

# Encoded Spanish Music Heritage through Verovio: The Online Platforms *Fondo de Música Tradicional IMF-CSIC* and *Books of Hispanic Polyphony IMF-CSIC*

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## Abstract

This paper presents the recent implementation of encoded music notation in two open access platforms of the Spanish National Research Council (CSIC) devoted to traditional music and polyphony, respectively: *Fondo de Música Tradicional IMF-CSIC (FMT)*<sup>1</sup> and *Books of Hispanic Polyphony IMF-CSIC (BHP)*<sup>2</sup>. Even though, at first, both repertoires seem unconnected, they have many textual/literary and musical points in common – such as the presence/survival of old 15<sup>th</sup>–17<sup>th</sup> century texts and/or melodies of polyphonic *romances* (ballads) in the 20<sup>th</sup> century oral tradition –; future technological developments will facilitate further connections beyond the ones already found through search by text incipits and numeric melodic incipit connecting both platforms. The presentation will have two parts devoted to *FMT* (with more than 20.000 images of melodies in open access, it is the largest online archive of folklore in the Hispanic world; it is used also for OMR research) and *BHP* (a reference online catalogue for polyphonic choir books in Spain and books with Hispanic polyphony elsewhere). After a brief explanation about the origin and scope of the repertoires covered in each platform, a few examples of encoded transcriptions of a melody, of an incipit in mensural notation, and of a polyphonic work (in MusicXML, \*\*mens, and \*\*kern; MEI can be used, too) rendered through Verovio will illustrate the potential development of *FMT* and *BHP*. Both websites constitute leading educational and musicological resources of the very rich Spanish music heritage, inviting national and international collaboration (crowdsourcing) to expand the contents of both platforms and to develop their digital technology.

## Introduction

This paper presents the recent implementation of encoded music notation examples in two open access platforms devoted to Spanish traditional music and polyphony, respectively: *Fondo de Música Tradicional IMF-CSIC (FMT)*<sup>1</sup> and *Books of Hispanic Polyphony IMF-CSIC (BHP)*<sup>2</sup>. The presentation will have two parts devoted to *FMT* and *BHP* to explain briefly their origins and scope of the repertoires covered in each platform; musical examples of a melody, of an incipit in mensural notation, and of a polyphonic work will illustrate their rendering through Verovio.

1 <https://musicatradicional.eu> (accessed January 12, 2022).

2 <https://hispanicpolyphony.eu> (accessed January 12, 2022).

## 1 Origins of the *Fondo de Música Tradicional IMF-CSIC (FMT)* and Encoded Transcription of Spanish Folk Tunes<sup>3</sup>

In 1943, the Spanish musicologist Higinio Anglès (1888–1969) founded the former “Instituto Español de Musicología” of the CSIC (Consejo Superior de Investigaciones Científicas / Spanish National Research Council) in Barcelona, one of the main projects of which was to collect pieces of oral tradition throughout Spain. For these so-called “misiones folclóricas” (1944–1960), Anglès engaged the most prestigious folklorists of the country and invited Marius Schneider (at that time head of the Phonogramm-Archiv in Berlin) to direct the Folklore department. As a result of this project, more than 25.000 melodies were collected on paper from close to 3.000 locations, as well as cards with basic data about the informants who sang/played these pieces. Although between 1951 and 1987 the CSIC published five volumes with transcriptions of pieces collected through these “Misiones” (and competitions, “Concursos”, to collect repertory), most of the materials remained unpublished and basically forgotten for several decades at my institution, the Institución Milá y Fontanals of Research in Humanities (IMF-CSIC), heir to the former Instituto Español de Musicología.

