



LIGO

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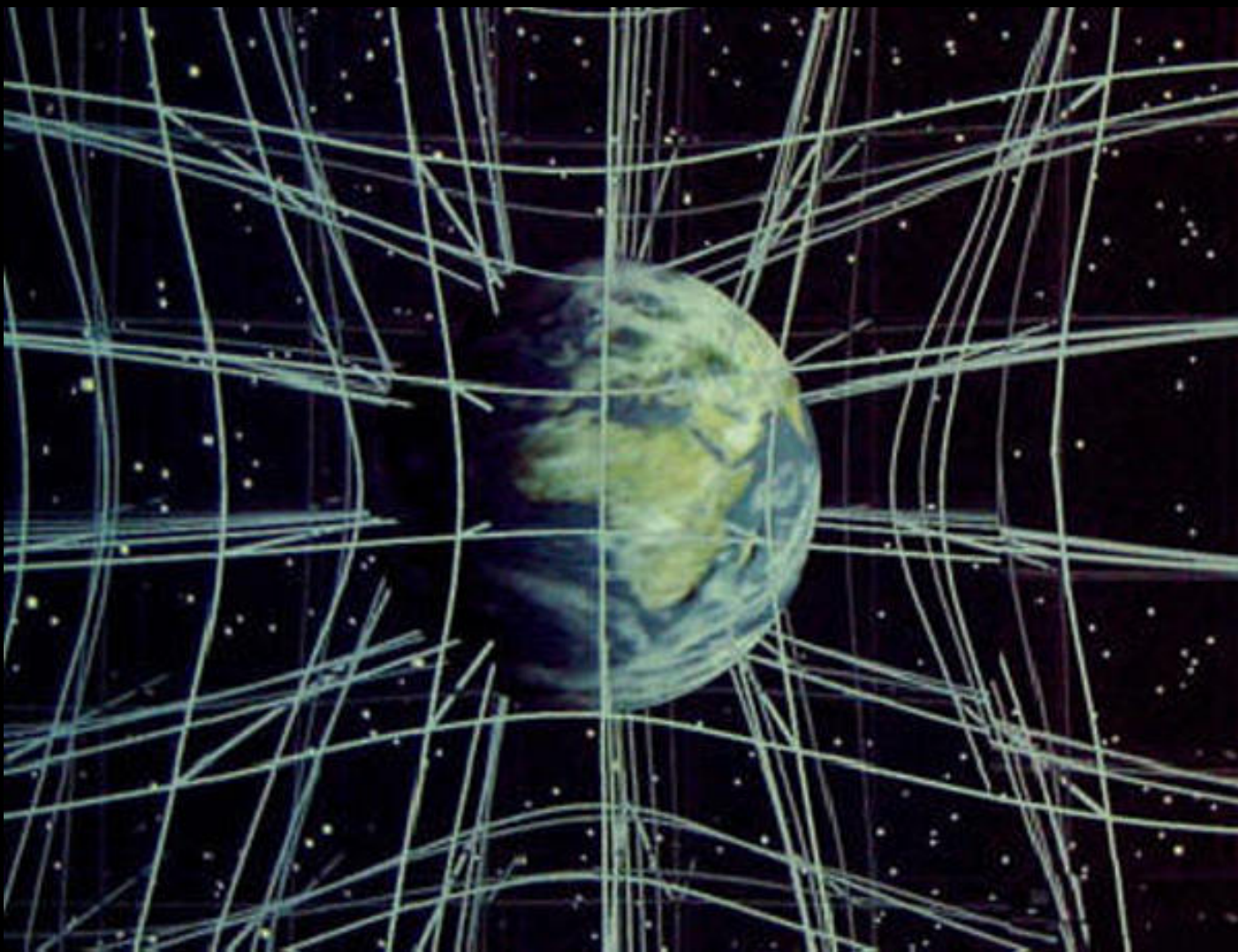
@LigoHanfordObservatory

