

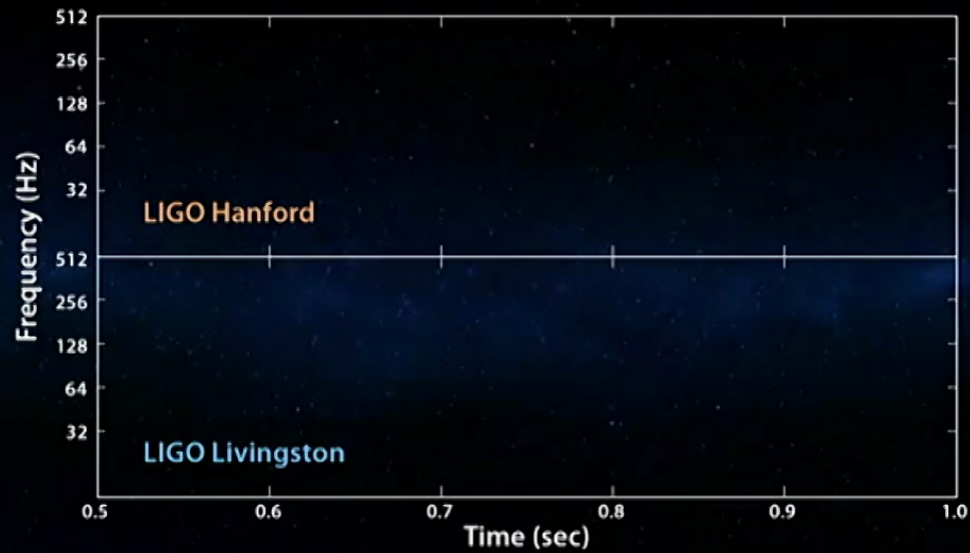
Title: Janna Levin: Black Hole Blues and Other Songs from Outer Space

