resolve a particular problem.

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\(^1\) Christine Locatelli report, see phase 3, note 1.
\(^2\) Ibid.