Newton's View circa 1687



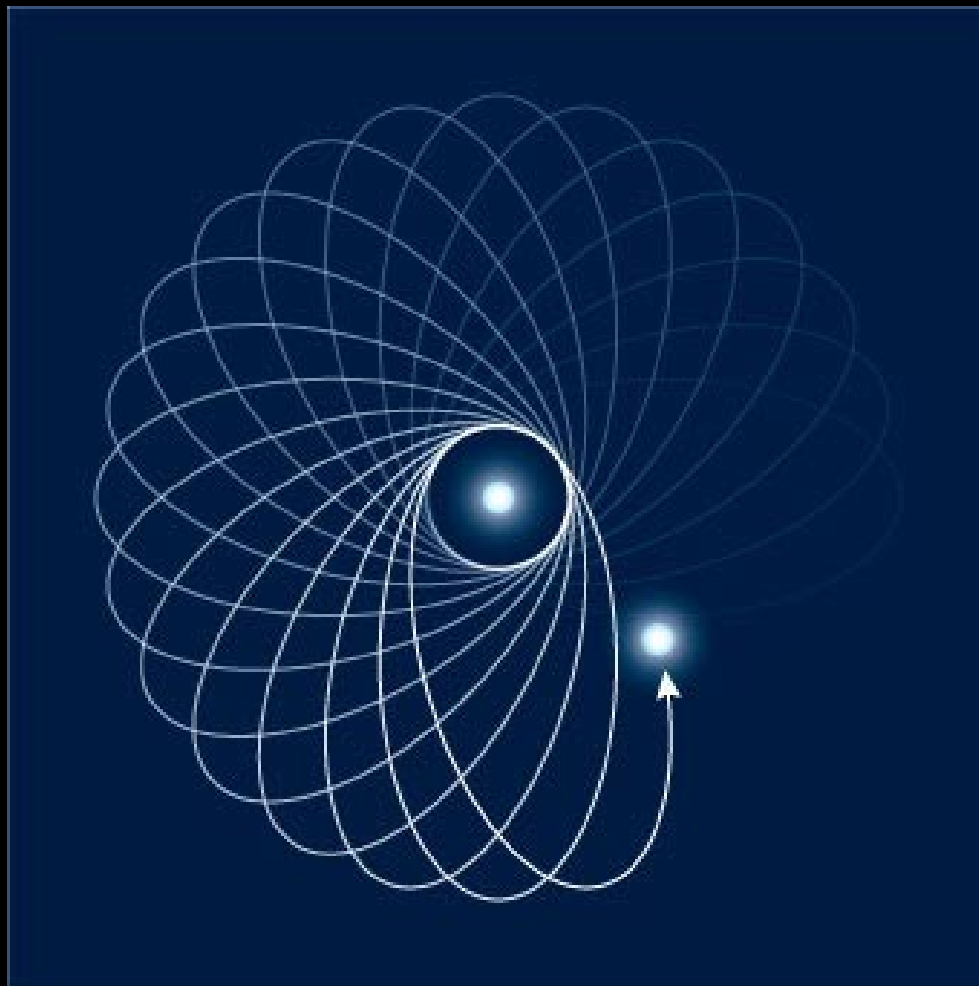


Einstein's View Circa 1915

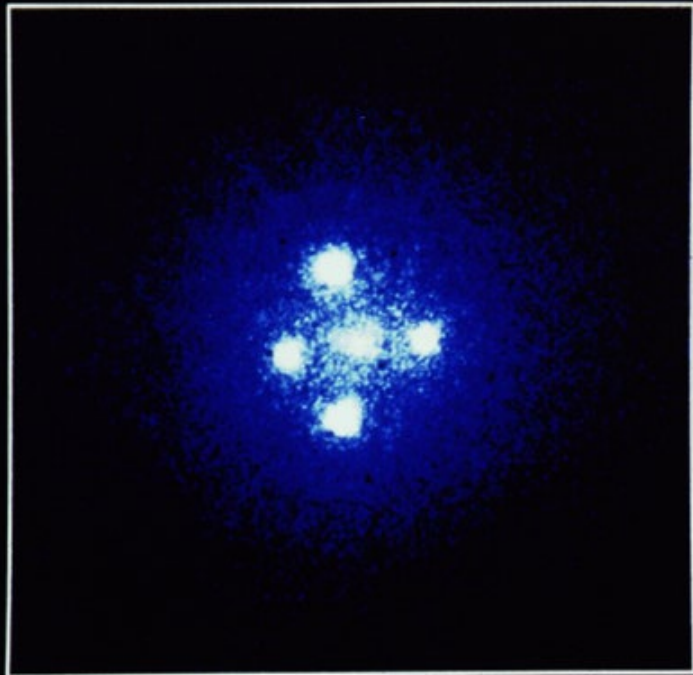




Who does the evidence support?



Who does the evidence support?



Gravitational Lens G2237+0305

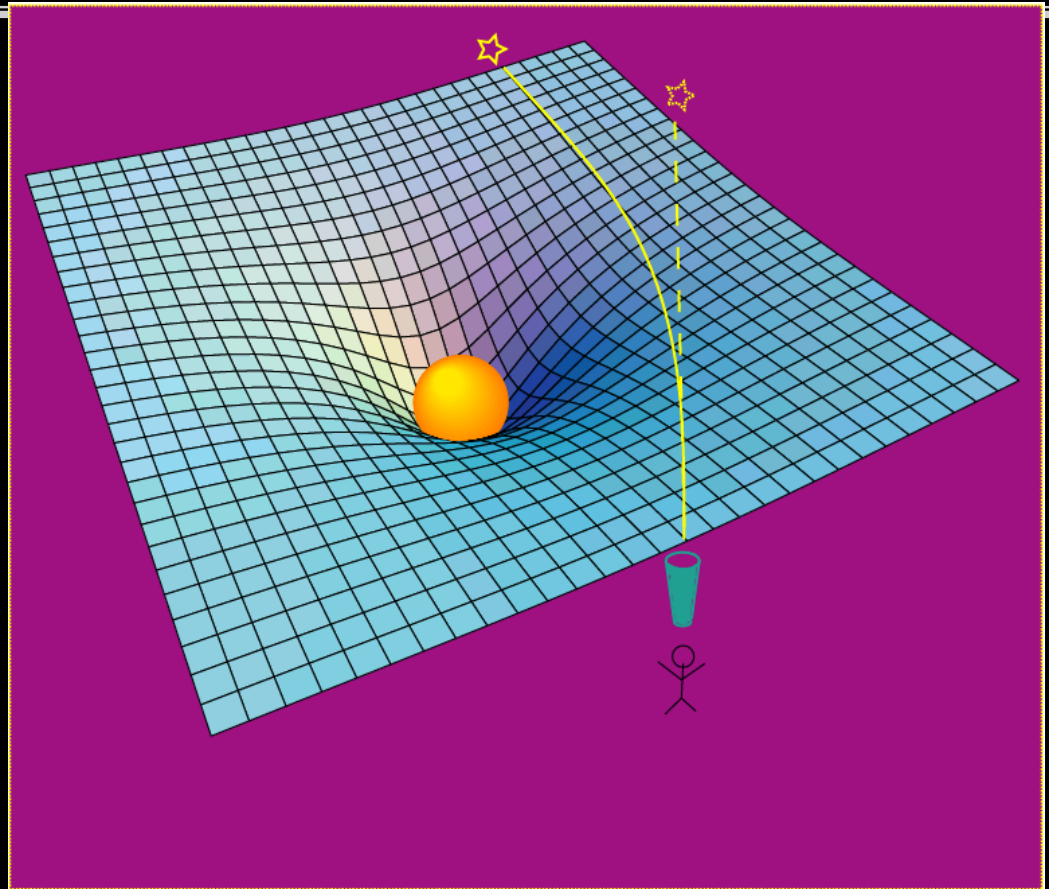


Photo credit: NASA and ESA



Who does the evidence support?