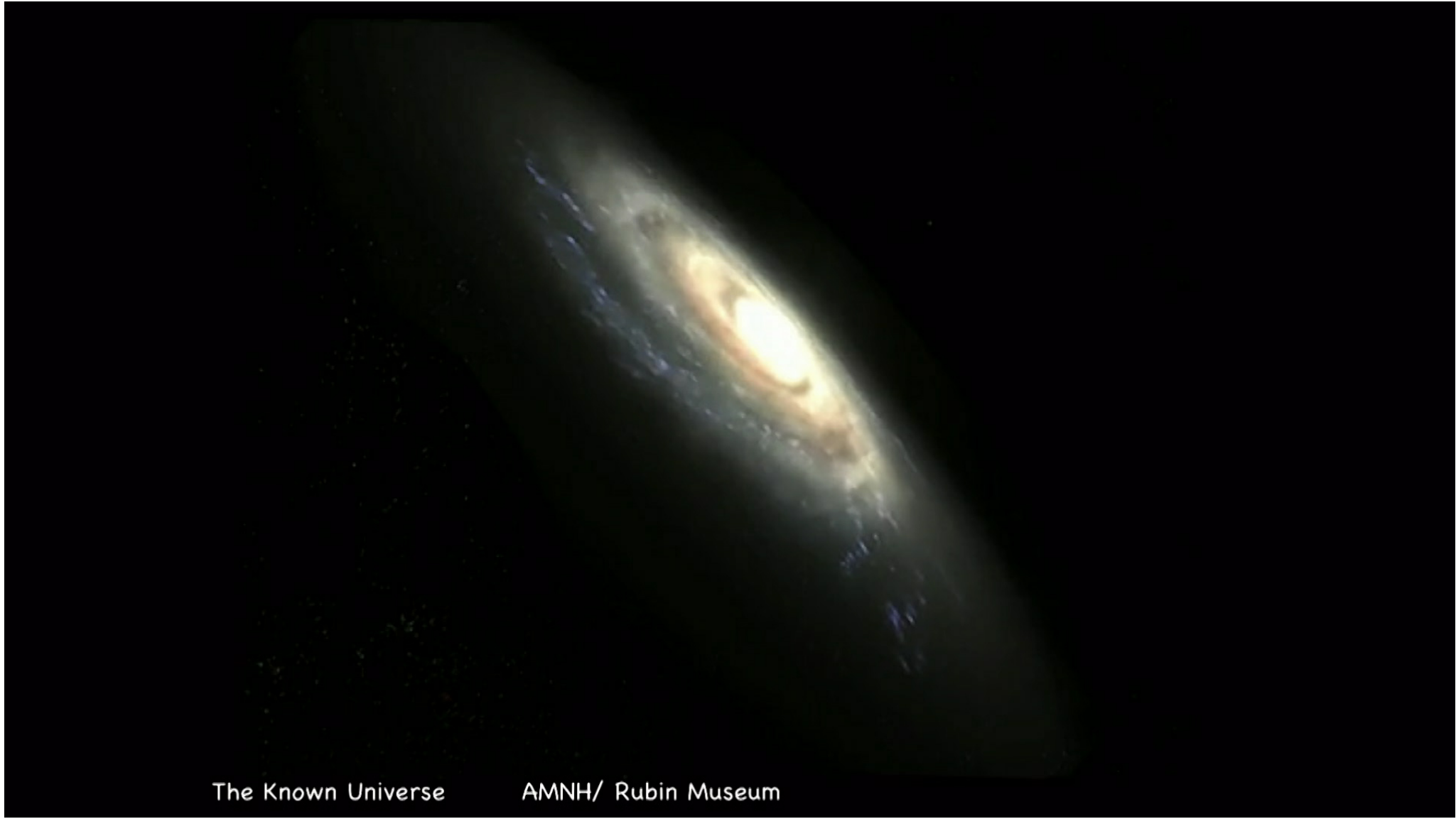
Date: May 03, 2017 07:00 PM

URL: <http://pirsa.org/17050000>

Abstract: <p>More than a billion years ago, two black holes collided. In the final second of their long life together, the black holes banged out a rhythm like mallets on a drum, creating gravitational waves â€“ ripples in the shape of spacetime. One hundred years ago, Albert Einstein predicted the existence of such waves, though it seemed improbable â€“ if not outright impossible â€“ that weâ€™d ever be able to actually detect them. They were long considered too faint for any earthbound experiment to measure. Undaunted, experimentalists were determined to measure these Lilliputian ripples, and after many decades of work and collaboration, they built LIGO â€“ the Laser Interferometer Gravitational-Wave Observatory. This incredible sophisticated and sensitive instrument was made to listen for the beat of that distant drum. In 2015, a billion years after the two black holes collided, their waves rippled through the LIGO detectors in Louisiana and Washington. With these remarkable new observatories, we can now capture the soundtrack to accompany the silent movie of the history of our universe.</p>

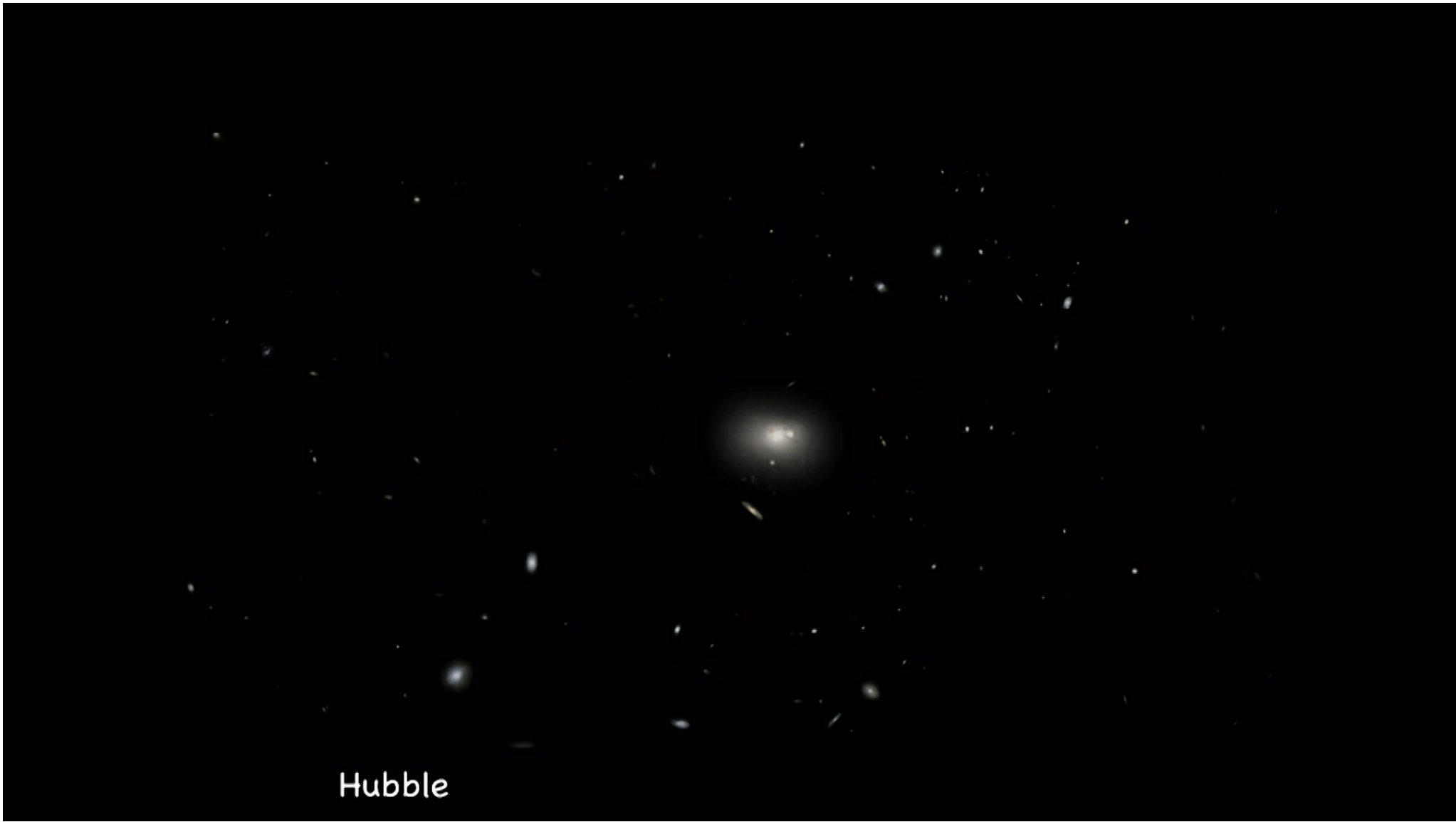
The direct recording of the
gravitational-wave sound
of two black holes colliding
1.3 billion years ago