In 2010, I started to organize and catalogue all these materials (with the help of my colleague at the IMF-CSIC, María Gembero-Ustárroz, and former PhD student Ascensión Mazuela-Angueta, now teaching at the University of Granada); in September 2012, Jan Koláček helped us to create the online platform *Fondo de Música Tradicional IMF-CSIC*, presenting it to the public on 4 February 2013 with the first thousand items. It should be pointed out that those materials had no name, and thus its current name *Fondo de Música Tradicional* is new, referring both to an old ‘physical archive’ at the IMF-CSIC in Barcelona and to an ‘online platform’ to present the materials. At that time, and with no financing, the priority was to digitize thousands of cards of the melodies and of the informants’ data to present the information online in a structured database (MySQL in DRUPAL) which could be useful both to researchers and the general public. From the very beginning, we wanted to incorporate music incipits, and we adopted a useful numeric incipit for practical reasons, since a complete music transcription and encoding of the melodies was out of the question at that time due to our limited financial and technological resources.<sup>4</sup> Since then, the platform has incorporated digitized IMF-CSIC audios from cylinders, magnetic wire, magnetic tape from the “Misiones” as well as other related materials from other sources. By 2016, an international review stated: *FMT* “[...] presents in digital form the single most important archive of Spanish musical folklore” [3, p. 869].

Now that *FMT* has included more than 46.000 pieces (from *FMT* and other sources) and is getting closer to presenting most of the melodies held at the IMF-CSIC, we can look forward to incorporating the full text of the songs, complete transcriptions of the melodies, and their encodings. In recent years, we have experimented with exporting transcriptions from Sibelius or MuseScore to MusicXML, which is rendered in *FMT* through Verovio<sup>5</sup>, with SVG being the front-end notation graphics seen on the website (see Figure 1). This result is the fruit of collaborative work among members of our project: Antonio Pardo Cayuela (Universidad de Murcia) and webmaster Jan Koláček, based on the initial modern transcription by Esperanza Clares (Universidad de Murcia). We are engaging undergraduate and graduate students to transcribe melodies of the *FMT*, export them to MusicXML (MEI or **\*\*kern**), and incorporate them into the website as part of academic internship opportunities at different universities; we hope that this kind of crowdsourcing will be very productive in many respects. *FMT* currently has over 800 modern transcriptions that can be searched under the menu “Pieces”.

3 For a full discussion of *FMT* and *BHP*, see [4].

4 The numeric music incipit we created for *FMT* represents the intervals between the first few notes of a piece, indicating whether the interval is ascending (+), descending (-), or represents a repeated note (=0); the number corresponds to the number of semitones (C-D is +2). For instance, the music incipit F-A-C-D-F-D can be searched through its equivalent numeric incipit: +4+3+2+3-3. This simple system helps to identify identical melodies transposed to different tonalities and/or with different texts, as well as to distinguish between different musical versions of pieces with identical text; for instance, this incipit +4+3+2+3-3 helped identify two instances of the same melody, one without text starting on F and the other with text starting on D.

5 <https://www.verovio.org/index.xhtml> (accessed January 12, 2022).



**CSIC**  
CONSEJO SUPERIOR DE INVESTIGACIONES CIENTÍFICAS

Fondo de Música Tradicional  
Fons de Música Tradicional  
**Traditional Music Holdings**





**Institució Milà i Fontanals, Barcelona**  
Musicology

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Source navigation:

Piece navigation:

### Canción de cuna (Mi nenica es mi nenica)

View
Edit

---

<b>Text incipit:</b>	Mi nenica es mi nenica
<b>Music incipit:</b>	=0=0=0+4+1+2
<b>Starting pitch:</b>	mi
<b>Informant:</b>	Navarro Sastre, Eduarda
<b>Source:</b>	MISIÓN M16
<b>Piece ID:</b>	M16-027
<b>Piece type:</b>	Vocal
<b>Language:</b>	Español/Spanish
<b>Genre:</b>	Canto ▾ Canción de cuna
<b>Location (official):</b>	Región de Murcia ▾ Murcia ▾ Lorca
<b>Audiovisuales:</b>	Audio ▾ MIDI
<b>Submission's author:</b>	Esperanza Clares Clares Antonio Pardo-Cayuela

