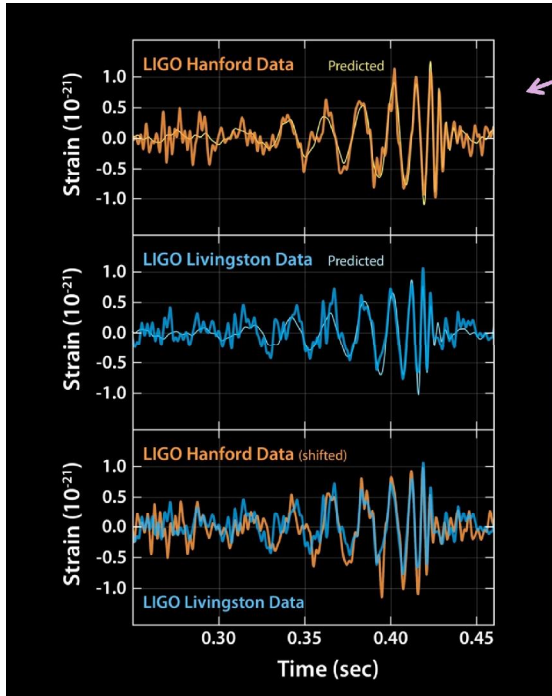
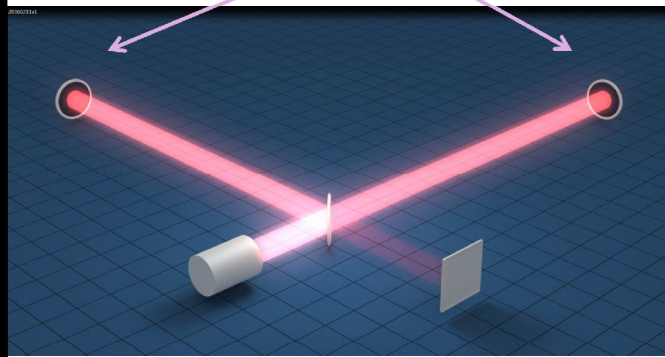


Access Laser at LIGO



Clear signals above noise level indicate a definitive event.

Thermal distortion of mirrors are compensated by precision CO₂ lasers, enabling LIGO to achieve low-noise and high sensitivity at 10⁻¹⁹ meters.



Access Laser has been collaborating with the Laser Interferometer Gravitational-Wave Observatory (LIGO) for more than 10 years. Several models of our stabilized lasers have been used by LIGO in the US and the European Gravitational Observatory. Special design efforts have been made along the way to meet the ever-increasing demand to achieve high-stability, low-noise, and extremely sensitive operation of the LIGO. We are grateful for the opportunity to contribute to the detection of gravitational waves, and we are proud of the LIGO team!

"..... an auxiliary system uses a CO₂ laser to heat the mirrors in a manner precise enough to counteract the shape-changes that occur as a result of heating from LIGO's main laser."

".... The laser that is used is an RF excited Merit-S Model CO₂ laser manufactured by Access Laser Company. The laser was chosen because of its proven ability to not line hop over extended periods...."

For more information about LIGO and the history making discovery visit:

<https://www.youtube.com/watch?v=BnQwFiVD5OA>

<https://www.ligo.caltech.edu/news/ligo20160211>

Acknowledgement

- <https://dcc.ligo.org/T050064/public>
- <https://www.ligo.caltech.edu>