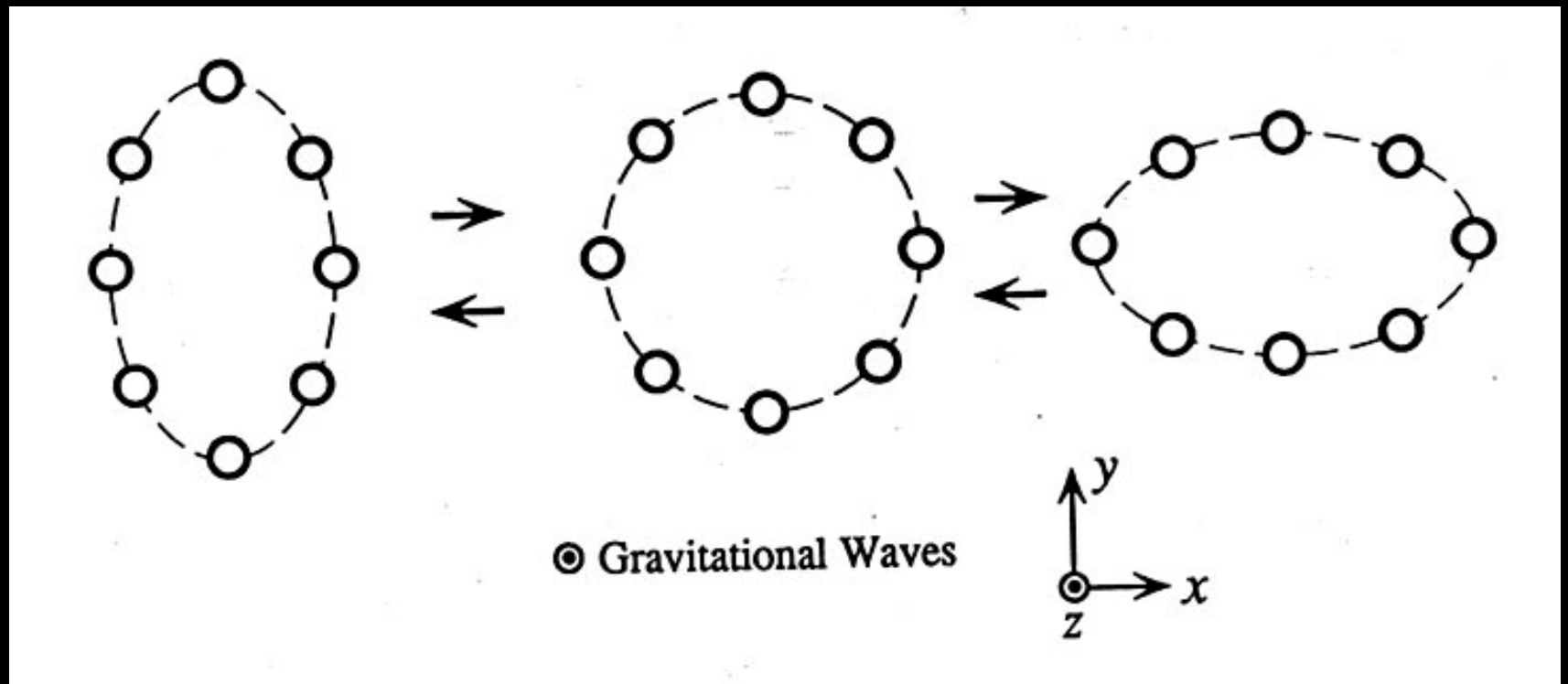




Gravitational Waves



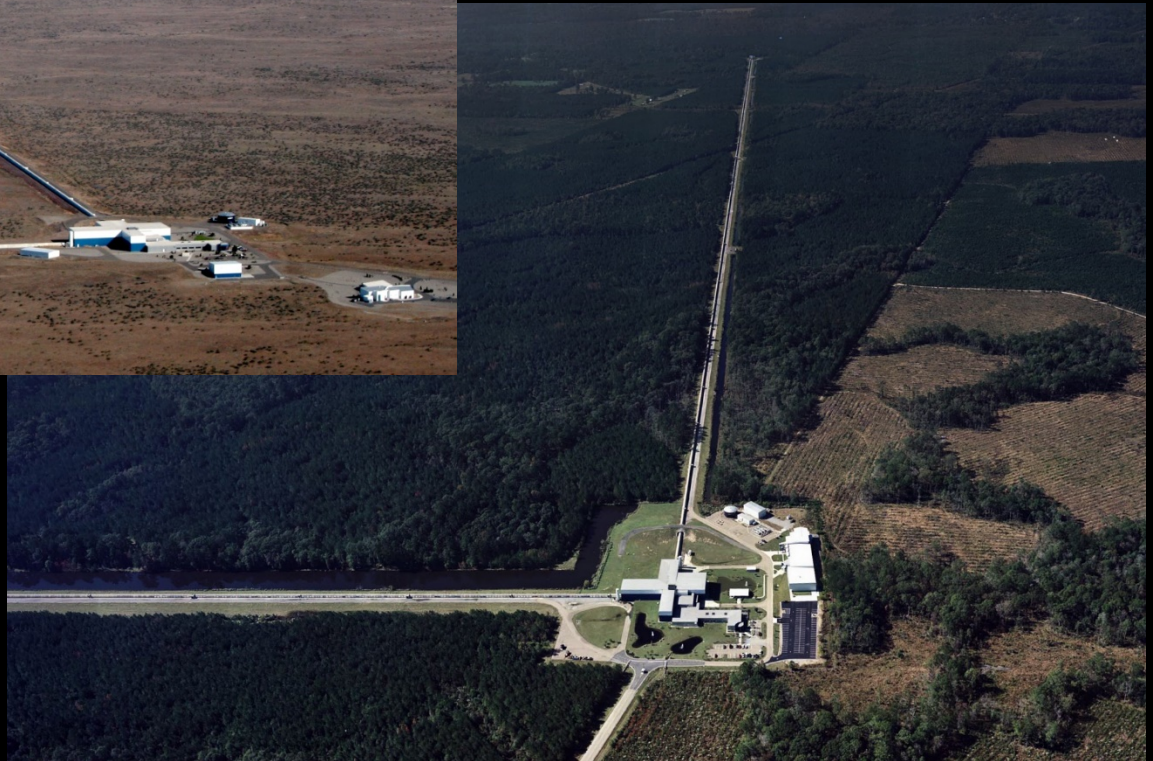
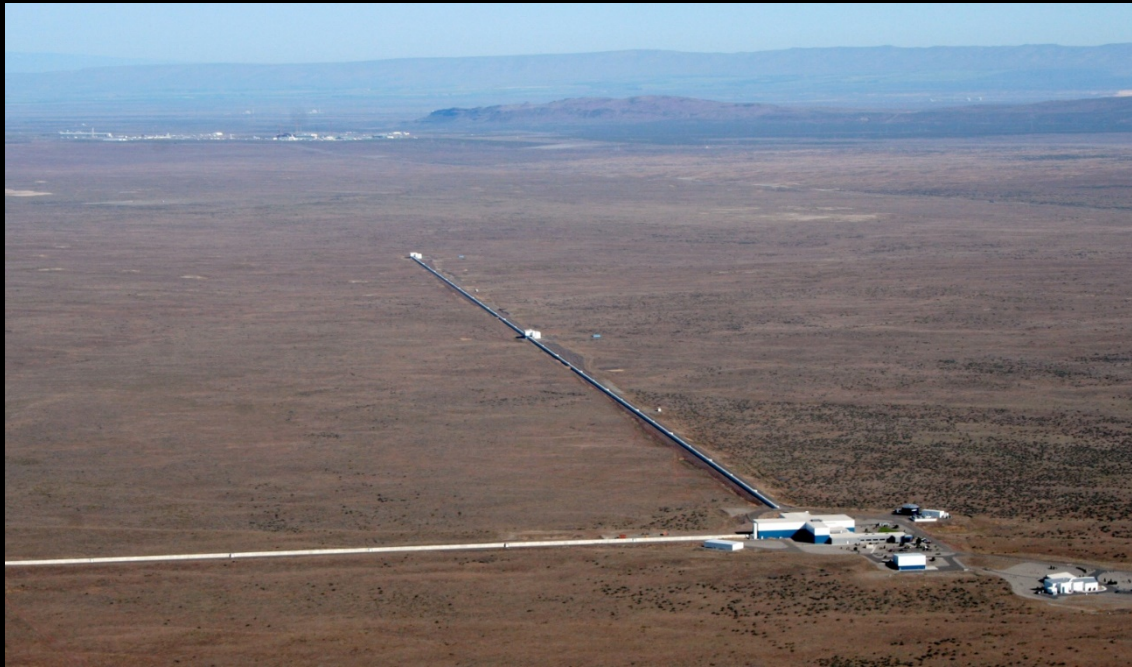
Gravitational Waves







