# making the earliest audio recordings accessible to all people for all time

**CONTACT:** Meagan Hennessey

press@firstsounds.org

**David Giovannoni** info@firstsounds.org

# The World's Oldest Sound Recordings Played For The First Time

A group of researchers has succeeded in playing a sound recording of a human voice made in 1860 – 17 years before Thomas Edison invented the phonograph.

Roughly ten seconds in length, the recording is of a person singing "Au clair de la lune, Pierrot répondit" – a snippet from a French folksong. It was made on April 9, 1860 by Parisian inventor Édouard-Léon Scott de Martinville on his "phonautograph" – a device that scratched sound waves onto a sheet of paper blackened by the smoke of an oil lamp.

Scott never dreamed of playing back his recordings. But this morning, the dream Scott never had will come true.

A cadre of audio historians, recording engineers, and scientists working in conjunction with the First Sounds initiative has transformed Scott's smoked-paper tracings into sound. They will premiere *Au Clair de la Lune* at the annual conference of the Association for Recorded Sound Collections at Stanford University this morning. Examples of sounds evoked from French and American phonautograph recordings made between 1857 and 1878 will also be played publicly for the first time.

First Sounds historians Patrick Feaster and David Giovannoni began their search for surviving phonautograph recordings, or phonautograms, in the fall of 2007. In October they studied 19 examples held by the Edison National Historic Site, made in 1878 by Edison and his associates to study the noise of the Metropolitan Elevated Railroad in Manhattan. In December they identified two specimens at the *Institut National de la Propriété Industrielle* (the French patent office), which Léon Scott deposited with his patent applications of 1857 and 1859. And in February they confirmed the survival of nearly a dozen phonautograms deposited by Scott at the *Académie des Sciences* of the *Institut de France*. These include Scott's first experiments from 1853 or 1854, as well as his most technically-accomplished recordings from 1860.

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Giovannoni worked with curators at each institution to make very high-resolution, preservation-grade digital scans of every phonautogram in their care.

Earl Cornell and Carl Haber, scientists at Lawrence Berkeley National Laboratory, converted these scans into sound using technology developed to preserve and create access to a wide variety of early recordings on mechanical carriers, such as phonograph discs and cylinders. The essence of the Berkeley technology, which was developed in collaboration with the Library of Congress, is to apply non-contact digital imaging to any material containing a recorded "groove". The imaging results in a digital representation of the record which can then be played on the computer with a virtual stylus. Being non-contact, the technology protects delicate samples from further damage or degradation. This approach has been used successfully on many phonograph discs and cylinders, and its application to the phonautograph recording was a straightforward extension. It is novel however that the phonautograph recordings were never meant to be played.

Feaster, Giovannoni, and First Sounds audio engineer Richard Martin jointly undertook the final steps of audio interpretation and restoration. They removed speed fluctuations inherent in the hand-cranked recordings, adjusted the speed of playback, and patiently coaxed the voice from behind a curtain of noise. Like the subjects captured in the earliest photographs, the sounds are ghostly but immediately recognizable.

Press should present credentials at the door of Braun Music Center on the campus of Stanford University 8:30–8:45 a.m. Park in the adjacent Tressider lot. Presentation is 9:00–10:30 a.m. Interviews will be booked through 5:00 p.m.

#### About First Sounds www.firstsounds.org

First Sounds is an informal collaborative of audio historians, recording engineers, sound archivists, scientists, and other individuals and organizations who aim to make mankind's earliest sound recordings available to all people for all time. It was established in 2007 by David Giovannoni of Derwood, MD; Patrick Feaster of Indiana University, Bloomington IN; and Richard Martin and Meagan Hennessey, owners of Archeophone Records of Champaign, IL. During its first year First Sounds has undertaken extensive original research, forged partnerships and preserved recordings in public and private archives, and brought together experts to accomplish technological firsts. More information about First Sounds and the earliest recordings – including sound files of *Au Clair de la Lune* – are at <a href="https://www.firstsounds.org">www.firstsounds.org</a>.



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## About Berkeley Lab <a href="http://www.lbl.gov">http://www.lbl.gov</a>

Berkeley Lab is a U.S. Department of Energy national laboratory located in Berkeley, California. It conducts unclassified scientific research and is managed by the University of California. The Berkeley Lab research on recorded sound preservation and access has been supported by the Library of Congress, the National Endowment for the Humanities, the Institute of Museum and Library Services, The National Archives and Records Administration, the University of California, the Dept. of Energy, the Andrew P. Mellon Foundation, and the John Simon Guggenheim Memorial Foundation.

## About ARSC www.arsc-audio.org

Founded in 1966, the Association for Recorded Sound Collections (ARSC) is an international, non-profit organization dedicated to research, study, publication, and information exchange surrounding all aspects of recordings and recorded sound.

With over one thousand members from twenty-three countries, the organization is comprehensive in scope and reflects the interests and concerns of its members, including: archivists, librarians, historians, musicians, students, discographers, reviewers, media producers, and recording engineers.

Through publications, grants and awards, conferences, and the work of its committees, the Association provides a forum for the development and dissemination of discographic information in all fields and periods of recording and in all sound media. In addition, ARSC works to promote the exchange and dissemination of research and information about historical recordings, and to foster an increased awareness of their importance as part of any cultural heritage.

#### **About the Archives**

The Académie des Sciences was founded in 1666 to encourage and protect the spirit of French scientific research and is one of five academies comprising the *Institut de France*. The oldest recording of the human voice heard today, from 1860, has been in the care of the Académie des Sciences de l'Institut de France since it was deposited in 1861. www.academie-sciences.fr

The *Institut National de la Propriété Industrielle*, or INPI, is the French patent office in Paris. The oldest recordings played today have been in the care of INPI since they were deposited in 1857 and 1859. <a href="www.inpi.fr">www.inpi.fr</a>

The **Edison National Historic Site** in West Orange, NJ, is administered by the U.S. Department of the Interior, National Park Service. The 1878 phonautogram recordings heard today and the accompanying Laboratory Notebook are under their care. <a href="www.nps.gov/edis">www.nps.gov/edis</a>

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