

FROM OLD HISPANIC TO AQUITANIAN NOTATION:  
MUSIC WRITING IN MEDIEVAL IBERIA\*

*DE NOTACIÓN HISPÁNICA A NOTACIÓN AQUITANA:  
ESCRIBIR MÚSICA EN LA IBERIA MEDIEVAL*

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*Abstract:* This article focuses on the peculiarities of the Old Hispanic and Aquitanian musical notations, as found in Iberian liturgical manuscripts from the 10<sup>th</sup> to the mid-16<sup>th</sup> centuries, and it proposes some reconsiderations of previous scholarship on Iberian music palaeography. Specifically, this palaeographical survey engages with two changes that occurred in music writing in the Peninsula in the period under consideration. Firstly, the Old Hispanic notation was replaced by Aquitanian notation at the end of the 11<sup>th</sup> century. Subsequently, the graphical appearance of Aquitanian notation changed due to the influence of the Gothic script. These two changes developed in quite different ways: the first was swift and rapid whereas the second was slow and gradual. In this overview, I present some previously neglected sources as illustrative examples of Aquitanian notation. These sources have been studied for the first time recently and are now available for consultation in the “Portuguese Early Music Database”.

*Keywords:* Music Palaeography; Neumes; Old Hispanic Notation; Aquitanian Notation; Medieval Iberia.

*Resumen:* Este artículo se centra en las peculiaridades de las principales muestras de notación musical hispana y aquitana conservadas en los manuscritos litúrgicos peninsulares de los siglos X a mediados del XVI, proponiendo reconsiderar el estado de la cuestión desde el campo de la paleografía musical peninsular. Específicamente, esta aproximación paleográfica se orienta alrededor de los dos cambios principales que marcaron la escritura de música en la Península en el período bajo consideración: la sustitución de la notación hispánica tradicional por la notación aquitana a finales del siglo XI, y el cambio gráfico que muestra la notación aquitana por influencia de la escritura gótica. La forma en la que ambos cambios se desarrollaron fue considerablemente desigual; precipitada y rápida en el primer caso, lenta y gradual en el segundo. En esta visión de conjunto, se presentan como ejemplos ilustrativos de notación aquitana fuentes que habían pasado desapercibidas hasta hace poco y que están ahora disponibles para su consulta en la “Portuguese Early Music Database”.

*Palabras clave:* paleografía musical; neumas; notación hispánica; notación aquitana; Iberia en la Edad Media.

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## SUMMARY

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1. INTRODUCTION<sup>1</sup>

In early medieval Iberia, music was written in Old Hispanic and Catalanian notation, the latter being employed only in the area where the Frankish had political control and managed to impose the Franco-Roman liturgy in the early ninth century. The imposition of the Franco-Roman liturgy in the rest of the Peninsula at the end of the eleventh century caused the replacement of the Old Hispanic notation –and gradually also of the Catalanian notation– with Aquitanian notation, imported from Southern France. The replacement of Old Hispanic notation happened relatively swiftly and the whole process was quite distressing for local scribes, as demonstrated by the traces of their struggle in the surviving manuscripts.

As time passed, the graphical appearance of the imported Aquitanian notation changed due to the growing influence of Gothic text script. The modification of the graphical appearance of Aquitanian notation was a gradual process that slowly developed over time. It started in the thirteenth century and gently progressed toward a substantial modification of the original appearance of Aquitanian notation into larger and more standardized neume forms<sup>2</sup>. From the fourteenth century onward, Iberian music scribes also started to employ square notation, which coexisted with Aquitanian notation for a few centuries.

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<sup>1</sup> Abbreviation used: Música Hispánica = Spanish Early Music Manuscripts; PEM = Portuguese Early Music Database; RISM = Répertoire International des Sources Musicales. Archives and libraries (RISM sigla): CH-SGs = St. Gallen, Stiftsbibliothek; E-L = León, Archivo Capitular de la Catedral de León; E-Mh = Madrid, Biblioteca de la Real Academia de la Historia; E-Mn = Madrid, Biblioteca Nacional de España; E-Sau = Salamanca, Biblioteca General Histórica; E-SI = Silos, Biblioteca de la Abadía de Santo Domingo de Silos; E-SO = Soria, Biblioteca Pública; F-CHRM = Chartres, Bibliothèque municipale; F-LA = Laon, Bibliothèque municipale; F-Pn = Paris, Bibliothèque nationale de France; GB-Lbl = London, British Library; GB-WO = Worcester, Worcester Cathedral, Music Library; I-Lc = Lucca, Archivio storico diocesano; I-Ra = Roma, Biblioteca Angelica; I-VEcap = Verona, Biblioteca capitolare; P-BRad = Braga, Arquivo Distrital; P-BRam = Braga, Arquivo Municipal; P-BRs = Braga, Arquivo da Sé; P-Cua = Coimbra, Arquivo Distrital e da Universidade; P-G = Guimarães, Arquivo Municipal Alfredo Pimenta; P-Ln = Lisboa, Biblioteca Nacional de Portugal; P-Pm = Porto, Biblioteca Municipal.

<sup>2</sup> The term “neume” usually refers in chant scholarship to the written versions of sung gestures in early notated manuscripts.

It was only in the fifteenth century that square notation superseded Aquitanian notation, which was eventually abandoned in the sixteenth century<sup>3</sup>.

This article focuses on the main features of both Old Hispanic and Aquitanian notation, and it discusses the main changes that occurred to music script in Iberia between the tenth and the fifteenth centuries. In the final section, I outline some preliminary considerations of our modern understanding of the relationship between the changes that occurred in music palaeography and the text scripts in Iberian liturgical manuscripts in the period under consideration.

## 2. OLD HISPANIC NOTATION

The history of Old Hispanic notation is intrinsically related to the history of the Old Hispanic liturgy, which was the Catholic liturgy of the Iberian Peninsula in the early medieval era<sup>4</sup>. The beginning of Catholicism in the Iberian Peninsula is generally dated to the Council of Toledo of 589, when Arianism was rejected, but the earliest evidence of the Old Hispanic liturgy is found in the “Verona Orationale” (BCV LXXXIX), written in Tarragona before 732, although this manuscript does not contain musical notation. In the ninth century, the Frankish kings imposed the adoption of the Franco-Roman liturgy (and chant) in their kingdom, and the rite was progressively imposed in Western Europe, but not in Iberia. In the early ninth century, the Frankish were only able to impose the Franco-Roman chant in the strip of the country over which they had political control –this area later became the Spanish March<sup>5</sup>. Indeed, the expansion of the Church was strongly backed by the Carolingian monarchs who saw it as a bulwark and basis of their authority in this part

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<sup>3</sup> With “square notation” I refer here to “the standard forms of chant notation with very little or no influence from mensural notation”, see Nelson 1996, p. 96. Square notation in Iberia is briefly discussed in § 4. Aquitanian Notation in Iberia.

<sup>4</sup> In recent years there has been a revival of studies on Old Hispanic chant, see Hornby, Maloy 2013, 2016a, 2016b; Hornby 2016; Maloy 2014; Rojo Carrillo 2017; De Luca 2018. The “Old Hispanic” liturgy has been previously referred to as “Visigothic”, “Hispanic” and “Mozarabic”, generating some terminological confusion. Indeed, the term “Mozarabic” refers to the Christians living under Muslim occupation, and the others are also not inappropriate in some respects. On the topic, see the entry “Mozarabic chant” in *Grove Music Online* (<https://doi.org/10.1093/gmo/9781561592630.article.19269>). Similarly, “Gregorian” is often used interchangeably with “Franco-Roman” for the liturgy developed in eight-century Francia from Roman models, but the latter is preferred. On this point see Hornby, Maloy 2013, p. 245.

<sup>5</sup> On the adoption of Franco-Roman chant in this area and the role played by St Benedict of Aniane in founding monasteries in Septimania, see Lewis 2011, pp. 39-40, 47. On the liturgy in Catalunya, see Rodríguez Suso 2004, pp. 91-101; Mundó 1967, pp. 173-191. On the replacement of Visigothic script for Caroline minuscule in Catalonia in the ninth century, see Chandler 2019, pp. 204-209.

of Spain. The notation found in the Franco-Roman sources from this area is called “Catalonian” and it was employed until the early twelfth century<sup>6</sup>. Apparently, by the end of the twelfth century Catalonian notation had already been completely replaced by Aquitanian notation<sup>7</sup>.

The adoption of the Franco-Roman rite in the rest of the Iberian Peninsula was officially endorsed at San Juan de la Peña in 1071 and at the Council of Burgos in 1080, when the local Old Hispanic liturgy and chant were finally officially discarded. By the early twelfth century, only a few parishes in Toledo continued to follow the ancient Old Hispanic liturgy, while the Franco-Roman liturgy was being progressively imposed in the rest of the Peninsula<sup>8</sup>. The diffusion of the Franco-Roman rite caused not only the progressive abandonment of the ancient local liturgy and its chant, but also meant that its style of musical notation was discarded. Indeed, the new Franco-Roman liturgy (and music) arrived in the Iberian Peninsula from Southern France in manuscripts written in Aquitanian notation. Out of the pre-Franco-Roman liturgical repertory, the Old Hispanic chant held out the longest against the imposition of the Franco-Roman liturgy, and is preserved most completely with fewest Franco-Roman influences<sup>9</sup>. As such, Old Hispanic chant offers a unique window on pre-Franco-Roman mindsets and regional variation in early European music. Nowadays the major obstacle to fully understanding this musical repertory is its notation. Old Hispanic notation is non-pitch readable and it provides only general information on the number of notes and the melodic contour. Early notators were more concerned with providing the reader with information related to various aspects of musical performance –such as vocal articulation and aspects of melodic movement– rather than the exact pitch. Indeed, orality was the main means of musical transmission (learning, diffusion, and preservation) in Western Europe until the mid-eleventh century and it is only with the invention of staff lines that the system of musical transmission gradually changed, coming to rely more on the written record rather than on orality<sup>10</sup>. Before this change, the notated

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<sup>6</sup> An essential reference to the study of Catalonian notation is Garrigosa i Massana 2003. Samples of Catalonian notation can be seen in the e-book Colantuono 2016 and in the following manuscripts: F-Pn n.a.l 557, E-SO Ms. 6-H (final fragment). On the earliest musical notation found in Cataluña, see Alturo, Alaix, Baldovigi 2017. On Catalonian notation, see also Suñol 1935; Moll 1986; Mas 1988.