Twin Observatories

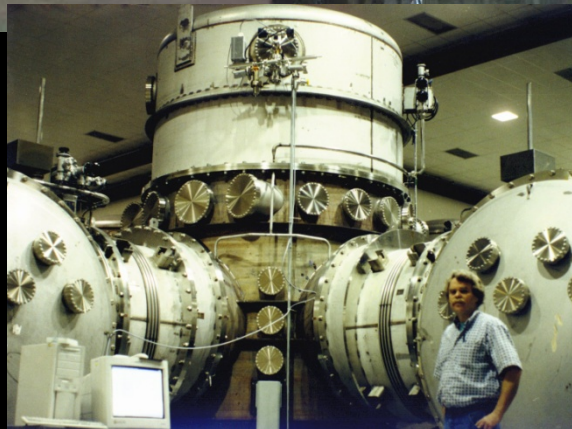




Vacuum chambers provide quiet homes for the mirrors



View inside Corner Station

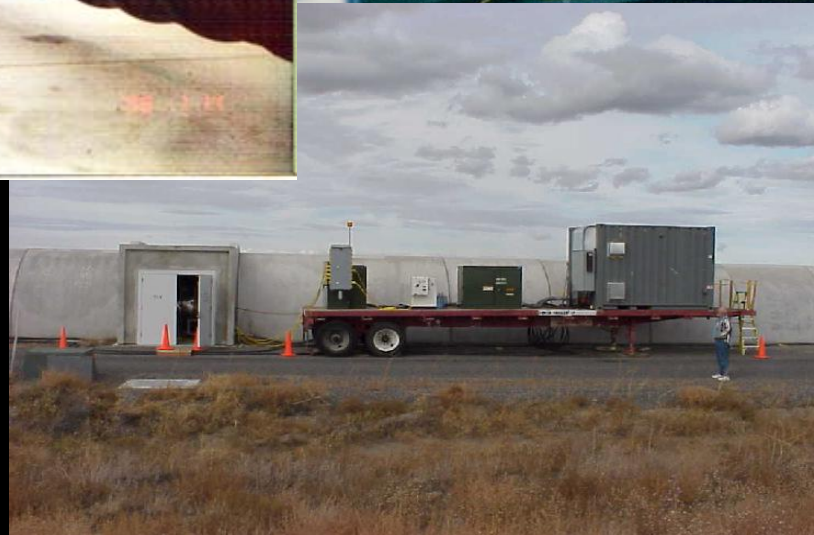


Standing at vertex beam splitter

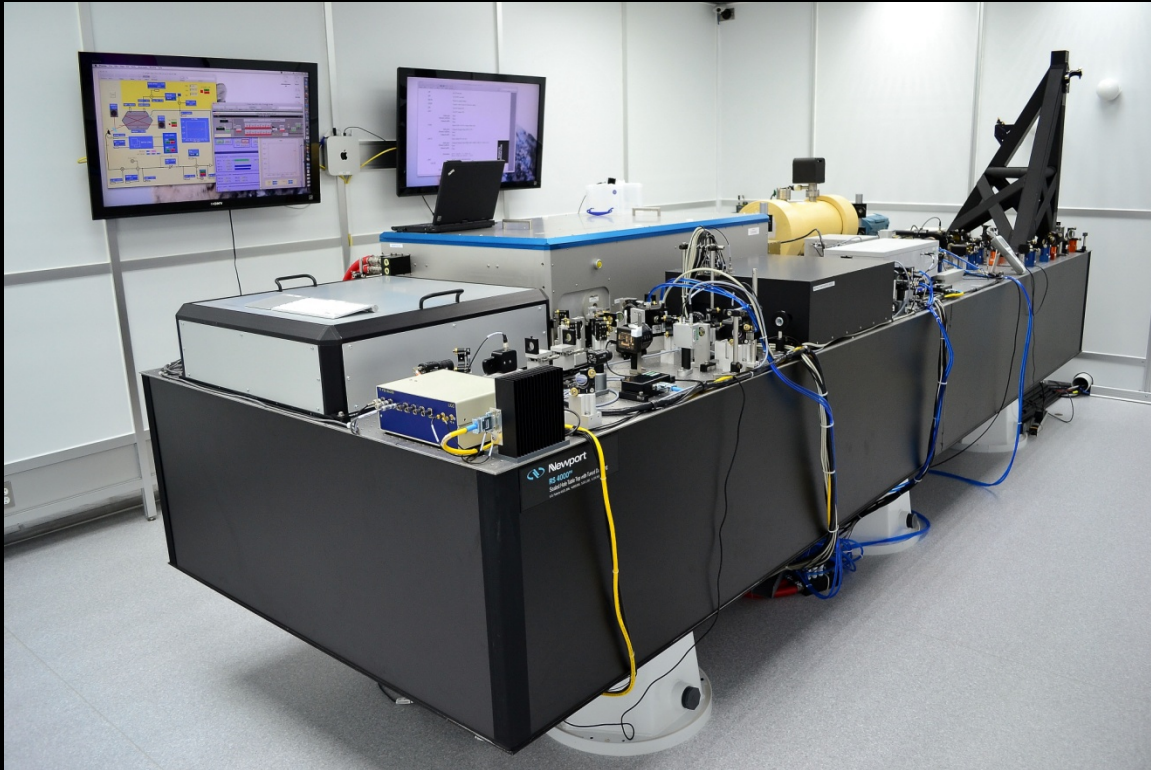


LIGO

Evacuated Beam Tubes Provide Clear Path for Light

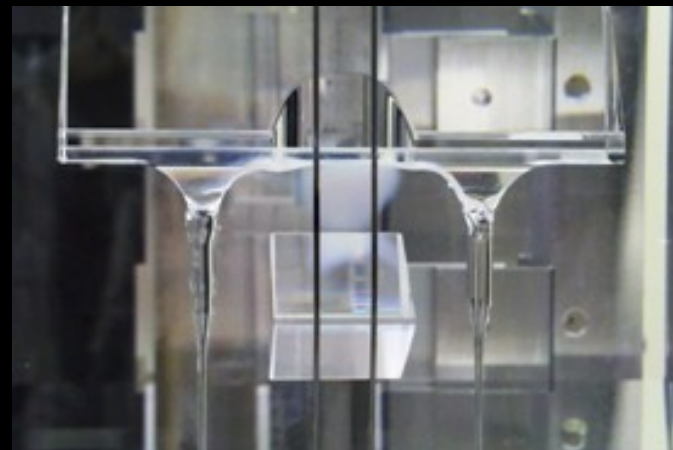
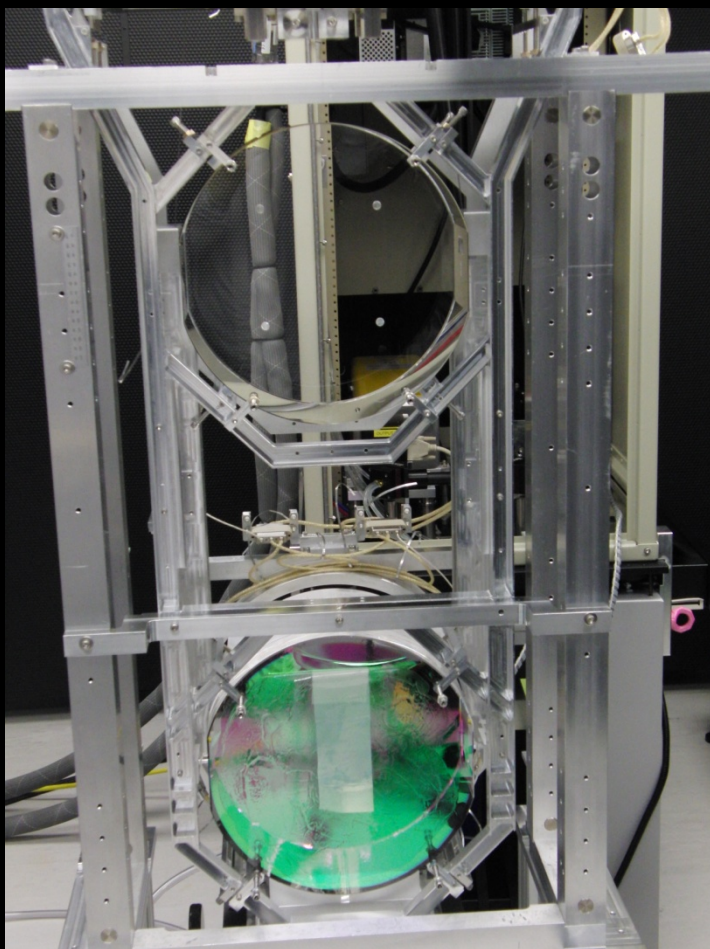