**Submitted by:** Esperanza Clares Clares - 04 Mar 2013  
**Last modified by:** María Gembero-Ustárroz - 19 Jul 2020

**How to cite**  
Esperanza Clares Clares, Antonio Pardo-Cayuela, "Canción de cuna (Mi nenica es mi nenica)", *Fondo de Música Tradicional IMF-CSIC*, ed. E. Ros-Fábricas (accession date: 27 Apr 2021), <https://musicatradicional.eu/piece/12280>

**Notation**

Canción de cuna M16-027  
Lorca (Murcia)



[View MusicXML](#)

**Navigation**

- Add Piece
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- Add Informant
- Add Publication
- Add Document
- Add Performer
- Add Rendition
- Add Collaborating institution
- Add Collaborating person
- Translate menu

**Audio and/or images**

Canción de cuna (Mi nenica es mi nenica)




```

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**Figure 1:** FMT presentation of the lullaby “Mi nenica es mi nenica”, collected in 1947 in Lorca (Murcia), with images of the original cards of the transcription of the music and text; it also includes the modern transcription (a MusicXML file rendered through Verovio). See *Fondo de Música Tradicional IMF-CSIC*: <https://musicatradicional.eu/piece/12280> (accessed January 12, 2022).

We are also collaborating with the R+D project “Handwritten Spanish music heritage preservation by automatic transcription (TIN2017-86576-r)” carried out by Jorge Calvo-Zaragoza, David Rizo Valero, and José Manuel Iñesta Quereda in order to apply the Optical Music Recognition (OMR) application MuRET, developed by them at the Universidad de Alicante, Spain, to *FMT*; this research will certainly speed up the transcription/encoding process [1]. We are planning to incorporate user-friendly one-click melodic analysis and other music searching tools into *FMT*.

*FMT* is still a modest project from the music encoding point of view – especially when compared, for instance, to such formidable repositories as the Dutch Song Database<sup>6</sup> –, but it constitutes a very important and well-documented collection of Spanish music heritage with ramifications in Latin America. Moreover, the future incorporation of the *FMT* as a dataset for Music Information Retrieval (MIR) research could open new vistas. As pointed out by Peter van Kranenburg and Berit Janssen, the same dataset of 20.000 songs, the *Essen Associative Code and Folksong Database (EsAC)*<sup>7</sup> is used over and over (de-contextualized) “to test segmentation algorithms, melodic similarity measures, pattern discovery algorithms, and the like”<sup>8</sup>, and perhaps *FMT* could provide another alternative.

## 2 Origins of *Books of Hispanic Polyphony IMF-CSIC (BHP)* and Encoded Transcription of Spanish Polyphony

Soon after the creation of the *Fondo de Música Tradicional IMF-CSIC* – designed for uncatalogued holdings in my institution (literally in the office next door) –, I realized that a similar platform would be very useful for my own research on Spanish polyphony and of interest to the community of scholars. Thus, I started *Books of Hispanic Polyphony IMF-CSIC (BHP)*. Why was it necessary? At that time, in 2013, and still today, we could say (although we have now a better idea thanks to *BHP*):

- We don’t know how many books of polyphony there are in Spain.
- We don’t know how many books outside Spain contain Hispanic polyphony.
- Catalogues and other existing reference works are very useful, but
  - they may refer to a single institution only,
  - they may be cataloguing only manuscripts,
  - they may be cataloguing only printed books,
  - they may cover only a restricted chronological period (15<sup>th</sup>–16<sup>th</sup> century),
  - they may cover only a particular genre.