<sup>7</sup> On the coexistence of Aquitanian and Catalonian notation in Cataluña in the eleventh century and the disappearance of Catalonian notation at the end of the twelfth century due to the overwhelming diffusion of Aquitanian notation, see Garrigosa i Massana 2010, pp. 14-15.

<sup>8</sup> On the Old Hispanic manuscripts with music associated with these parishes, see below § 3.1. Later Old Hispanic notation.

<sup>9</sup> Randel 1985, p. 230.

<sup>10</sup> Asensio Palacios 2009, p. 21.

chant books were used only for mnemonic reference and, in order to read the music from the notation, cantors had to know the repertory by heart.

Like other Western European early music scripts, neumes in Old Hispanic notation were placed over the text and there were no dry-point guide lines. The inclination of the pen-stroke indicated whether the melody went up or down and the vertical distance between each neume on the page did not represent the melodic distance between two sounds. Thus, the first note of each neume is always identified as “neutral” while the notes after are identified either as lower, higher, the same, or the same/higher according to the direction of the pen-stroke that follows<sup>11</sup>. Modern palaeographers study non-pitch readable notations by comparing them with later versions, which were written using a more precise notational system. For the Old Hispanic repertory, however, before notation could develop into a more pitch-focused system, the Old Hispanic liturgy was discarded, and the copying of Old Hispanic manuscripts ceased almost completely, so, it is impossible to translate the Old Hispanic chant into a modern score where we can read pitches and intervals.

## 2.1. The graphical richness of Old Hispanic notation

From a palaeographic point of view, Old Hispanic notation falls within the family of “Frankish neumes” and it represents a regional variation of the script that was developed in the Iberian Peninsula<sup>12</sup>. This idiosyncratic Iberian version of the Frankish script represents one of the most sophisticated examples of graphical techniques employed by early medieval scribes to extend the range of meaning of a basic set of signs<sup>13</sup>. Indeed, Old Hispanic scribes exploited to a great degree the potential of the Frankish script, creating a complex system of signs that do not belong to the Frankish script foundational layers and which must have been designed after the initial dissemination of the script to the West<sup>14</sup>. As such, Old Hispanic notation features both signs shared with other early notations, and signs that appear nowhere else and whose

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<sup>11</sup> This system is described in the basic English introduction to Old Hispanic notation provided in Hornby, Maloy 2013, pp. 315-326, and it is also applied in the subsequent works by the same authors. More recently, De Luca et al 2019 provided a comprehensive discussion on the interpretation of Old Hispanic neumes and their codification according to the rules of the Neumes Module 4.0 of the *Music Encoding Initiative*.

<sup>12</sup> Rankin 2018, pp. 108-122, at p. 108. On Frankish scripts, see also Corbin 1957, 1977; Colette 2003; Cardine 1970; Stäblein 1975.

<sup>13</sup> Rankin 2018, p.118.

<sup>14</sup> The transformation of the Frankish script –from a way of writing sounds according to a number of basic principles to one in which the sign repertory was considerably elaborated both in graphic terms and to represent extended meanings– can also be observed in other areas, and

meaning is, in many cases, unrecoverable<sup>15</sup>. The earliest surviving manuscripts with Old Hispanic notation are a collection of *versus* made at Lyon and copied in Visigothic text script in the early ninth century (F-Pn lat. 8093, f. 18v); some fragments from an Antiphoner copied in the late ninth century (F-Pn n.a.l. 2199, ff. 14-16); and the early tenth-century “León Antiphoner” (E-L ms. 8), which is the most complete manuscript of Old Hispanic chant and contains several *unica*<sup>16</sup>. The notation of the León Antiphoner is very calligraphic, and it is the product of a team of scribes working in a first-class *scriptorium*<sup>17</sup>. The most astonishing feature of the notation of the León Antiphoner is its graphical richness (see fig. 1).

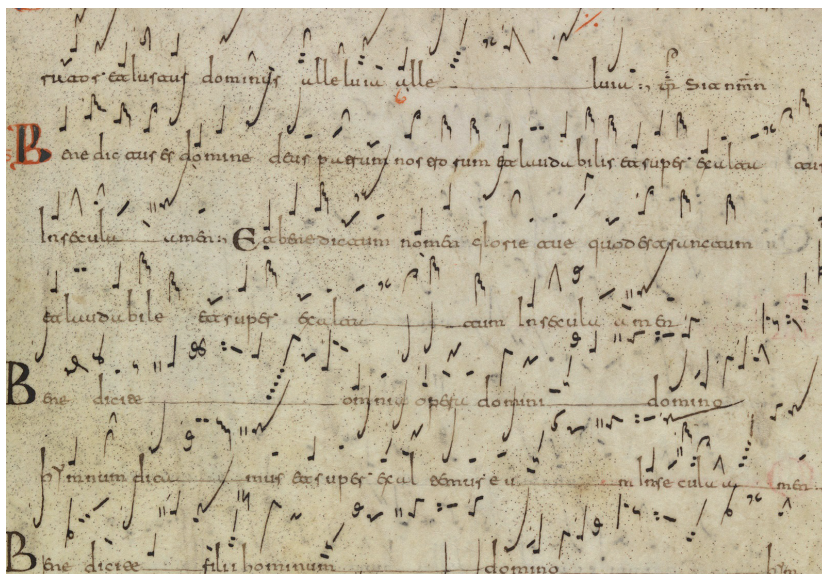


Fig. 1. The León Antiphoner E-L ms. 8, f. 88r, detail.

it demonstrates an active process of development and change of music writing before the end of the ninth century. Rankin 2018, pp. 225, 228.

<sup>15</sup> A thorough description of other Frankish notations can be found in Rankin 2018, pp. 108-122, 194-228, 317-327. Herminio González Barrionuevo is the scholar who had the closest look at some idiosyncratic features of the Old Hispanic notation and produced an extensive bibliography on it. See González Barrionuevo 1987a, 1987b, 1990, 1993, 1995, 1997, 2008.

<sup>16</sup> The notation of the earliest sources in vertical notation is briefly discussed in Rankin 2018, pp. 118-122, 228. The most recent contributions on the dating of the León Antiphoner are Gutiérrez 2019; De Luca 2017, 2018; Díaz y Díaz 2007.

<sup>17</sup> Elsa De Luca is the first scholar to identify the presence of several scribes who participated in copying the original layer of notation of the León Antiphoner, see De Luca 2018, p. 137; Boudeau, De Luca 2020a; De Luca 2020b, pp. 33-40. On the Antiphoner's notation see also González Barrionuevo 2013.

The León Antiphoner shows a great variation in the basic neume forms and has several additional signs placed near the text or the neumes to convey further musical information<sup>18</sup>. In palaeographical terms, the graphical richness of the León Antiphoner was due to the wide range of application of the parameters of the pen-stroke (length, inclination, and orientation); and to the different kinds of neumatic connections<sup>19</sup>. In Example 1 we can see some two-note descending neumes from the León Antiphoner that can help us identify the parameters of the pen-stroke. In these neumes the second pitch is represented by the section of the pen-stroke which follows the turn of the pen.



Example 1. Two-note descending neumes

The length parameter is given by the actual length of each section of the pen-stroke representing a pitch, e.g. neumes A-F (example 1) all have approximately the same turning angle but the two sections of the pen-stroke have different lengths –before and after the turn of the pen. The inclination parameter is always measured with respect to the previous or following section of the pen-stroke, for instance neume G in example 1 has a turning angle of approximately 90° and the second section of the pen-stroke has a flat inclination while neumes A-F have a narrower turning angle and the final pen-stroke has a downward inclination. The orientation parameter has to do with the movement of the pen on the page. Neumes H-I show how different kinds of orientation of the pen-stroke can change the final neume shape: in both neumes the scribe started writing a long, rising pen-stroke and then turned the pen in an anticlockwise direction (neume H) or in clockwise direction (neume I). The scribes of the León Antiphoner put great effort into differentiating the various neume shapes and this strongly suggests that they were trying to use graphical devices to capture as much musical information as possible to help the reader recall the melody to be sung.

<sup>18</sup> The meaning of these additional signs is unknown, but they likely mirror nuances of performance.

<sup>19</sup> A detailed palaeographical description of the parameters of the pen-stroke and the graphical connections can be found in De Luca 2020b, pp. 35-38.



Example 2. Neumatic connections

Example 2 illustrates the different kinds of connections found in Old Hispanic manuscripts. A graphical connection represents the way two single pitches are joined within a neume and, as such, it is found only in compound neumes. Neumes A-E (example 2) represent a two-note ascending melodic movement, and each neume exemplifies one of the graphical connections typical of the Old Hispanic notation: the gapped connection (A), the curved anticlockwise (B), the angular plain (C), the angular v-shaped (D), and the looped connection (E)<sup>20</sup>. If a neume rises or falls for three or more notes in the same direction, and it has an angular connection throughout, then it will use the staircase shapes, either upward (F) or downward (G). It is very common to find different kinds of neumatic connections in operation within the same neume, as illustrated by neumes H-J in example 2.

The graphical richness created by the neumatic connections and the application of the parameters of the pen-stroke is peculiar not only to the León Antiphoner but generally to the early stage of Old Hispanic notation. Similar to a trend observed in other areas of Western Europe, eleventh-century Old Hispanic manuscripts show a lessening of diversity and a decreased interest in recording nuance in notation. There are fewer neumes, which are reduced to more basic shapes, and there are fewer notational signs placed near the neumes or the text. In eleventh-century manuscripts neumes representing the same melodic contour appear to be shown by pen-strokes of the same size and length; the shapes also appear less agile and the pen-strokes acquire some rigidity, which is not the case in earlier manuscripts (see fig. 2). Moreover, in some manuscripts the ductus of the notation has started to shift to the right<sup>21</sup>.

<sup>20</sup> The clockwise curved connection also exists, as seen in example 1-I.