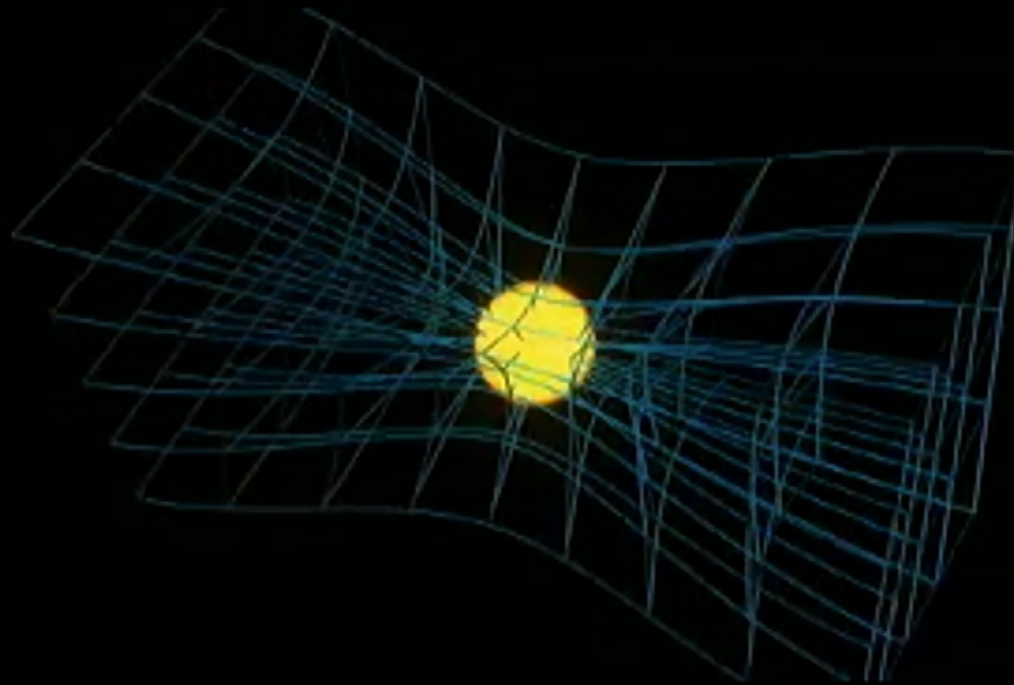




The Known Universe

AMNH/ Rubin Museum





ligo.org