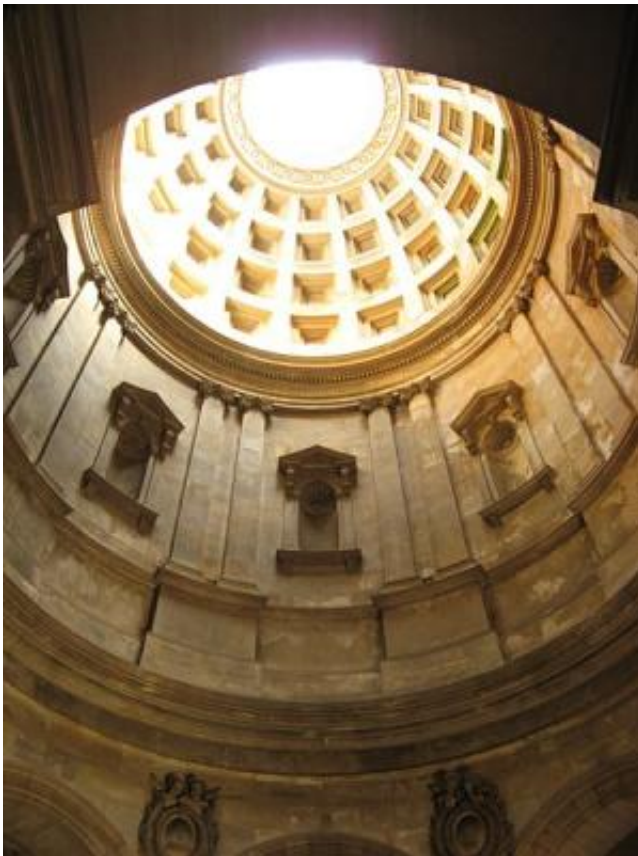


# New world record set for longest duration echo in a man-made structure

January 17 2014, by Bob Yirka

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Hamilton Mausoleum. Credit: Wikipedia

(Phys.org) —The record for the longest duration echo in a man-made structure has been decimated by a single shot from a blank loaded pistol—an amazing 112 seconds. It happened inside an oil storage tank buried in the hard rock of a hillside in the Scottish Highlands. The

previous record was a paltry 15 second reverberation in Hamilton Mausoleum in Lanarkshire.

The oil storage tank was one of six buried in the Highlands (at Ross Shire) just prior to Britain's engagement in WWII—they are connected via tunnels and were intended as a storage depot for fuel for warships stationed at nearby Invergordon. The hope was that if Britain entered the war, fuel for the warships would be protected from long range German bombers.

The [echo](#) test was conducted by Allan Kilpatrick, an expert on the history of Inchindown (the official name of the oil storage tank facility) and Professor of Acoustic Engineering Trevor Cox. Kilpatrick fired the pistol about a third of the way into the huge tank, while Cox did the timing from a third of the way from its end. The result was a noise that bounced around inside the tank for close to two minutes before dying out. The long echo has been recognized by the Guinness Book of World Records as the longest ever inside a man-made structure.

The [fuel tank](#) is clearly very large, able to hold over 25 million liters of fuel—it's long too, about twice that of a soccer field. But it's mostly likely the walls that most contribute to the amazingly long echoes—they're 45 centimeters thick.

In speaking with the media, Cox suggested that the unusual acoustics in the tank might possibly lend themselves to musical compositions. His simple experiments yelling while inside the tank suggested that because the reverberations lasted so long, a person could actually harmonize with themselves if they so desired.

Inchindown has not been used as a fuel storage facility for several years—its last known actual use was during the Falklands War in 1982.

Today, the site is shuttered and the only people allowed inside are those on scheduled tours.

**More information:** via [Independent](#)

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