<sup>21</sup> See, for instance, how the axis of the notation shifted in the eleventh century *Liber misticus* GB-Lbl add. 30845, f. 49v.



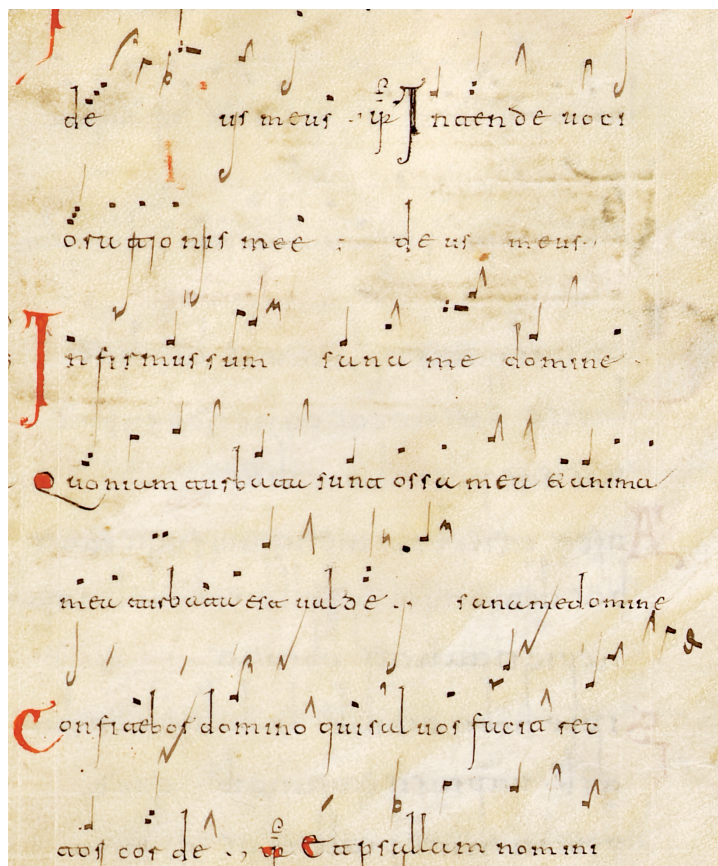


Fig. 2. The *Breviary of Queen Sancha* E-SAu ms. 2668, f. 152r, detail.

### 3. THE TRANSITION BETWEEN THE TWO NOTATIONS

#### 3.1. Later Old Hispanic notation

After the imposition of the Franco-Roman chant and the arrival of new liturgical manuscripts in Aquitanian notation, Old Hispanic notation was not completely discarded and some manuscripts with the local style of notation were produced in later years. Among them is the famous Antiphoner GB-Lbl add. 30850<sup>22</sup>, this manuscript shows a peculiar mix of traditions; it bears

<sup>22</sup> On GB-Lbl add. 30850, see Fernández de la Cuesta 1976, pp. 233-256; 1985; Asensio Palacios 2009, pp. 23-24.

both the local Visigothic script and the Old Hispanic notation, but it contains the newly imported Franco-Roman melodies. From a musicological standpoint the Antiphoner add. 30850 represents the effort made by Visigothic script scribes to mediate between the Old Hispanic notation (which they mastered) and the new Franco-Roman chant (which they were forced to learn and copy).

The notation of manuscript add. 30850 was the object of a careful analysis by palaeographer Herminio González Barrionuevo. The scholar compared the Old Hispanic neumes found in the Antiphoner with the neumes for the same Franco-Roman melodies found in other Western European manuscripts, written with different notational style<sup>23</sup>. Based on this semiological comparison, González Barrionuevo aimed to reconstruct the “original” meaning of the Old Hispanic neumes in the Antiphoner. However, it is worth remembering the limits of such a comparative approach. In fact, a sign used both in Old Hispanic notation and in other coeval notation(s) did not necessarily carry the same meaning across all related music scripts. Previous studies have demonstrated that the same sign could have multiple interpretations in different notational systems. Susan Rankin, for example, identifies such a case in East Frankish and Breton notation, concluding that *the similarity of these graphs is no guarantee of their cognate relation and their direct association would be an example of a “false etymology”*<sup>24</sup>. Thus, even though Old Hispanic notation shares some basic symbols and general principles with other early notations, we cannot automatically assume that those shared symbols represent the same musical meaning everywhere, especially if we consider that Old Hispanic notation transmitted more musical nuances and details than other contemporary notations<sup>25</sup>. Moreover, we should not forget a fundamental difference between the Franco-Roman and the Old Hispanic chant. The latter was *not* based on the Octoechos (like the Franco-Roman chant), but on a pre-modal system<sup>26</sup>. Hence, the two chant repertoires differed not only in melody but also in tonal organization.

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<sup>23</sup> The manuscripts are: I-Lc 601; I-Ra 123; CH-SGs 390-391; F-LA 239; GB-WO F. 160, and the Mont-Renaud Antiphoner with Noyon notation –private collection. In addition to manuscript 30850, González Barrionuevo took into account some notational aspects of the Benedictine monastic Breviary GB-Lbl add. 30848. See, *inter alias*, González Barrionuevo 1987, 1993, 1995.

<sup>24</sup> This example is thoroughly discussed in Rankin 2018, pp. 185-186. The facsimile of F-CHRM 47 is published in Mocquereau 1913.

<sup>25</sup> See, for example, the tiny pen-strokes placed at the top-left corner of neumes in E-L ms. 8, f. 57v.

<sup>26</sup> On this point, see Randel 1969, pp. 93-102. Ferreira discussed Hispanic pre-Franco-Roman psalmodic recitation tones practices and, by putting together evidence concerning the Ambrosian, Gallican, and Old Hispanic chant (already identified in scholarship as forming a larger “Gallican liturgical family”), he concluded that there was no trace of a clear-cut

Old Hispanic notation, with its graphical richness, had already developed some idiosyncratic graphical devices to express the nuances of the Old Hispanic chant and therefore, it is quite likely that some shift occurred to the original meaning of the Old Hispanic neumes when they were used to represent the “foreign” Franco-Roman melodies in manuscript add. 30850. All these differences between the Franco-Roman and the Old Hispanic chant repertoires probably explain why the Old Hispanic notation was not systematically employed to copy the newly imported Franco-Roman chant after its arrival in Iberia and, indeed, any later use of Old Hispanic notation appears to have been limited to the copying of Old Hispanic chant.

Other samples of Old Hispanic notation are found in one eleventh-century fragment of unknown provenance now kept in Coimbra (P-Cua IV-3a S-Gv. 44, 22), and in some manuscripts written around the thirteenth century that have been associated with Toledo<sup>27</sup>. These manuscripts have been associated with six parishes in Toledo (Santa Eulalia, Santas Justa y Rufina, San Lucas, San Marcos, San Sebastian, and San Torcuato) which, anecdotally, were granted permission to continue observing the Old Hispanic liturgy while the Franco-Roman rite was being imposed in the rest of the Peninsula. From a palaeographical point of view, later Old Hispanic notation is almost uncharted territory<sup>28</sup>. What is certain is that later Old Hispanic notation did not evolve into a more pitch-focused system, as other coeval notations did. In fact, in later manuscripts with Old Hispanic notation we observe a considerable drop in the recording of musical nuances and, overall, in the quantity of musical information conveyed by the neumes. Instead, the neumes were reduced to very basic shapes and the graphical variety became remarkably diminished. In these sources it is also often difficult to work out the melodic contour of the neumes because their *ductus* is strongly shifted to the right<sup>29</sup>. The manuscripts

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distinction between authentic and plagal modes and “that there were either three large modal classes or four large categories with some overlapping, encompassing a wider variety of melodic sub-types”: Ferreira 2006, p. 637.

<sup>27</sup> On the Toletan manuscripts, see Mundó 1965; Rojo Carrillo 2018. Ferreira suggested that the Coimbra manuscript (now fragment) could have been imported to the city during the rule of the mozarab Count Sesnando, who encouraged the Mozarabic community, appointed a clergyman of Mozarabic origins as the bishop of Coimbra, and later acted as Toledo’s governor to oversee the capitulation of the city to Alfonso VI in 1085. Ferreira 1993, pp. 458-459. See also “Música Hispánica” for a description of the Toletan manuscripts.

<sup>28</sup> Old Hispanic notation found in these later manuscripts has often been referred to as “horizontal”, as opposed to the notation in the sources from the north of the Peninsula, which was described as “vertical”. On the notation of the Toletan manuscripts, see Brou 1955, pp. 29-31; Zapke 2011.

<sup>29</sup> As we have seen above, the inclination of the *ductus* could already be observed in eleventh-century manuscripts, but it reached its peak in the later Toletan manuscripts. See, for instance, E-Mn Ms. 10110 *Liber mysticus de Cuaresma*.

with horizontal notation certainly deserve thorough palaeographical scrutiny, but what emerges from preliminary observation is that this style of notation may have been simply a regional variety of the Old Hispanic notation. This variety was less systematically employed than the vertical notation found in manuscripts from the north, and it featured fewer graphs.

### 3.2. Old Hispanic melodies in Aquitanian notation

In the aftermath of the change of rite, Visigothic script scribes were confronted with both a new liturgical and musical repertory to be learned (by heart), and a new system for reading and writing music (the Aquitanian notation). The existence of around twenty-five Old Hispanic melodies in Aquitanian notation offers further evidence of the challenges the scribes faced. Some Old Hispanic melodies originally written in manuscripts E-Mh Cod. 56 and E-SI ms. 4 were erased and replaced by a new version in Aquitanian neumes<sup>30</sup>. Some *preces* that were notated in Old Hispanic neumes in the same manuscripts were also found written in Aquitanian neumes in the Franco-Roman “Gradual of Gaillac”, F-Pn lat. 776<sup>31</sup>. To this group of Old Hispanic melodies in Aquitanian notation, Carmen Rodríguez Suso has added six pieces for the *ordo* of the dedication of the altar found in some pontificals from Narbonne and other manuscripts, whose melodic contours match the neumes found in the León Antiphoner for the same chants<sup>32</sup>, Germán Prado has discussed some Lamentations found in E-SI ms. 9 from the Galician Monastery of San Rosendo de Celanova<sup>33</sup>; these melodies show unusual characteristics for the Franco-Roman repertory, sharing instead similarities with melodies in Old Hispanic neumes found in some earlier Bibles<sup>34</sup>.

