Town of Livingston

PROPOSED PROCLAMATION BY THE MAYOR

WHEREAS, in his 1916 General Theory of Relativity, Albert Einstein predicted the existence of gravitational waves as ripples in the fabric of spacetime that propagate at the speed of light; and

WHEREAS, as technology has advanced, mankind has realized the possibility of directly observing gravitational waves of astrophysical origin that emanate from some of the most energetic events that occur in our Universe; and

WHEREAS, early work on gravitational-wave detection by laser interferometers included a 1972 MIT study describing a kilometer-scale interferometer and estimates of its noise sources; and

WHEREAS, in 1980 the National Science Foundation (NSF) commenced its commitment to this effort by funding the development of an interferometer at MIT and Caltech to investigate the feasibility of building a gravitational-wave antenna; and

WHEREAS, in 1984, the NSF approved a development plan for the Large Interferometric Gravitational Wave Observatory (LIGO), which led to a 1990 construction proposal; and

WHEREAS, Livingston, Louisiana was selected as one of the two sites for LIGO in 1992; and

WHEREAS, construction of the LIGO-Livingston site began in 1995, along with a companion observatory in Hanford, Washington, and whose LIGO inauguration ceremony was in 1999; and

WHEREAS, the Virgo project was approved by the French NCSR and the Italian INFN in 1993, leading to the 1996 start of construction of the Virgo observatory near Pisa, Italy, and the commissioning of the Virgo observatory in 2003; and

WHEREAS, with the establishment of the LIGO Scientific Collaboration of international physics institutes and research groups in 1997, and the Virgo Collaboration in 2000, LIGO and Virgo were together dedicated to the search for gravitational waves; and

WHEREAS, on September 14, 2015, LIGO's two sites together achieved the world's first detection of gravitational waves, whose existence had been predicted 99 years earlier by Albert Einstein, and whose source was the coalescence of two black holes located 1.3 billion light-years away; and

WHEREAS, on August 14, 2017, the two LIGO sites together with the Virgo site detected gravitational waves, whose source was the coalescence of two neutron stars located 130 million light-years away, and which were also detected by 70 ground- and space-based observatories operating in the electromagnetic spectrum ranging from radio waves to gamma bursts, with this event also ushering in the era of multi-messenger astronomy; and

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WHEREAS, LIGO co-founders Rainer Weiss, Kip Thorne and Barry Barish were awarded the 2017 Nobel Prize in Physics "for decisive contributions to the LIGO detector and the observation of gravitational waves;" and

WHEREAS, IEEE, the Institute of Electrical and Electronics Engineers, is a professional association with over 423,000 members worldwide, and which has dedicated 212 IEEE Milestones honoring significant technical and scientific achievements throughout the world; and

WHEREAS, IEEE's 213th Milestone titled "Gravitational-Wave Antenna, 1972-1989" bearing a citation reading "Initially developed from 1972 to 1989, the Gravitational-Wave Antenna enabled detection of ripples in spacetime propagating at the speed of light, as predicted by Albert Einstein's 1916 Theory of General Relativity. Construction of Livingston's Laser Interferometer Gravitational-Wave Observatory (LIGO) commenced in 1995. In 2015, LIGO antennas, located here and in Washington state, first detected gravitational waves produced 1.3 billion years ago from two merging black holes" will be dedicated at the LIGO site on February 3; and

WHEREAS, Livingston, Louisiana recognizes the willingness of the NSF and the U.S. government to endorse and fund a large multi-decade scientific research program, whose success led to the extraordinary achievements of the LIGO and Virgo gravitational-wave antennas, to international cooperation, and to a better understanding of the forces of nature and humanity's place in our Universe.

NOW, THEREFORE, I, Jonathan "JT" Taylor, Mayor of the Town of Livingston, Louisiana, do hereby proclaim February 2021 as

LIGO/Virgo Gravitational-Wave Antenna Month

in the town of Livingston, Louisiana, and I encourage all people in our community and in the state of Louisiana, as well as anyone with an appreciation of these dramatic achievements, to join me in this special observance.

Signed and sealed with the official seal of the town of Livingston, Louisiana, this 26 day of 2021, A.D., Two Thousand and Twenty-One, at Livingston, Louisiana.

Jonathan "JT" Taylor,
Mayor

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