- *RISM (Répertoire International des Sources Musicales)*, with over 1.3 million records, is “the largest and only global organization that documents written musical sources”<sup>9</sup>. *RISM* attempts to catalogue all music to 1900 (including all Spanish/Hispanic sources), but that’s quite a lot to cover, and the Hispanic world is not well represented. *BHP* can play a collaborative role.
- All of these limitations directly affect our view of Hispanic polyphony, and in particular hinder a broader, *longue durée* perspective beyond the 16th century.
- The digital age offers new research tools.

After four years of preparatory work, our team (see *BHP* homepage) made the website available to the public in open access coinciding with our presentation during the Medieval and Renaissance Music Conference in Prague on 7 July 2017.

6 <http://www.liederenbank.nl/index.php?lan=en> (accessed January 12, 2022).

7 <http://www.esac-data.org/> (accessed January 12, 2022).

8 “An illustration of this is the way in which the EsAC collection is used in MIR research. Virtually all papers in the proceedings of the yearly conference on Music Information Retrieval (ISMIR), in which this set of melodies are used, do not show an interest in folk music as such. Instead, the melodies are taken as just a collection of labeled musical data to test segmentation algorithms, melodic similarity measures, pattern discovery algorithms, and the like. The meta-data that comes with the collections (e.g., region of origin, tune family membership, segment boundaries), are used as ground-truth data for corresponding MIR tasks” [5, p. 118].

9 <https://rism.info/index.html> (accessed January 12, 2022).

The objective of *Books of Hispanic Polyphony (BHP)* is to serve as a comprehensive research tool concerning manuscript and printed polyphonic books in Spain as well as books with Hispanic polyphony elsewhere. *BHP* has no chronological limitations, and we have started to cover the period from the 15th through the 20th century. We do not provide images of the sources, unless the institutions that hold them do so through repositories or permission. In such cases, we incorporate the appropriate links; for instance, we have found the following repositories particularly useful: (a) *Biblioteca Digital Hispánica*<sup>10</sup> for books at the Biblioteca Nacional de España in Madrid; (b) *Digital Vatican Library*<sup>11</sup> for choir books at the Biblioteca Apostolica Vaticana; and (c) the digital collections at the Bayerische Staatsbibliothek in Munich,<sup>12</sup> among others. We also incorporate links to manuscripts described in *Digital Image Archive of Medieval Music (DIAMM)*,<sup>13</sup> to printed books in *Printed Sacred Music Database 1500–1800*,<sup>14</sup> to *Portuguese Early Music Database (PEM)*,<sup>15</sup> and to other appropriate websites that could offer relevant information. Our menu with “Sources”, “Locations”, “Institutions”, “People”, “Genres”, “Works”, “Movements”, “Documents”, and “Bibliography” should give you a sense of our objective, and we are still building searching tools and different ways to connect information. We would like to serve as a reference tool and as a platform to present original research and foster international collaboration. This digital platform was initiated as part of the four-year (2013–2016) R+D Project “Libros de polifonía hispana (1450–1650): catálogo sistemático y contexto histórico-cultural” (HAR2012-33604) of the Spanish Ministry of Economy and Competitiveness. *BHP* continued to be part of the objectives – together with *FMT* – of a new R+D project “Hispanic Polyphony and Music of Oral Tradition in the Age of Digital Humanities” (HAR2016-75371-P, Spanish Ministry of Science and Innovation, 2016–2020).