All these melodies have received great attention in chant scholarship<sup>35</sup>. Nonetheless, there are a few reasons that prevent us from using them as keys to understanding the original meaning of the Old Hispanic neumes. First of all, these few melodies represent a very small percentage

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<sup>30</sup> Manuscript E-Mh Cod. 56 (from San Millán de la Cogolla, La Rioja) contains sixteen melodies from the Office of the Dead. E-SI ms. 4 (from San Prudencio de Monte Laturce, La Rioja) contains three antiphons for the Foot-Washing on Maundy Thursday.

<sup>31</sup> Facsimile edition of F-Pn lat. 776 in Albarosa, Rumphorst, Turco 2001.

<sup>32</sup> Rodríguez Suso 1998; 2004, pp. 95-99.

<sup>33</sup> Prado 1934.

<sup>34</sup> Asensio Palacios 2009, pp. 20-21.

<sup>35</sup> On these melodies, mostly of the La Rioja tradition, see: Aubry 1908, pp. 57-75; Prado 1928; Rojo, Prado 1929, pp. 66-82; Randel 1969, p. 66; Brockett 1968, p. 109; Asensio Palacios 2008; Rodríguez Suso 1998.

of a repertory of several thousand Old Hispanic melodies. In addition, these pieces are short, syllabic and display none of the long melismas typical of the Old Hispanic chant. From a palaeographical point of view, the situation is even more complex because Old Hispanic and Aquitanian are two very different styles of notation. Aquitanian notation is diastematic, that is, the height of the notes varies according to the musical interval between them. Specifically, in Aquitanian notation, a note is expressed as a position on a vertical scale, while in Old Hispanic notation –as shown before– a note is expressed as a rising or descending pen-stroke. The Aquitanian notational alphabet involved a reduction in the number of graphs (that is, the musical signs), and it did not reflect the variety of neume shapes found in Old Hispanic notation<sup>36</sup>. Hence, neumes of two, three, four or more notes written in Old Hispanic notation become simplified when transcribed into Aquitanian notation because there is no possibility of transcribing the different types of Old Hispanic neumatic connections into this style of music script (see example 2). Furthermore, it may also be relevant to refer to Rodríguez Suso's remarks on the analysis of the chants for the dedication of the altar contained in more than fifty manuscripts with different notational styles. The scholar wisely pointed out that every time a melody was transcribed into a different (and later) notational style, the new version maintained all the corrections made to the elements of the melody that were considered irregular in the previous adaptation. Hence, the grouping of melodies according to their notation is not a purely graphical matter but it has some musical meaning as well, because each notational group corresponds to a specific liturgical style and musical taste<sup>37</sup>.

#### 4. AQUITANIAN NOTATION IN IBERIA

The imposition of the Franco-Roman chant triggered the arrival of many liturgical books from southern France at the end of the eleventh century; thenceforth, Aquitanian notation became the means by which the new Franco-Roman melodies started to be taught, learned, and copied<sup>38</sup>. Aquitanian notation is characterized by the separation of the notes into dots (except for

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<sup>36</sup> Some neumes for special effects such as the *virga*, *bivirga*, *trivirga*, *virga strata*, the *distropha*, *tristropha* and the *pressus* are reduced to one or more dots when transcribed into Aquitanian notation, Huglo 2011, p. 166.

<sup>37</sup> Rodríguez Suso 1998, p. 177.

<sup>38</sup> On the arrival of new manuscripts in Aquitanian notation in the Iberian Peninsula, see Huglo 1985; Corbin 1952, pp. 75-125.

the *torculus* and the quilismatic group), by its graphical simplicity, and by having an axis on which the neumes rise diagonally and fall vertically (reading from the top to the bottom)<sup>39</sup>. Aquitanian notation had a very long life in the Iberian Peninsula. While in southern France it already began to be replaced by square notation in the twelfth century, Aquitanian notation remained as the main system for music writing in the Peninsula until at least the early fifteenth century, and was still being used in the sixteenth century. The persistence of the Aquitanian single-line system until the sixteenth century can probably be explained by the dearth of resources of the Iberian churches, who could not afford the production of new and expensive books and instead opted to maintain and re-use the old books and system for as long as possible<sup>40</sup>. It is important to highlight, however, that Aquitanian notation coexisted with square notation in Iberia during a few centuries. Indeed, the Cistercians and the Mendicant orders (Franciscans and Dominicans) used stave-notation, and they extended its use to their houses in the Peninsula. Both Mendicant orders aimed to write clear and easily readable music and therefore set some rules for liturgical books to achieve this goal. According to those rules, the music had to be written on a staff of four lines and the words had to be clearly separated so that the notes were not squeezed together<sup>41</sup>. In the Cistercian case, stave-notation was already in use in the second quarter of the twelfth century but the diffusion of square notation in Iberia did not happen at an early date, nor did it follow a straight and uniform trajectory (fig. 3 shows an Iberian early thirteenth-century Cistercian Breviary in Proto-Gothic script and Aquitanian notation). Indeed, it is only in the fourteenth century that the main ecclesiastical centres of the Peninsula started to use liturgical books with square notation, while centres with fewer material resources continued to use books in Aquitanian notation. Indeed, producing a book in square notation not only required someone skilled and capable of dealing with a different style of book and layout, but it also required more parchment, which was expensive, and which not all churches could afford to buy. A factor that prompted the adoption of square notation in rich religious centres was the presence of big choirs that benefitted from the larger size of books in square notation as they allowed greater readability<sup>42</sup>.

Broadly speaking, square notation managed to supersede Aquitanian notation in the fifteenth century, but it was only in the last third of the sixteenth

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<sup>39</sup> Huglo 2011, p. 165. On Aquitanian notation, see Ferretti 1925; Colette 1970-1971; Huglo 1982; Albarosa, Rumphorst, Turco 2001; Cazaux-Kowalski 2014.

<sup>40</sup> Nelson 1996, p. 58; Rodríguez Suso 1993a, p. 523; 1993b, p. 2304.

<sup>41</sup> Huglo 1967; Nelson 1996, p. 96.

<sup>42</sup> Ruiz Torres 2013, p. 190.

century that Aquitanian notation was completely abandoned<sup>43</sup>. Given the prominence of Aquitanian notation until almost the beginning of the modern era, there are not many studies specifically focused on the characteristics of square notation in Iberia in medieval times. However, there are a few notable studies of square notation as found in some Spanish manuscripts. Kathleen Nelson studied some manuscripts from Zamora where she identified three main types of square notation, mainly distinguished by the characteristics of the *pes* (a two-note rising neume). The oldest manuscripts (from the mid to late thirteenth century and fourteenth century) seem to prefer the vertical *pes* form; those dated from the fifteenth or early sixteenth century seem to prefer instead the oblique *pes* form, while another smaller group of manuscripts dated from the late fourteenth or the fifteenth century use both forms. Nelson also highlighted in the Zamoran sources a preference for the 5-line rather than 4-line staff<sup>44</sup>. Santiago Ruiz Torres conducted an extensive and detailed study of the 82 plainchant choir books of the Cathedral of Segovia, dated between the fifteenth and the nineteenth century. Among other things, Ruiz Torres analysed in detail the characteristics of the square notation found in these sources and concluded that although the square notation provides great diastematic accuracy, these manuscripts show a significant graphical simplicity. Overall, there are only nine main graphical shapes used in this large set of choir books. From a notational standpoint, these manuscripts are classified by taking into account the presence of the “punto con doble plica”, here intended as a square punctum with two descending stems –one on the right and one on the left (p. 222). This shape implies a longer duration of the neume, which is mainly found in the earlier sources (those still showing some remnants of the medieval tradition) and eventually disappears in the most modern sources<sup>45</sup>. Finally, Lara Lara focused on the sixteenth-century choir books of the Cathedral of Córdoba, all written in square notation on a 5-line staff. Here, the more common shape is the square punctum (*punctum quadratum*), while the rhomboidal punctum (*punctum inclinatum*) is used only in compound neumes. The rhomboidal punctum is used both in descending melodic movements (*climacus* and *subbipunctis* neumes) and in ascending movements as a passing note. The rhomboidal punctum is commonly

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<sup>43</sup> Corbin 1952, p. 248; Ferreira 2006, p. 623; 2008, vol. I, p. 22; Joaquim 1944, pp. 70-71, Ruiz Torres 2013, p. 190.

<sup>44</sup> The characteristics of these three classes of square notation in Zamora are thoroughly discussed in Nelson 1996, pp. 96-102. See also pp. 41-75 for a discussion of plainchant notation and rhythm in the Spanish musical treatises up to the mid sixteenth century.

<sup>45</sup> Ruiz Torres 2013, pp. 189-232. Ruiz Torres’s analysis can be considered as the most extensive and thorough study on the characteristics of square notation in late medieval and modern Spanish sources.

employed in ascending neumes, with a square punctum at the top and the bottom, not only in Córdoba but also in Palencia, San Lorenzo de El Escorial and other Spanish locations<sup>46</sup>.