Pre-Stabilized Laser





Pendulum suspensions give mirrors freedom of movement in the LIGO frequency band



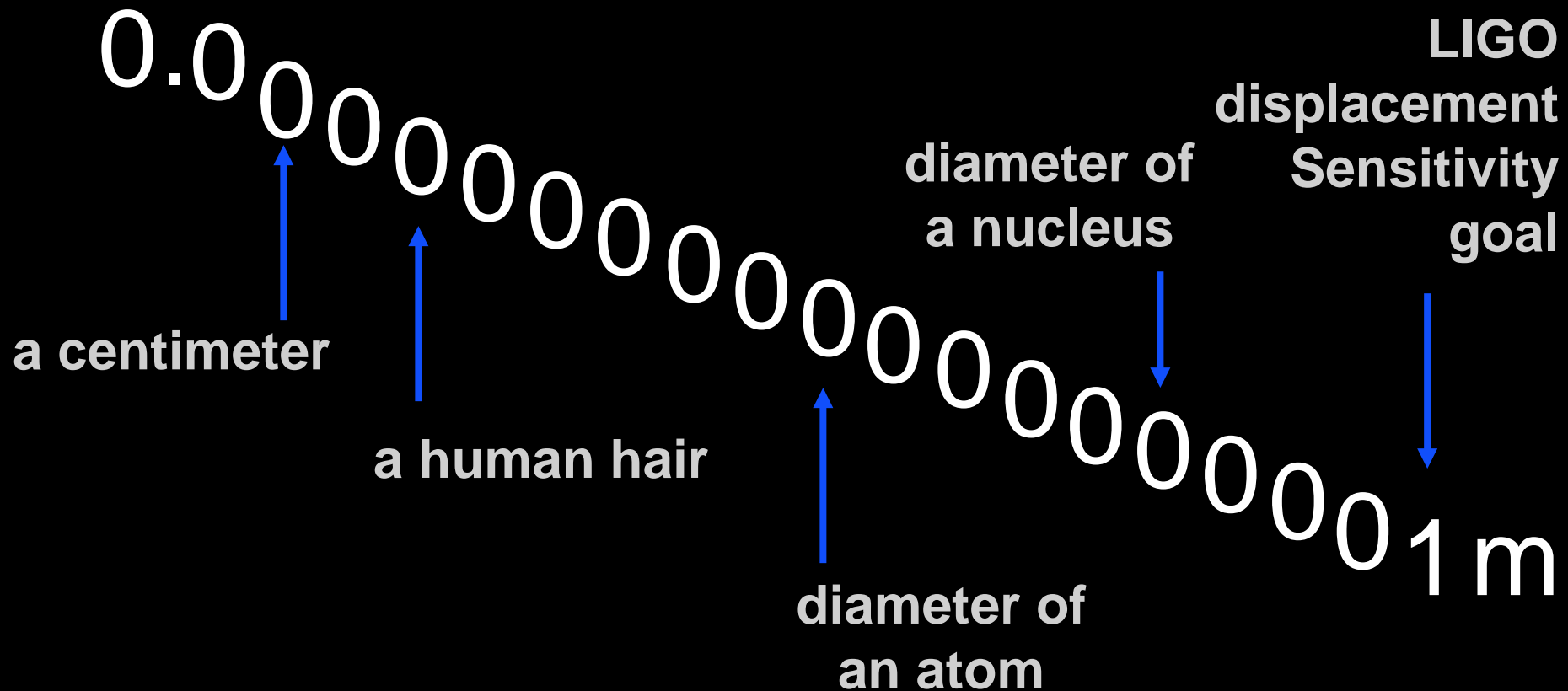