Currently, *BHP* contains information about 2478 polyphonic sources, 545 institutions, 1821 people (musicians and non-musicians related to books of polyphony), 5929 works, 6029 movements of works, 104 documents (such as old inventories), and 1770 bibliographic items; it has become an international reference work in the field. As we did with *FMT*, we included a search option by numeric music incipit as a helping aid to locate possible concordances among pieces for the identification of anonymous works; the only difference between *FMT* and *BHP* in this respect is the addition of =P to indicate the presence of a pause/rest of any length in the music incipit of a polyphonic voice in *BHP*.<sup>16</sup>

An important aspect of the project is the incorporation of music encodings using two Humdrum formats: \*\*mens for incipits in original, mensural notation, and \*\*kern for full transcriptions of polyphonic works in modern notation, both rendered through Verovio. This has been accomplished thanks to the collaboration with David Rizo Valero (Universidad de Alicante), Antonio Pardo Cayuela (Universidad de Murcia), and our webmaster Jan Kolářek; in the near future, these and other formats will allow us to incorporate sophisticated analytical tools. See in Figure 2 the incipit in mensural notation of “Qui pius prudens” from the hymn “Iste confessor” by Francisco Guerrero (1528–1599), and in Figure 3 the beginning of the full transcription of this work in the webpage of *BHP*.<sup>17</sup>

10 <http://www.bne.es/es/Catalogos/BibliotecaDigitalHispanica/Colecciones/> (accessed January 12, 2022).

11 <https://digi.vatlib.it/all/> (accessed January 12, 2022).

12 <https://www.bsb-muenchen.de/en/collections/music/about-the-collection/> (accessed January 12, 2022).


13 <https://www.diamm.ac.uk/> (accessed January 12, 2022).

14 <http://www.printed-sacred-music.org/> (accessed January 12, 2022).

15 <http://pemdatabse.eu/> (accessed January 12, 2022).


16 See the alphabetical list of piece titles with the corresponding numeric music incipit in the menu “Movements”: <https://hispanicpolyphony.eu/movements> (accessed January 12, 2022).


17 For information and multiple resources about Humdrum, see *CCARH Humdrum Portal* (<http://humdrum.ccarh.org/>, accessed January 12, 2022).




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Libros de polifonía hispana  
Llibres de polifonia hispana  
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### Navigation

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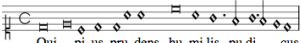
### Navigation

Qui pius, prudens (18v-23r). Iste confessor ▼

## Qui pius, prudens (18v-23r). Iste confessor

View
Edit
Revisions

<b>Order No.:</b>	05.01
<b>Source:</b>	E-ORIC 06
<b>Work ID:</b>	E-ORIC 06 (18v-23r)
<b>Text incipit:</b>	Qui pius, prudens
<b>Attribution:</b>	Guerrero, Francisco
<b>No. of voices:</b>	4
<b>Language:</b>	Latin
<b>Text underlay:</b>	t;t;t;t
<b>Clef (S):</b>	C1
<b>Mensuration sign (S):</b>	C
<b>Starting note (S):</b>	re
<b>Music incipit (S):</b>	+2-4+2=0+7=0+3-3-2-2+2-2-1-2
<b>Clef (A):</b>	C3
<b>Mensuration sign (A):</b>	C
<b>Starting note (A):</b>	la
<b>Clef (T):</b>	C4
<b>Mensuration sign (T):</b>	C
<b>Starting note (T):</b>	re
<b>Clef (B):</b>	F4
<b>Mensuration sign (B):</b>	C
<b>Starting note (B):</b>	re

Cantus 

Qui pi-us, pru-dens, hu-mi lis, pu di - cus

**Submission's author:** [Antonio Pardo-Cayuela](#)

Submitted by [Antonio](#) on Wednesday, October 10, 2018 - 12:05.

**Submitted by:** [Antonio Pardo-Cayuela](#) - 10 Oct 2018

**Last modified:** - 15 Feb 2020

**How to cite**

Antonio Pardo-Cayuela, "Qui pius, prudens (18v-23r). Iste confessor", *Books of Hispanic Polyphony*, ed. E. Ros-Fàbregas (accession date: 07 Mar 2021), <https://hispanicpolyphony.eu/movement/26874>



Qui pi-us, pru-dens, hu-mi lis, pu di - cus

**Submission's author:** [Antonio Pardo-Cayuela](#)

Submitted by [Antonio](#) on Wednesday, October 10, 2018 - 12:05.