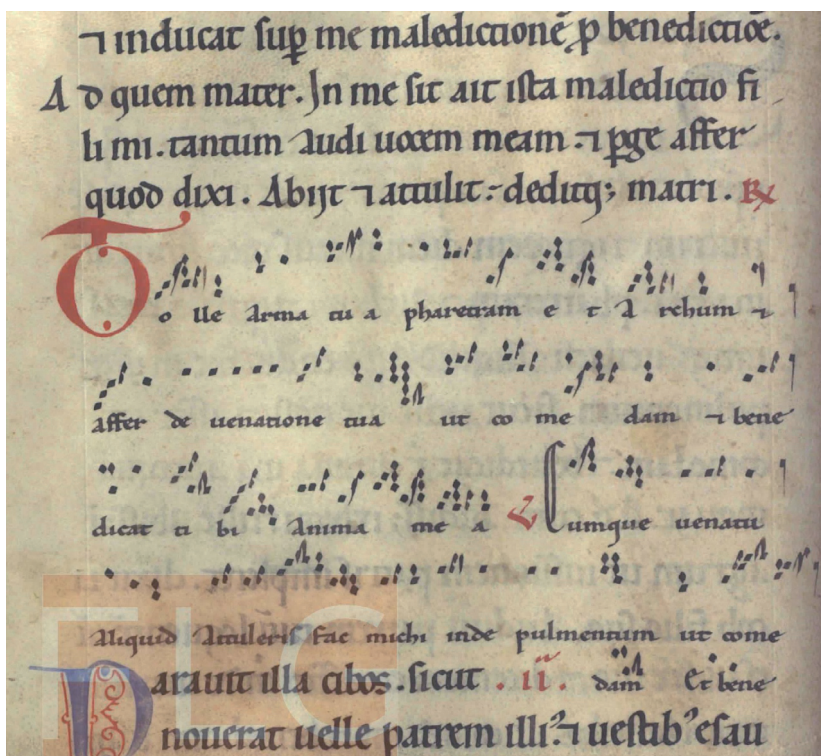


Fig. 3. Cistercian Breviary belonging to the Fundación Lázaro Galdiano. Detail of f. 26v.

During the approximately five centuries during which Aquitanian notation remained in use in the Peninsula, its graphical appearance gradually changed due to the presence of new writing tools for Gothic script, namely some much broader nibs<sup>47</sup>. The narrow nib, typical of the early days of

<sup>46</sup> Lara Lara 2004, pp. 55-60. For a short description of square notation in the choir book of the Monastery of El Escorial, see Rubio 1982, pp. 27-31.

<sup>47</sup> The main reference for later modifications of Aquitanian notation are the comments made by Stäblein, who described three classes of notation: a) almost unchanged with the exception of the squaring of the *punctum*, b) modified Aquitanian notation of two styles, northern and southern (the latter being found especially on the Iberian Peninsula); c) square notation with traces of Aquitanian notation. Stäblein 1975.



Aquitanian notation, allowed each graph to be shaped very clearly and it also permitted a great deal of control over the individual pen-strokes. The use of broader nibs prompted the following graphical changes in the appearance of Aquitanian notation: a better separation of the neumes and neumatic groups (that is, a better use of the space and the occasional use of musical bars), an increased angularity and the adoption of more rhomboidal and square shapes, an increase in the module of the notation, a loss in graphical variety of the neumes (liquescent ones included), and an extensive use of “ligature” (that is, the thin lines that connect the square puncta within compound neumes)<sup>48</sup>. Other later changes in Aquitanian notation include much less use of dry-point lines, the frequent use of semitone markers in Portuguese –but not Spanish– manuscripts, and a change in the layout of the codices, first featuring two columns, then a full-page column<sup>49</sup>. A feature of Aquitanian notation that did not change over this time was the fact that the ruling system made no distinction between the lines drawn to accommodate text and those for music (all the ruling lines were positioned at the same distance)<sup>50</sup>. Nonetheless, a related feature that changed over time was the size of the area devoted to notation. In fact, in later sources the area for notation could take up two, or even three ruling lines, as can be seen in the liturgical fragments P-BRam N° Frags. 1, 10, P-Brad 169 and P-G C 1429, P 217.

Let’s now have a closer look at some of the changes in Aquitanian notation by considering Iberian manuscripts from the late eleventh to the mid sixteenth century<sup>51</sup>.

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<sup>48</sup> These categories of changes were identified by Rodríguez Suso in her analysis of the fragments in Aquitanian notation from the Basque Country dated from the twelfth to the sixteenth century (the scholar also included a change in the internal *ductus* of compound neumes). Rodríguez Suso 1993a, pp. 509, 524-530.

<sup>49</sup> The change in the layout is discussed in Rodríguez Suso 1993a, p. 509; 1993b, pp. 2302-2303.

<sup>50</sup> See, for instance, the twelfth-century fragment P-Brad Pastas 16.

<sup>51</sup> Good-quality images of some later Spanish fragments in Aquitanian notation are freely available online in the digital edition of Calahorra Martínez 2011. See, for instance, Frag. 1 at <https://ifc.dpz.es/publicaciones/ebooks/id/3073>.

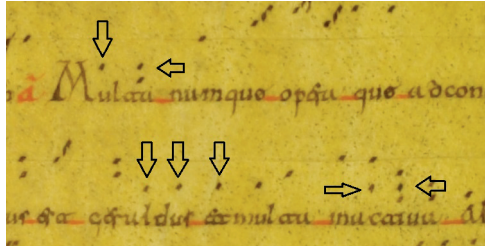


Fig. 4. P-BRam n.º 12 Códices, f. Ar. Detail of the Antiphon “Multa namque” (Cantus ID 203181) in third mode.

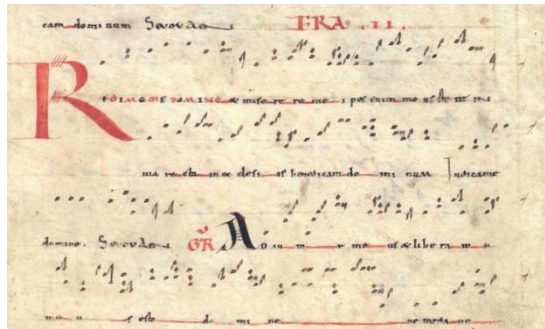


Fig. 5. E-Mh Cód. 51, f. 67v, detail<sup>52</sup>.

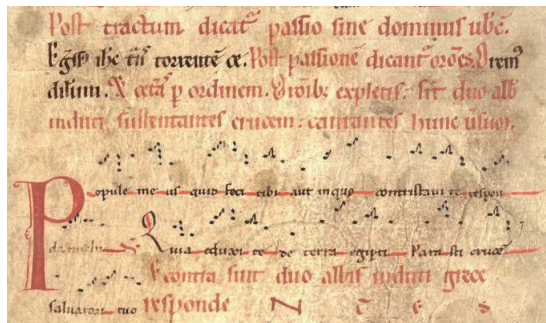


Fig. 6. E-Mh Cod. 45, f. 37r, detail.

<sup>52</sup> All the chants in this manuscript are indexed in “Música Hispánica”.

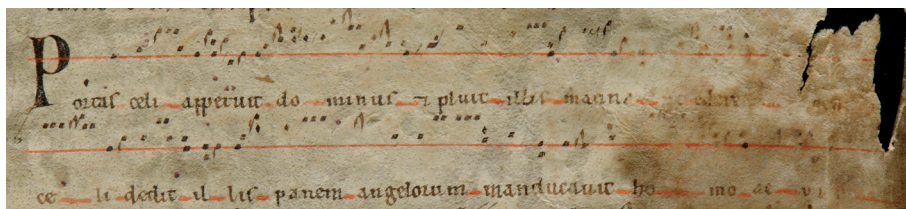


Fig. 7. P-BRad Pastas de fragmentos, 54 (olim Caixa 315, n.º 201), f. Ar. Detail of the Offertory “Portas caeli” (Cantus ID g01030) in eighth mode © Universidade do Minho / Arquivo Distrital de Braga (document PT/UM-ADB/COL/F/000054).



Fig. 8. P-G C 192, f. Ar, detail.

By comparing early and later Aquitanian manuscripts we can see how the neumes changed from small, rounded and sometimes imprecise shapes (see figs. 4-7) to square or rhomboidal puncta with angular corners (see figs. 3, 8). In the early manuscripts the puncta were “written”, that is, traced with a single pen-stroke, while in later Aquitanian notation the square puncta were “drawn”, that is, the scribe first drew the four edges and then filled them with ink<sup>53</sup>. Early Aquitanian notation was characterized by a great variation in the neume shapes even within one single source (see P-G P 808 and figs. 4-7)<sup>54</sup>. At this early stage the puncta often have irregular borders and the “square” punctum frequently has its lateral edges tilted to the right like a

<sup>53</sup> Rodríguez Suso 1993a, p. 493.

<sup>54</sup> See the description of class 1a notation in Nelson 2002, p. 171; 1996, p. 81.

parallelogram (see for instance the puncta in P-Brad 51). Unfortunately, this inclination of the punctum can be difficult for a modern reader to interpret when it comes to distinguishing between the regular “square” punctum and the rhomboidal punctum. The correct identification of the rhomboidal punctum is important because it was, occasionally, used as a semitone marker<sup>55</sup>. Fig. 4 displays a clear example of early Aquitanian notation where the rhomboidal punctum sometimes gives the reader an indication of the position of the lower semitone. In fig. 4 the rhomboidal punctum signals the position of E (two steps below the line, which means G) above the words *Multa, Geraldus et multa, inactiva*<sup>56</sup>. From the thirteenth century onward, both the regular and the rhomboidal punctum took a more angular shape with a precise contour, and there is much more consistency in the neume shape and size, both within individual manuscripts and across coeval sources. For instance, in fig. 7 one can easily recognize the rhomboidal punctum placed two steps below the line to signal E (*Portas*) and the punctum placed two steps above the line to signal B (*apperuit*). Later manuscripts (from the fourteenth century onward) not only show a bigger module in the notation but also display standardized neume shapes and an unequivocal graphical differentiation between the regular square punctum and the rhomboidal one (see P-BRs frag. 3 and frag. 10 and figs. 3, 8). A contrast has also appeared between the hairline stems and thick note-heads, which was absent in the earlier manuscripts.

As time passed, the module of the Aquitanian neumes grew progressively larger. The smallest module is found in the earliest sources, like the fragment with Aquitanian notation and Visigothic features in the script P-Brad Pasta dos documentos visigóticos, s.n., now lost<sup>57</sup>. In the thirteenth century the neume size increased and a more pronounced angularity of the pen-stroke was also more evident (see P-G 10-9-9-1, fig. 3). This tendency gradually led to writing larger neumes which also show a pronounced distinction between hairlines and bold strokes (see for instance P-Brad 150). Along with the module

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<sup>55</sup> The punctum signaling the lower semitone is referred to in scholarship as the “special punctum”. The *special punctum* has a rhomboidal shape while the normal *punctum* lies horizontally and looks more like a square. The term *special punctum* is drawn from Colette’s expression “forme spéciale de point” to indicate one of the three signs used to signal the lower note of the semitone in F-Pn Lat. 1139. Colette 1990, *passim*.