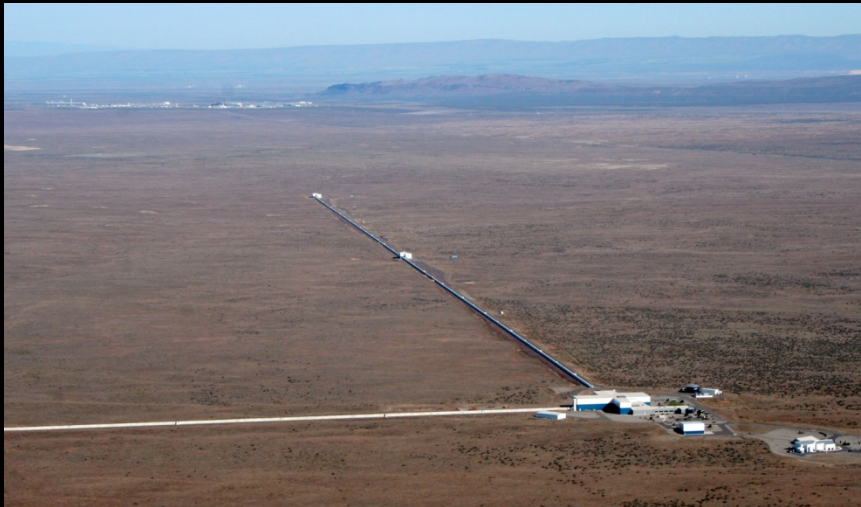
Vibration Isolation - ISI

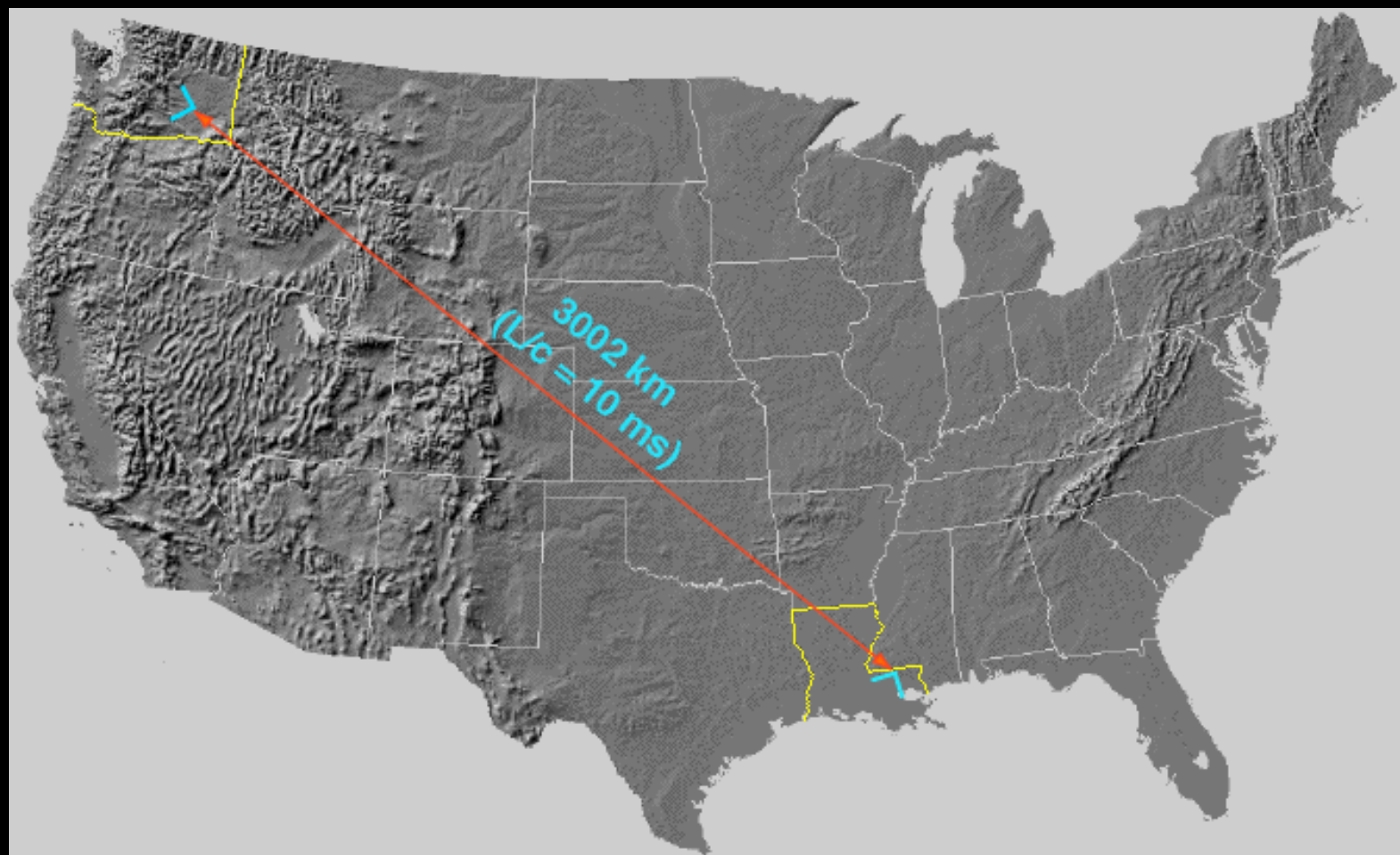




How sensitive is LIGO?