**Submitted by:** [Antonio Pardo-Cayuela](#) - 10 Oct 2018

**Last modified:** - 15 Feb 2020

**Figure 2:** Hymn "Iste confessor" by Francisco Guerrero (1528–1599). *BHP* webpage of the polyphonic verse "Qui pius, prudens" with the music incipit of the superius voice in the original, mensural notation rendered by Verovio from encoding in \*\*mens. See *Books of Hispanic Polyphony IMF-CSIC*: <https://hispanicpolyphony.eu/movement/26874> (accessed January 12, 2022).



Source navigation:  
E-ORic 06 ▼

Piece navigation:  
05. Iste Confessor ▼

### E-ORic 06 (18v-23r)

**Order No.:** 05  
**Source:** E-ORic 06  
**Title:** Iste Confessor  
**Text incipit:** Qui pius, prudens  
**Text underlay:** t;t;t;t;  
**Ascription:** Anon.  
**Attribution:** Guerrero, Francisco  
**No. of voices:** 4  
**Scribes:** Sart, José  
**Language:** Latin  
**Genre:** Sacred vocal › Hymn  
**Date:** 18/4 (1777)  
**Location/Origins:** Comunidad Valenciana › Alicante › Orihuela

**Comments:** Alternatim and abbreviated version of *Iste confessor* included in *Liber Vesperarum Francisco Guerrero Hispalensis Ecclesiae Magistro auctore* (Roma: Domenico Bassa, 1584) (RISM G4873). This setting uses the verses of *Iste Confessor Domini colentes* instead of *Iste confessor Domini sacratus*, used in *Liber vesperarum*. The music applied to verse 4 (*Unde nunc noster chorus in honorem*, canon in diapason) in *Liber Vesperarum*'s version has been suppressed.

**Text:** [Iste confessor Domini colentes variant].

1. Iste confessor Domini colentes/ Quem pie laudant populi per orbem:/ Hac die lætus meruit beatas/ Scandere sedes.  
 [If it is not the day of his death, the last line is changed to:] Hac die lætus meruit supremos/ Laudis honores.
2. Qui pius, prudens, humilis, pudicus/ Sobriam duxit sine labe vitam,/ Donec humanos animavit auræ/ Spiritus artus.
3. Cuius ob præstans meritum frequenter,/ Ægra quæ passim iacueremembra,/ Viribus morbi domitis, salutem/ Restituntur.
4. Noster hinc illi, Chorus obsequentem/ Concinit laudem, celebresque palmas;/ Ut piis ejus precibus juvemur/ Omne per ævum.
5. Sit salus illi decus atque virtus,/ Qui super cæli solio coruscans/ Totius mundi seriem gubernat/ Trinus, & unus. Amen.

The image shows a musical score for a four-voice polyphonic setting of the hymn 'Iste Confessor'. The score is written for four voices: Cantus (Soprano), Altus (Alto), Tenor, and Bassus. The lyrics are in Latin and are written below the musical notation. The score begins with the text '2. Qui pius, prudens, humilis, pudicus...' and continues with several staves of music and lyrics. The lyrics are: '2. Qui pius, prudens, humilis, pudicus, Sobriam duxit sine labe vitam, Donec humanos animavit auræ, Spiritus artus. 3. Cuius ob præstans meritum frequenter, Ægra quæ passim iacueremembra, Viribus morbi domitis, salutem Restituntur. 4. Noster hinc illi, Chorus obsequentem Concinit laudem, celebresque palmas, Ut piis ejus precibus juvemur Omne per ævum. 5. Sit salus illi decus atque virtus, Qui super cæli solio coruscans Totius mundi seriem gubernat Trinus, & unus. Amen.'

**Figure 3:** Webpage of BHP with the hymn "Iste confessor" by Francisco Guerrero (1528–1599) in the choir book *Libro de Partitura de Atril* 6 at the Cathedral of Orihuela (Alicante); image includes the beginning of the complete four-voice polyphonic transcription, starting with "Qui pius, prudens" rendered by Verovio from \*\*kern. See *Books of Hispanic Polyphony IMF-CSIC*: <https://hispanicpolyphony.eu/piece/16370> (accessed January 12, 2022).