<sup>56</sup> The same shape signaling B (two steps above the line) is found above the words *passus est dequibus, mirabiliter*. This Antiphon belongs to the Office for Gerald of Aurillac (Cantus Feast Code 14101300).

<sup>57</sup> The images and description of the fragment are available for consultation in PEM, see § 7. List of manuscripts cited. PEM is a digital library that allows free and universal access to many Iberian (mostly Portuguese) manuscripts with musical notation written before ca. 1650. Up to this date, PEM allows access to 229 sources of plainchant and polyphony (70 books and 159 fragments).

of the neumes, the size of the *custos* also increased<sup>58</sup>. Scholars have explained that the *custos* with the head on the right is typical of French manuscripts while the *custos* with the head on the left is peculiar to Iberian sources<sup>59</sup>. A survey on the presence and shape of the *custos* in the hundred or so liturgical fragments in Aquitanian notation now kept in Braga and Guimarães has demonstrated that while the typical Iberian *custos* is found almost everywhere, few fragments display the French *custos* (see P-Brad 50, 51, 52 and 108)<sup>60</sup>. In these liturgical fragments the French *custos* is found alongside other features that are typical of the early stage of Aquitanian notation, so it seems possible that these books were copied directly from manuscripts brought from southern France. As time passed, Iberian scribes developed their own idiosyncratic style for writing the *custos*, turning its head to the left (figs. 5-6)<sup>61</sup>.

This overview of the development of Aquitanian notation in the Iberian Peninsula would not be complete without reference to semitone markers. Solange Corbin was the first scholar to point out the presence of a rhomboidal punctum signalling the lower note of the diatonic semitone (E, B natural, or A with flattened B) in around thirty Portuguese fragments and codices, mainly dated between the thirteenth and fifteenth centuries. Corbin regarded the rhomboidal punctum as the main characteristic of a “Portuguese notation”, which derived from Aquitanian notation and was used from the last quarter of the twelfth century up to the fifteenth century in Portuguese manuscripts. According to Corbin, this Portuguese notation derived from the Aquitanian one –from which it took the diastemata and the use of the red line– but it departed from that notation for a more pronounced angularity, a bigger module, the presence of superimposed square notes and, above all, the use of a virga or a rhomboidal punctum to mark the lower note of the semitone<sup>62</sup>. Corbin also claimed that there was no trace of a similar system to mark the

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<sup>58</sup> The *custos* was a musical sign commonly used as a reference in neumatic notations and it was placed at the end of each line of music. The *custos* was not sung and it simply signaled the height of the first note on the following line.

<sup>59</sup> Nelson 1996, p. 85. In the Iberian *custos*, the head could be placed either at the bottom left (AMG C 623) or at the top left (AMB n.º 8 Códices).

<sup>60</sup> To access the fragments, please follow the link <http://pemdatabase.eu/sources> and select both “Braga” and “Guimarães” in the “Location” drop-down menu. On the same page, select also “Fragment” in the “Completeness” field and select “Aquitanian” and “Aquitanian (Portuguese variety)” in the “Type of notation” field; then click “Apply” to retrieve the whole list of fragments.

<sup>61</sup> No French *custos* was found in any later Aquitanian manuscript consulted for this investigation. In the sixteenth century, square notation found in the choir books of the Cathedral of Córdoba, the *custos* takes the shape of a small rhomboidal punctum slanted to the right with the tail placed on the right hand-side and pointing upwards. Lara Lara 2004, p. 63.

<sup>62</sup> Corbin 1952, pp. 251-258.

semitone in France<sup>63</sup>. A few years later, however, the scholar adjusted her position to assert that we do not find an independent notation in Portugal, but we do find an Aquitanian script which became more and more stylized so that it could eventually be identified as a subgroup of the Aquitanian notation<sup>64</sup>. Later, Marie-Noël Colette partially reconsidered Corbin's findings and pointed out the presence of a special sign for the semitone in southern French manuscripts (especially from Moissac and Limoges), particularly in F-Pn lat. 1139<sup>65</sup>. Ferreira investigated the early Franco-Roman liturgical practices imported into Portugal, mainly in the region of Braga, and he also acknowledged a close connection between this Portuguese repertory and the one from Occitania, basing his analysis on solid musical, liturgical, and palaeographical evidence<sup>66</sup>. Subsequently, João Pedro d'Alvarenga reiterated that there is not enough palaeographical evidence to claim the existence of an independent "Portuguese notation", preferring instead the idea of a notational system imported from southern France, which developed into a regional variety that eventually led to the simplification of the original graphical repertory<sup>67</sup>. Furthermore, Alvarenga rejected the claim that a notational device conveying intervallic information is present in the majority of Portuguese sources, as previously asserted<sup>68</sup>. Following on from Colette's remarks, it is now widely accepted that the use of a special punctum to indicate the location of the semitone may have entered the territories of modern Portugal and Spain from its use in the regions of Moissac, Limoges, and Toulouse. Among the Portuguese manuscripts that use the special punctum there are the thirteenth-century Pontifical of Braga (P-Ln Alc. 162) and the later *Salterio de Santa Cruz de Coimbra* (P-Pm Ms. 114, Santa Cruz 24). The former shows a special punctum that resembles an apostrophe (tilted *ca.* 45° and slightly stretched) and is usually used but does not appear in every occurrence of the semitone; in the *Salterio* the special punctum takes the shape of a rhombus and it is much more consistently used<sup>69</sup>. A palaeographical analysis of the dissemination of the rhomboidal punctum in the fragments in Aquitanian

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<sup>63</sup> Corbin 1952, p. 252.

<sup>64</sup> "Une graphie Aquitaine peu à peu stylisée et devenue un sous-groupe", Corbin 1957, p. 121, as reported in Ferreira 2015, p. 87.

<sup>65</sup> Colette 1990, pp. 306-308.

<sup>66</sup> See Ferreira 1994-1995, pp. 172-173; 2009, *passim*. In a more recent study, Ferreira explored the impact of Corbin's legacy on Portuguese musicological studies and beyond, see Ferreira 2015. Manuel Pedro Ferreira has been the leading expert on the Portuguese musical repertory preserved in Aquitanian notation as both an academic and a performer.

<sup>67</sup> Alvarenga 2008, p. 210. Alvarenga had already concisely rejected the claim of an independent "Portuguese notation" in 2002, pp. 12-13, n. 6.

<sup>68</sup> Alvarenga 2008, p. 207.

<sup>69</sup> Alvarenga 2008, pp. 208-209.

notation now kept in Braga and Guimarães has shown that in the early days of Aquitanian notation the use of the rhomboidal punctum to convey intervallic information was known to local scribes but was not widespread<sup>70</sup>. It was only from the thirteenth century onward that this use of the rhomboidal punctum became more regular<sup>71</sup>. Broadly speaking, the choice to convey more exact modal information to the reader was optional, and the scribe could deliberately choose to use –or not use– the special punctum to mark the lower note of the semitone while copying. Indeed, occasionally it is possible to read a piece with a clear indication of the mode (conveyed by the special punctum) followed by other pieces likely written by the same scribe where the special punctum is absent, and the modern identification of the mode remains undetermined<sup>72</sup>.

The semitonal punctum appears to be mostly peculiar to Portuguese manuscripts<sup>73</sup>. Indeed, in the majority of Spanish sources the rhomboidal punctum does not carry any intervallic information, instead it is used within the same piece at different heights (figs. 5-6), or on consecutive steps (fig. 3). Interestingly, the use of the rhomboidal punctum and other graphical markers to signal the lower note of the diatonic semitone in Spanish sources seems to be limited to some early sources. One of these is E-SAu ms. 2637, a manuscript of (presumably) Spanish origin where the rhomboidal punctum is consistently used to mark the lower semitone; this manuscript is a Plenary Missal and it contains the most extensive sanctoral contained in any Franco-Roman missal extant on the Iberian Peninsula<sup>74</sup>. Other Spanish sources with the special punctum were studied by Kathleen Nelson, who investigated an early twelfth-century antiphoner fragment in Visigothic script and Aquitanian musical notation currently held in the Biblioteca Capitular of Toledo<sup>75</sup>. The notation of this two-folio fragment shows a clear indication of the semitone location;

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<sup>70</sup> The palaeographical scrutiny of the fragments detailed the contexts where the rhomboidal punctum was found and distinguished the cases where it was randomly written from the cases where it was purposefully employed to convey information on the diatonic semitone. See De Luca 2020a.

<sup>71</sup> Despite this general trend, on occasion it is possible to find some later fragments –possibly copied in the fifteenth century– which show a much lesser degree of diastemata than some of the earlier fragments.

<sup>72</sup> As happens, for instance, in the *bifolium* P-BRam n.º 12 Códices (fig. 4).

<sup>73</sup> “The continued use beyond the twelfth century of the semitonal punctum in Aquitanian notation appears most prominent among Portuguese sources and so the use of the description «Portuguese» remains justified especially for later uses of such notation,” Nelson 2016, pp. 38-39; 2007, p. 23.

<sup>74</sup> The sanctoral shows a clear Frankish influence, though it preserves some cults from the Spanish *sanctorale*, and there are also notable correspondences with earlier manuscripts from Silos (GB-Lbl add. 30848, 30849). See Zapke 2007, p. 378; Boudeau 2016.