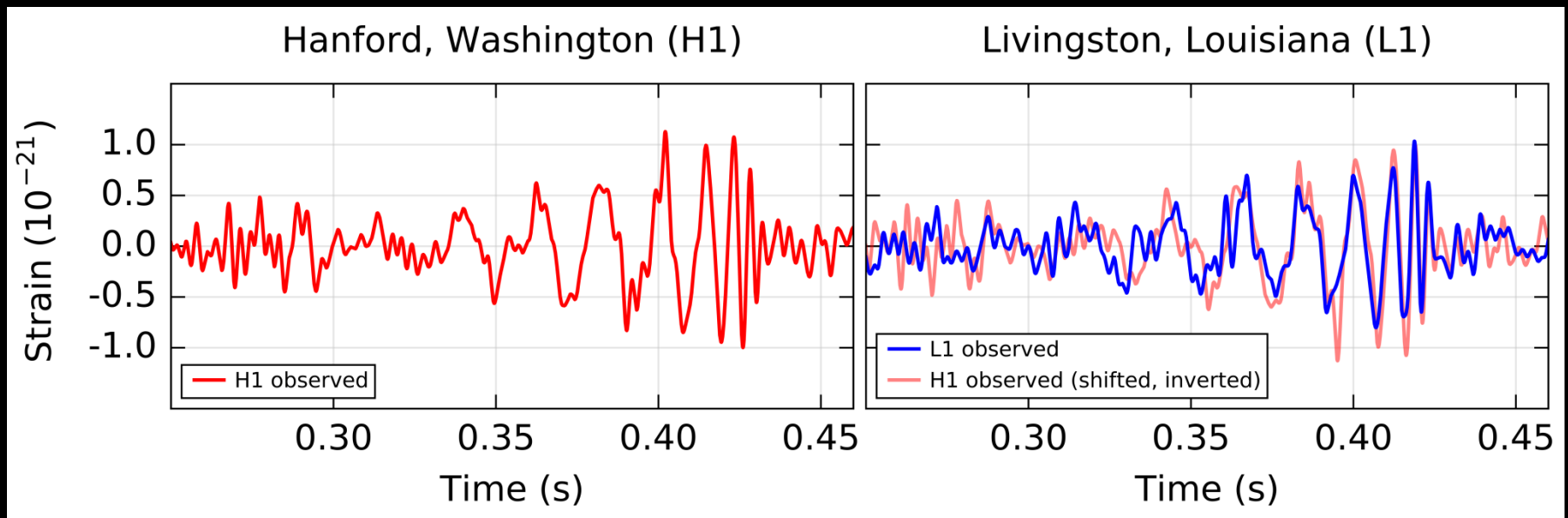






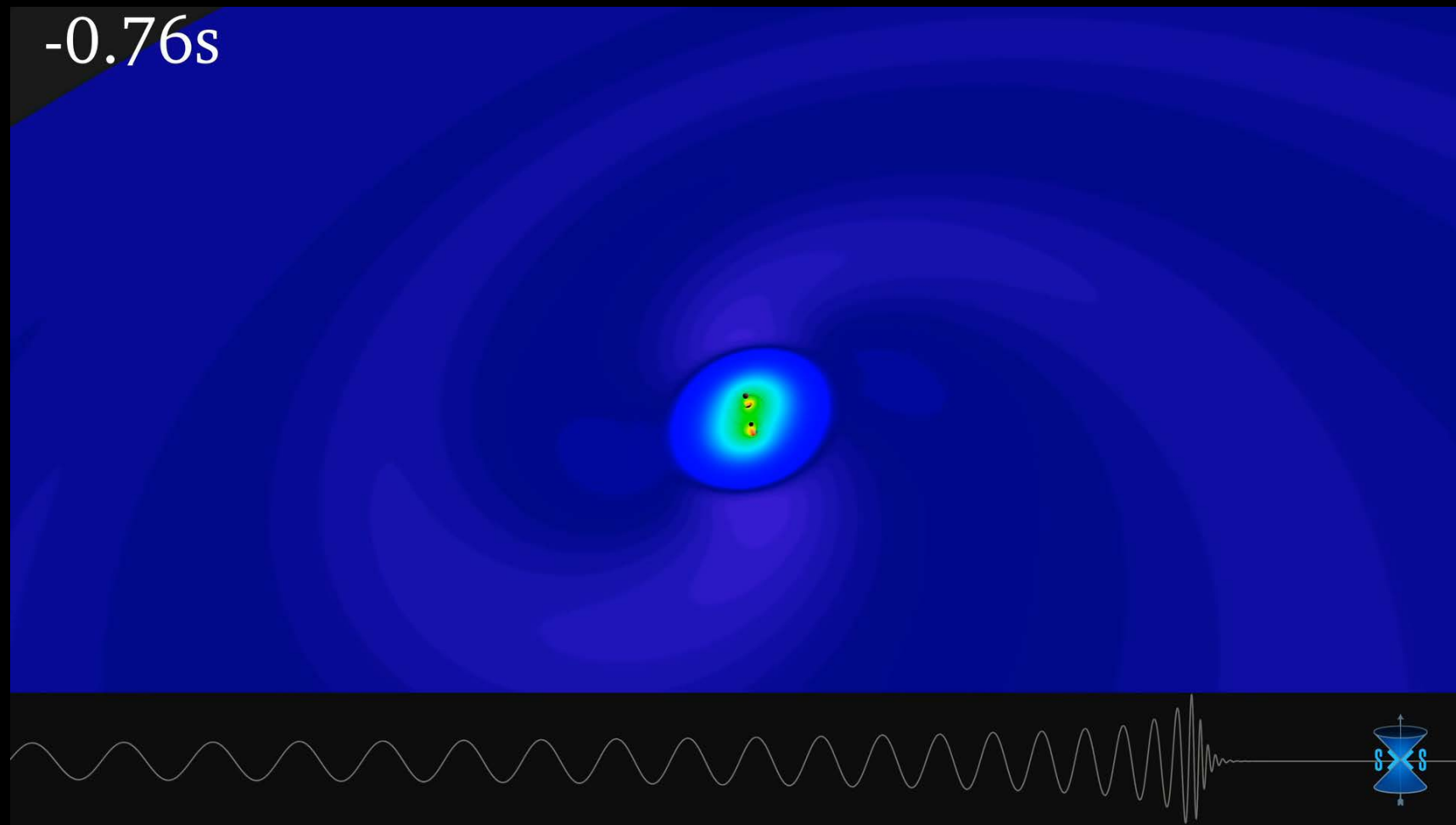


GW150914: 09:50:45 UTC on Sept 14, 2015



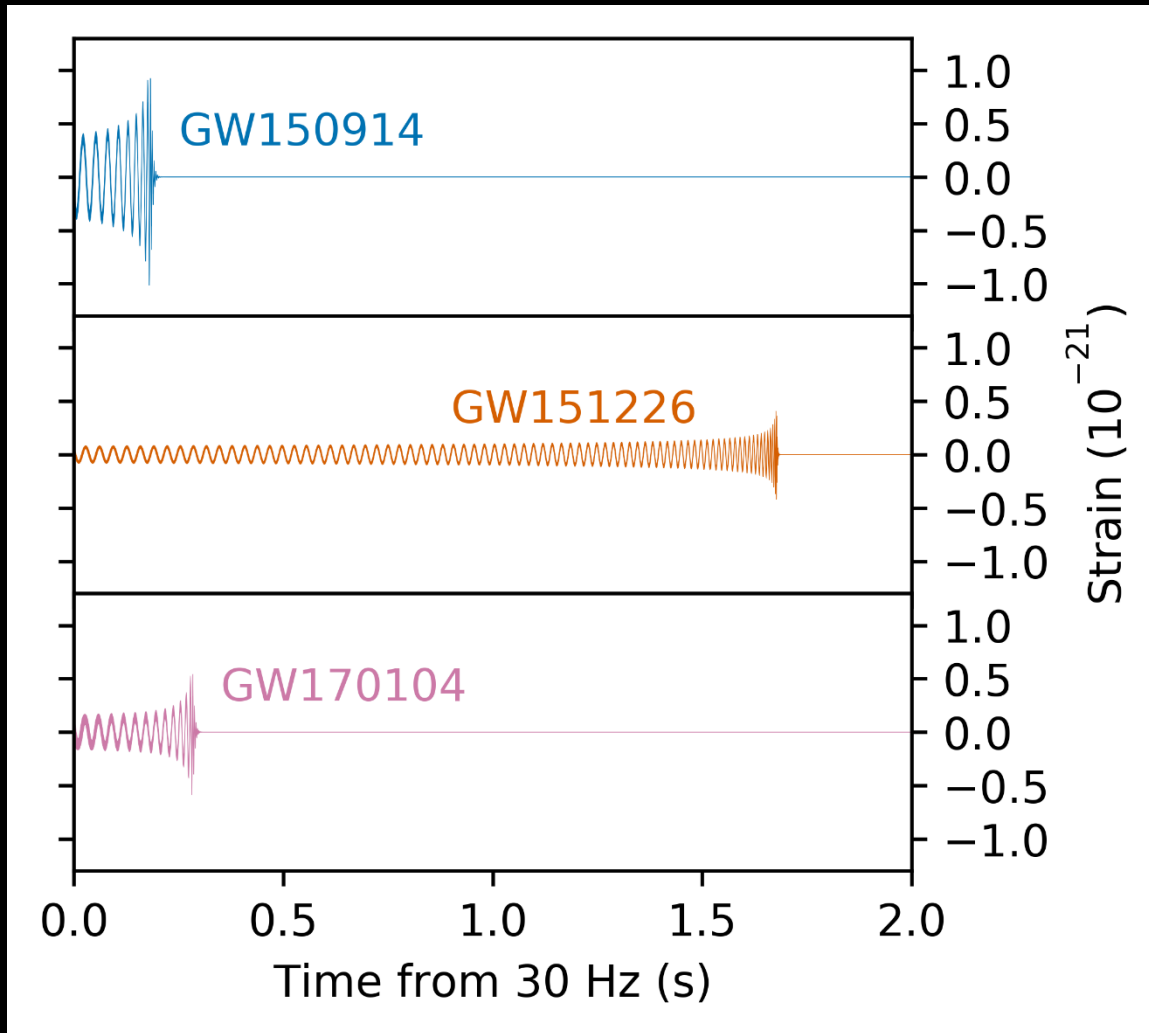


A Simulation of the Event

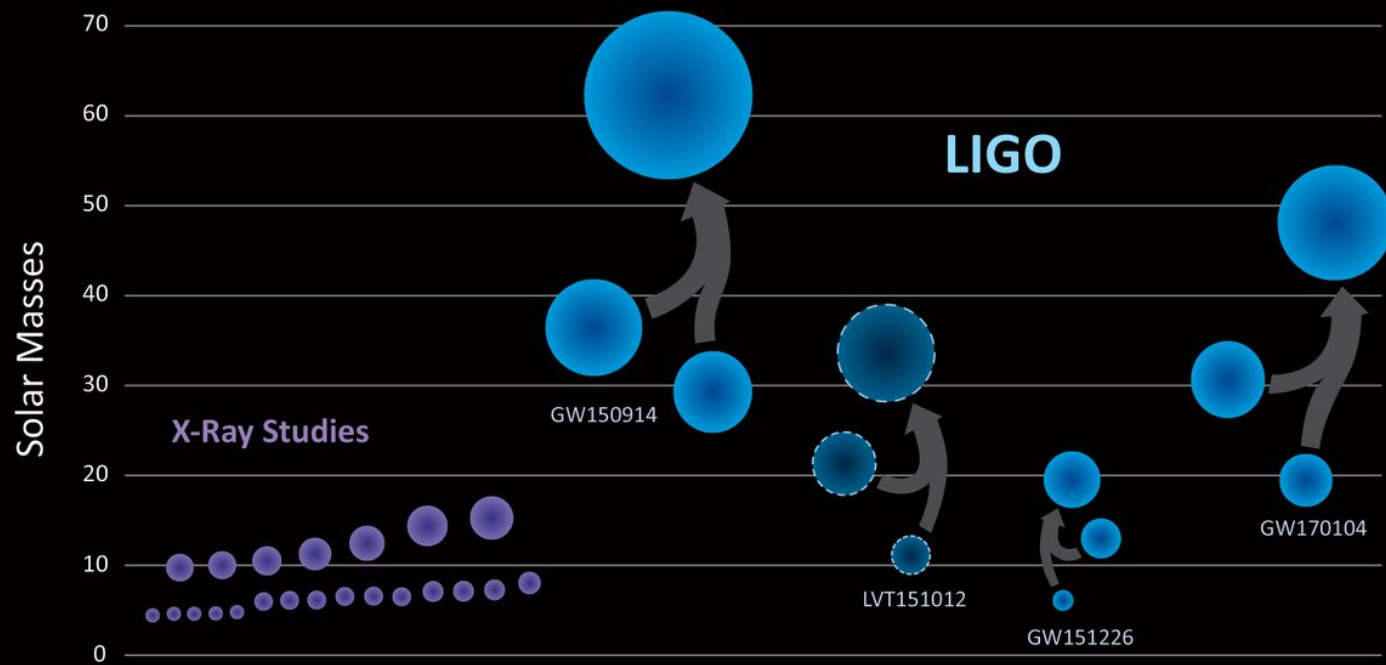




Are there more?



Black Holes of Known Mass







***LIGO is operated by Caltech and MIT for
the National Science Foundation***

- NSF Cooperative Agreement # NSF-PHY-0757058
- LIGO's research efforts are directed by the LIGO Scientific Collaboration, composed of roughly 1000 researchers at more than 65 domestic and international institutions.