Since our webmaster, Jan Koláček, is also responsible for other related websites, we are exploring the simultaneous search in several databases. In the menus “Works” and “Movements” in *BHP*, a search by “Title” offers additional searches in two websites: 1) *Portuguese Early Music Database (PEM)*; and 2) *Fondo de Música Tradicional IMF-CSIC (FMT)*. For instance, a search by “Title” in *BHP* of the word “Domine” finds 278 pieces containing that word; at the end of the list, the option “Click here to search in external resources (*PEM*)” provides 84 additional findings in that database, and 4 other works after clicking on “Click here to search in *Fondo de Música Tradicional IMF-CSIC*”. The connection between *BHP* and *FMT* is particularly valuable to research possible relationships between melodies and texts from old romances and *villancicos* in Spanish (15<sup>th</sup>–17<sup>th</sup> century) and the repertory of oral tradition collected in the 20<sup>th</sup> century [2]. See Figure 4, where a search for “Triste de mi” finds the *villancico* “Triste qué será de mi” in the *Cancionero Musical de Palacio* (E-Mp II-1335; 1495–1520) and six pieces in *FMT*, probably not related in this case but containing the words “triste de mi”. We hope to apply simultaneous search of encoded music notation soon.

*BHP* has also adopted the list of liturgical feasts (“List of feasts”) from *Cantus: A Database for Ecclesiastical Chant – Inventories of Chant Sources*;<sup>18</sup> we thank Debra Lacoste (University of Waterloo, Canada) for her permission to do so. This way, in the near future, a search for a particular feast in *BHP* will provide liturgically related polyphonic works and, with an additional click, plainchant melodies for the same celebration listed in *Cantus*.

The screenshot shows the BHP website interface. At the top, there is a navigation menu with links: Home, Sources, Locations, Institutions, People, Genres, Works, Movements, Documentation, Bibliography, and Contact. Below the menu, there are flags for Spain, Mexico, and the United Kingdom. The main content area is titled "List of works" and includes an "Info" section. It displays search filters for Attribution, MS / Print, Cantus firmus / Title, Liturgical feast, Genre, and Title. The search results table shows one result from the *Cancionero Musical de Palacio* and six results from the *Fondo de Música Tradicional IMF-CSIC*.

Title	Work ID	Attribution	MS / Print	Date
Triste qué será de mí	E-Mp II-1335 (lxxxii/90v)	Torre, Francisco de la	MS	15/4-16/1 (1496-1520)

Title	Melody	Genre	Location	Informant	Piece ID
<b>Habanera a dos voces. Vivas</b> Triste de mí que vivo sin esperanza	=0=0=0+2+1=0	Canto y baile	Andalucía	Almazán, Julio	C04-11
<b>Dónde vas Alfonso XII</b> Dónde vas, Alfonso doce, donde vas, triste de mi	+1+2+9-4-5+2-2	Canto	Aragón	Garcés Lample, Anselma	M21-470
<b>Dónde vas, Alfonso doce</b> Dónde vas, Alfonso doce, dónde vas, triste de mi	=0=0+2-4+2-3-2-2+9=0=0+2+1-1-2-2	Canto	Aragón	Castillón Huerri, Isabel	M28-708
<b>Dónde vas Alfonso XII</b> Dónde vas Alfonso doce dónde vas, triste de mi	-1-2-5+3+2-2-1	Canto	Aragón	Bielsa Cazcana, Antonia	M20-126
<b>Soledad de las campanas</b> Soledad de las campanas soledad triste de mi	+4+3+2-2+2-2	Canto	Aragón		C01-a114
<b>Triste de mi camilla</b> Triste de mi camilla	=0=0=0+4+3=0	Canto	Andalucía	Moreno Caraballo, Milagros	M39-0637

Search in PEM Database  
[» Click here to search in external resources \(PEM\)](#)

**Figure 4:** A search in *BHP* by title “Triste de mi” finds one piece in the *Cancionero Musical de Palacio* (E-Mp-1335; 1495–1520) and, after a simultaneous search in *FMT*, six other pieces of oral tradition collected in the 20<sup>th</sup> century containing those words.

18 <http://cantus.uwaterloo.ca/> (accessed January 12, 2022).



## Conclusion

Altogether, both platforms, *Fondo de Musica Tradicional IMF-CSIC* and *Books of Hispanic Polyphony IMF-CSIC*, constitute leading educational and musicological research resources for the very rich Spanish music heritage, inviting national and international collaboration (crowdsourcing) to expand the contents of both platforms and to develop their digital technology related to encoded music notation and analytical tools.

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