<sup>75</sup> Nelson 2007.

the two semitone-marking signs are a three-note quilismatic group (covering minor thirds or a perfect fourth with the semitone located between the top two notes), and a special punctum (diamond shape) used either in isolation or as part of a descending pattern of two or more notes on one syllable<sup>76</sup>. Nelson also investigated the notation of some slightly later bifolio fragments (currently kept in Zamora and originally belonging to a noted breviary) written in a Pregothish text hand in the second half of the twelfth century, possibly in the central or north-western part of the Iberian Peninsula; here three graphical devices indicate the semitone: the semicircular virga, the special punctum, and the quilisma<sup>77</sup>. Broadly speaking, in Aquitanian notation associated with Spain the use of the quilisma to signal the lower note of the semitone becomes more regular only from about the middle of the twelfth century, whereas before this date sources tend to employ the quilisma on a wide variety of pitches<sup>78</sup>. Regarding the Basque Country, 472 liturgical fragments with Aquitanian notation survive; they are dated from the twelfth to the sixteenth century and were written mainly in the southern part of the region<sup>79</sup>. Rodríguez Suso has explained that here the quilisma was commonly used to indicate the lower note of the semitone, and it is only in very few cases that the quilisma was not used for this purpose<sup>80</sup>. The close correspondence between the quilisma and the lower note of the semitone became less regular in the fifteenth and sixteenth centuries<sup>81</sup>. Despite this, sixteenth-century treatises often refer to the usefulness of the quilisma to discover the position of the semitone<sup>82</sup>. On some rare occasions the fragments from the Basque Country also show indications concerning the mode of the chant, such as “septimi toni” or the number of the mode written in red ink at the beginning of the piece<sup>83</sup>.

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<sup>76</sup> Nelson 2007, p. 22.

<sup>77</sup> Zamora, Archivo Histórico Provincial (no RISM sigla), Pergaminos musicales 196, 199, and 200. As Nelson points out, these three devices are known as semitone indicators in other manuscripts. However, no other source appears to use these signs in the same way as in the Zamoran fragments. See Nelson 1996, pp. 86-87, 92-93, 180-181, 232, 294; 2004-2005.

<sup>78</sup> Information on the meaning of the quilisma in other Spanish manuscripts of Aquitanian notation is provided in Nelson 2004-2005, pp. 16-18; 1996, pp. 87-88.

<sup>79</sup> The plainchant preserved in these fragments can be ascribed to the liturgical tradition of southern France (music, liturgical order, and calendar), Rodríguez Suso 1993a, 1993b.

<sup>80</sup> Interestingly, in the antiphon *Compertus vir* in fragment 582 a later hand replaced the square punctum on B with a quilisma, Rodríguez Suso 1993a, pp. 503-506.

<sup>81</sup> Rodríguez Suso 1993a, p. 506.

<sup>82</sup> Rodríguez Suso 1993a, pp. 504-505. See Durán 2002, ff. CI-CII.

<sup>83</sup> Rodríguez Suso 1993a, p. 518.



## 5. MUSICAL NOTATIONS AND TEXT PALAEOGRAPHY: SOME REMARKS

Modern research shows a wide lacuna in our understanding of the relationship between the changes that occurred in Iberian music writing and the contemporaneous transition between Visigothic, Caroline, and Gothic scripts. The following remarks aim to highlight areas where further interdisciplinary research could contribute to a more complete picture.

At the end of the eleventh century Aquitanian notation replaced Old Hispanic notation in liturgical books and, as part of the same cultural transformation, the Council of León made the use of Caroline minuscule script compulsory in liturgical books in 1090<sup>84</sup>. Despite this regulation, Visigothic script was not completely wiped out and continued to be written during the twelfth century albeit with diminishing frequency<sup>85</sup>. On the contrary, Old Hispanic notation was soon to be abandoned and, within a few decades, its copying would almost cease<sup>86</sup>. We can see an example of this in fig. 4, a twelfth-century fragment (now in Braga) which was written in Visigothic minuscule and Aquitanian notation<sup>87</sup>. Although, from the point of view of text palaeography, we can observe elements of Visigothic and Caroline scripts coexisting in late-eleventh and twelfth-century manuscripts, from the point of view of musical notation we recognize that after the change of rite there was a complete overhaul which rapidly led to Old Hispanic notation being abandoned in the copying of new liturgical books of the Franco-Roman rite. This utter transformation can be better understood if we consider the effect of orality in the process of music transmission. Writing notation was a more complex task than copying text because the scribe had to know by heart the repertory being copied. That is, copying notation required that the scribe could recall the music as they read the model/s from which they were copying and then write down the notation in the new manuscript<sup>88</sup>. Thus, scribes who were assigned to create new books with Franco-Roman melodies were also required to “master”

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<sup>84</sup> Azevedo Santos 2007, p. 119.

<sup>85</sup> The genetic characteristics of the morphology of the letters in Visigothic minuscule script are: the open *a* and *g*, the inverted *tau* and *beta*, the tall *i* that is like an *l*, the excessively extended ascenders and descenders of the *p*, *f*, *g* and *i*, as well as the *b*, *l*, *d* and *h*, which are also very long. Another typical feature of this script is the limited use of abbreviation signs: Azevedo Santos 2007, p. 118. On Visigothic script see Alturo, Torras, Castro 2012.

<sup>86</sup> A few exceptions are discussed in § 3.1. Later Old Hispanic notation.

<sup>87</sup> Other fragments with Visigothic features in the script and Aquitanian notation are P-BRad Pasta dos documentos visigóticos, s.n. and the early twelfth-century antiphoner fragment currently held in the Biblioteca Capitulat of Toledo discussed in Nelson 2007.

<sup>88</sup> The process of music writing was quite individualized, and it could easily involve some editing by the scribe, who may have wanted to match the written record with their experience of the music in performance.

this musical repertory, in addition to the new notational style. This was not an easy task because the Old Hispanic and Franco-Roman chant repertories were not only different on a palaeographical level (because they were transmitted in two different musical notations) but also on a musical level, in terms of new melodies to be learned and, possibly, also in the organization of the tones<sup>89</sup>. As such, it is likely that in the aftermath of the change of rite local Visigothic music scribes were first trained in the new “foreign” musical repertory and only gradually started to produce new liturgical books of the Franco-Roman rite. Eventually, all these factors would result, probably over the course of just a few decades, in the complete disappearance of Old Hispanic notation from Iberian liturgical books of Franco-Roman chant.

Regarding the characteristics of scripts and notation in later Iberian musical sources, namely those in Aquitanian notation, there are two observations that can be made. First, the modification of the graphical appearance of Aquitanian notation was prompted by the use of broader nibs to write Gothic text script; however, these tools only changed the module of the notation (which progressively became larger) and, consequently, the area for notation. An important aspect of Aquitanian notation, which appears to be completely unrelated to the diffusion of Gothic script, is the degree of diastemata. Indeed, recent research on Iberian plainchant sources in Aquitanian notation have demonstrated the coexistence of two parallel systems for notating plainchant between the late eleventh and the fifteenth century, with both systems employing the typical elements of Aquitanian notation on a single line without clefs. Specifically, one system was non-diastematic and lacked any indication of semitone positions, while the other was a diastematic and heightened system which showed some strategies to convey information on the location of the semitone; this system was already employed in the Iberian scriptoria in the aftermath of the imposition of the Franco-Roman rite<sup>90</sup>. This situation is clearly reflected in some of the sources discussed above. For instance, fig. 4 shows a perfectly diastematic fragment dated to the eleventh to twelfth centuries and written in Visigothic minuscule. Fig. 8 shows another clear example of perfectly diastematic Aquitanian notation but, in this case, the source is dated to the fifteenth century and is written in “Gótica libraria” (*Textualis*). On the other side of the spectrum, figs. 5, 6, and 3 are examples of Aquitanian notation which does not provide diastematic information; they show the following kinds of scripts: Caroline minuscule, last stage (fig. 5, dated to the early twelfth century), transitional

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<sup>89</sup> Randel 2013, p. 84.

<sup>90</sup> On this point, see De Luca 2020a.

Caroline (fig. 6, dated to the late twelfth century), Proto-Gothic script (fig. 3, dated to the early thirteenth century).

A second consideration is the particular characteristics of the text scripts of sources written in Aquitanian notation. Chant scholars have recognized that liturgical musical manuscripts usually have a more old-fashioned style of script, and it is not uncommon to find on the same page scripts pointing to different eras simply because mismatched graphical conventions have been adopted for texts with and without notation<sup>91</sup>. The conservatism of the script in liturgical manuscripts is exemplified by a fragment used to reinforce the binding of a book of accounts for the year 1540 (Lisbon, Arquivo da Casa da Moeda, Livro 843 –no RISM sigla)<sup>92</sup>. The chant script suggests it is from the mid-thirteenth century while other elements –such as the size of the neumes, the distance between the lines, elements of the Gothic script in the non-notated hymn– hint at a later fourteenth-century dating<sup>93</sup>.

## 6. CONCLUSION

Early music writing in medieval Iberia was characterized by the astonishing calligraphic quality of non-pitch readable Old Hispanic notation. This was a music script derived from the Frankish family of neumes, but which departed from its origins in its inventiveness and creativity. Indeed, Visigothic scribes developed many idiosyncratic ways to express the musical nuances of Old Hispanic chant in notation and to convey a great deal of information about the performance of the chant to the medieval reader. The peculiar history of Old Hispanic notation was, however, intrinsically related to the fate of the liturgical chants it transmitted. When, at the end of the eleventh century, the Franco-Roman rite was imposed and the Old Hispanic liturgy discarded, Old Hispanic notation was soon replaced by Aquitanian notation as the official music writing in liturgical books. Although Old Hispanic notation survived as a music script in manuscripts of Old Hispanic chant, and continued to be written until the thirteenth-century, it never developed into a more precise and pitch-focused system like other notations. Aquitanian notation never reached the same calligraphic quality and vitality of Old Hispanic notation, but it had a remarkably long-lasting history in the

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<sup>91</sup> See, for instance, the notated and non-notated scripts in P-Cua Liber Catenatus and E-SAu Ms 2637. On the latter, see Boudeau 2016, p. 71.

<sup>92</sup> The fragment was partially published (text and facsimile) by Nascimento 2011, pp. 63-74.

<sup>93</sup> Palaeographical analysis in Ferreira 2013.

Iberian Peninsula. Indeed, it remained in use as the main musical system until the sixteenth century, whereas in southern France it was already being replaced by square notation in the twelfth century. Iberian manuscripts with Aquitanian notation permit us to investigate how a foreign notational system was locally adopted and how it eventually changed during a time span of around five centuries. Slight changes to the graphical appearance of Iberian Aquitanian notation started to occur from the thirteenth century onward due to the influence of Gothic script and new writing tools such as a broader nib. While our understanding of local notational practices within Iberian territories is still incomplete, it is possible to geographically circumscribe some scribal peculiarities, such as the preference for the rhomboidal punctum as a semitone marker in Portuguese manuscripts and the preference for the quilisma as a semitone marker in Spanish sources.

