

Paganini's violin gets X-ray treatment in quest of sound secrets

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French experts fired X-rays at a 18th-century violin worth millions this

weekend hoping to discover the secret of its magical sound, they said Monday.

The violin, dubbed "Il Cannone" (the cannon) because of its powerful sound, was Italian composer and violin virtuoso Niccolò Paganini's favorite.

The maestro from the Italian city of Genoa played it for decades before it became the property of his home city after his death in 1840.

The violin, made by instrument maker Giuseppe Bartolomeo Guarneri del Gesù in 1743, is now only brought out from time to time for the world's best to play, including the winners of Genoa's Premio Paganini international violin competition.

The European Synchrotron Radiation Facility (ESRF), a particle accelerator in the southeastern city of Grenoble, scanned the instrument down to the cellular structure of its wood.

The idea is to create a 3D model of the violin in and out of which people can zoom, down to a micron, or millionth of a meter.

"The first goal is conservation," said Paul Tafforeau of the ESRF.

"If ever any flaws need repairing, we will have all the details."

But they also hoped the "non-destructive analysis" would help shed light on why it plays so beautifully.

"It's an exceptional instrument in terms of its sound qualities," Tafforeau said.

"With this data, we hope to better understand why."

The detailed analysis of the X-rays will take several months.

"Working on this violin is like a dream," Tafforeau said.

Luigi Paolasini, who was in charge of the project at the ESRF, said the violin had been insured for a value of 30 million euros (\$32 million) to travel from Genoa to Grenoble.

"The logistics were very complicated because we're not a museum that would have experience in moving works of art around," Paolasini said.

Whatever the outcome of the analysis, the guiding principle for any [restoration work](#) on the instrument is "to exercise extreme caution, or abstain altogether", said Alberto Giordano, a curator of precious instruments in Genoa.

"I get older, but the [violin](#) stays the same, and that's the way it should be," he said.

"Just like the picture of Dorian Gray, it stays fresh as a rose," Giordano added in reference to a novel by Oscar Wilde in which a painting of a man ages in his stead in an attic, allowing him to remain eternally young.

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