This study on the features of Old Hispanic and Aquitanian scripts in medieval Iberia contributes to clarifying how music writing changed over the centuries in the Peninsula. The research shows how the characteristics observed in notation are intimately related to the cultural context where the manuscripts were produced. Both text script and music notation are by-products of the Iberian medieval book culture and, therefore, they benefit from being studied side by side. It would be interesting to investigate manuscripts with the same geographical provenance as these sources could help to identify peculiar scribal practices, preferences, and other potential local idiosyncrasies. Hopefully this article, and the special issue to which it belongs, will inspire future interdisciplinary studies on Iberian manuscripts, promoting collaborations among scholars of palaeography, codicology, and other nearby areas of research.

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8. LIST OF MANUSCRIPTS CITED<sup>94</sup>

RISM Sigla	Shelf-mark	Dating	URL (if available) [last accessed: 10/11/2020]
CH-SGs	Cod. Sang. 359	922-926	<a href="https://www.e-codices.ch/en/list/one/csg/0359">https://www.e-codices.ch/en/list/one/csg/0359</a>
	Cod. Sang. 390	late 10 <sup>th</sup> century	<a href="https://www.e-codices.ch/en/list/one/csg/0390">https://www.e-codices.ch/en/list/one/csg/0390</a>
	Cod. Sang. 391	late 10 <sup>th</sup> century	<a href="https://www.e-codices.ch/en/list/one/csg/0391">https://www.e-codices.ch/en/list/one/csg/0391</a>
E-	Fundación Lázaro Galdiano	early 13 <sup>th</sup> century	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=439854">https://bvpb.mcu.es/es/consulta/registro.do?id=439854</a>
E-L	MS. 8	900-905	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=449895">https://bvpb.mcu.es/es/consulta/registro.do?id=449895</a>
E-Mh	Cód. 45	Late 12 <sup>th</sup> century	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=409871">https://bvpb.mcu.es/es/consulta/registro.do?id=409871</a>
	Cód. 51	early 12 <sup>th</sup> century	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=409879">https://bvpb.mcu.es/es/consulta/registro.do?id=409879</a>
	Cód. 56	late 10 <sup>th</sup> century	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=409886">https://bvpb.mcu.es/es/consulta/registro.do?id=409886</a>
E-Mn	Ms. 10110	1210-1500	<a href="http://bdh.bne.es/bnearch/detalle/bdh0000014388">http://bdh.bne.es/bnearch/detalle/bdh0000014388</a>
E-SAu	ms. 2637	12 <sup>th</sup> century, second half	<a href="http://pemdatabase.eu/source/4126">http://pemdatabase.eu/source/4126</a>
	ms. 2668	1059	<a href="http://hdl.handle.net/10366/55563">http://hdl.handle.net/10366/55563</a>
E-SI	ms. 4	11 <sup>th</sup> century	<a href="http://musicahispanica.eu/source/21404">http://musicahispanica.eu/source/21404</a>
	ms. 9	13 <sup>th</sup> century	<a href="http://musicahispanica.eu/source/19722">http://musicahispanica.eu/source/19722</a>
E-SO	Ms. 6-H	13 <sup>th</sup> century, first half	<a href="https://bvpb.mcu.es/es/consulta/registro.do?id=396690">https://bvpb.mcu.es/es/consulta/registro.do?id=396690</a>
F-CHRm	47	10 <sup>th</sup> century	
F-LA	239	9 <sup>th</sup> century	<a href="http://manuscrit.ville-laon.fr/_app/visualisation.php?cote=Ms239&amp;vue=1#1">http://manuscrit.ville-laon.fr/_app/visualisation.php?cote=Ms239&amp;vue=1#1</a>

<sup>94</sup> The following cited manuscripts have no RISM sigla: Spain, Zamora, Archivo Histórico Provincial, Pergaminos musicales 196, 199, 200. Mont-Renaud Antiphoner with Noyon notation –private collection. Lisbon, Arquivo da Casa da Moeda, Livro 843, and therefore are not part of the table.

F-Pn	lat. 776	11 <sup>th</sup> century	<a href="https://gallica.bnf.fr/ark:/12148/btv1b84546727.r=latin%2520776?rk=128756;0">https://gallica.bnf.fr/ark:/12148/btv1b84546727.r=latin%2520776?rk=128756;0</a>
	lat. 1139	11 <sup>th</sup> -13 <sup>th</sup> century	<a href="https://gallica.bnf.fr/ark:/12148/btv1b600946s.r=latin%201139?rk=107296;4">https://gallica.bnf.fr/ark:/12148/btv1b600946s.r=latin%201139?rk=107296;4</a>
	lat. 8093	early ninth century	<a href="https://gallica.bnf.fr/ark:/12148/btv1b90659560/f19.item.r=8093.zoom">https://gallica.bnf.fr/ark:/12148/btv1b90659560/f19.item.r=8093.zoom</a>
	n.a.l. 557	12 <sup>th</sup> century	<a href="https://gallica.bnf.fr/ark:/12148/btv1b10546776k/f26.image">https://gallica.bnf.fr/ark:/12148/btv1b10546776k/f26.image</a>
	n.a.l. 2199	10 <sup>th</sup> century	<a href="https://gallica.bnf.fr/ark:/12148/btv1b105243380/f48.item.r=2199.zoom">https://gallica.bnf.fr/ark:/12148/btv1b105243380/f48.item.r=2199.zoom</a>
GB-Lbl	add. 30845	10 <sup>th</sup> century	<a href="http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_30845_fs001r">http://www.bl.uk/manuscripts/Viewer.aspx?ref=add_ms_30845_fs001r</a>
	add. 30848	11 <sup>th</sup> century	<a href="http://searcharchives.bl.uk/IAMS_VU2:IAMS040-002022569">http://searcharchives.bl.uk/IAMS_VU2:IAMS040-002022569</a>
	add. 30849	12 <sup>th</sup> century	<a href="http://searcharchives.bl.uk/IAMS_VU2:IAMS040-002022570">http://searcharchives.bl.uk/IAMS_VU2:IAMS040-002022570</a>
	add. 30850	late-eleventh century	<a href="https://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=7241&amp;CollID=27&amp;NStart=30850">https://www.bl.uk/catalogues/illuminatedmanuscripts/record.asp?MSID=7241&amp;CollID=27&amp;NStart=30850</a>
GB-WO	F. 160	ca. 1230, with fourteenth-century additions	<a href="http://cantus.uwaterloo.ca/source/123646">http://cantus.uwaterloo.ca/source/123646</a>
I-Lc	601	early twelfth century	<a href="http://medium-avance.irht.cnrs.fr/ark:/63955/md278s45t55f">http://medium-avance.irht.cnrs.fr/ark:/63955/md278s45t55f</a>
I-Ra	123	1029-1039	<a href="https://manus.iccu.sbn.it/opac_SchedaScheda.php?ID=42707">https://manus.iccu.sbn.it/opac_SchedaScheda.php?ID=42707</a>
I-VEcap	LXXXIX	before the end of the seventh century	<a href="http://www.nuovabiblioteca-manoscritta.it/Generale/BibliotecaDigitale/mostraImmagini.html?codice=15&amp;volume=1">http://www.nuovabiblioteca-manoscritta.it/Generale/BibliotecaDigitale/mostraImmagini.html?codice=15&amp;volume=1</a>

P-BRad	16	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1498">http://pemdatabase.eu/source/1498</a>
	50	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1673">http://pemdatabase.eu/source/1673</a>
	51	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1676">http://pemdatabase.eu/source/1676</a>
	52	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1698">http://pemdatabase.eu/source/1698</a>
	54	13 <sup>th</sup> century, first half	<a href="http://pemdatabase.eu/source/1699">http://pemdatabase.eu/source/1699</a>
	108	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1692">http://pemdatabase.eu/source/1692</a>
	150	14 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1700">http://pemdatabase.eu/source/1700</a>
	169	mid to late 13 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/185">http://pemdatabase.eu/source/185</a>
	Pasta dos documentos visigóticos, s.n.	1090-1120	<a href="http://pemdatabase.eu/source/12692">http://pemdatabase.eu/source/12692</a>
P-BRam	Nº 8 Códices	12 <sup>th</sup> -13 <sup>th</sup> centuries	<a href="http://pemdatabase.eu/source/42886">http://pemdatabase.eu/source/42886</a>
	Nº 12 Códices	11 <sup>th</sup> -12 <sup>th</sup> centuries	<a href="http://pemdatabase.eu/source/43118">http://pemdatabase.eu/source/43118</a>
P-BRs	Frag. 1	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/42984">http://pemdatabase.eu/source/42984</a>
	Frag. 3	13 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/43000">http://pemdatabase.eu/source/43000</a>
	Frag. 10	12 <sup>th</sup> -13 <sup>th</sup> centuries	<a href="http://pemdatabase.eu/source/43015">http://pemdatabase.eu/source/43015</a>
P-Cua	IV-3a S-Gv. 44 (22)	11 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/286">http://pemdatabase.eu/source/286</a>
	Liber Catenatus	mid-14 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/165">http://pemdatabase.eu/source/165</a>
P-G	10-9-9-1	13 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/1990">http://pemdatabase.eu/source/1990</a>
	C 192	15 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/2021">http://pemdatabase.eu/source/2021</a>
	C 623	12 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/39351">http://pemdatabase.eu/source/39351</a>
	C 1429	15 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/43041">http://pemdatabase.eu/source/43041</a>
	P 217	14 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/43074">http://pemdatabase.eu/source/43074</a>
	P 808	13 <sup>th</sup> century	<a href="http://pemdatabase.eu/source/39546">http://pemdatabase.eu/source/39546</a>
P-Ln	Alc. 162	13 <sup>th</sup> century, first third	
P-Pm	Ms. 114, Santa Cruz 24	late half of the 13 <sup>th</sup> century	

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