



LIGO Hanford



LIGO Livingston

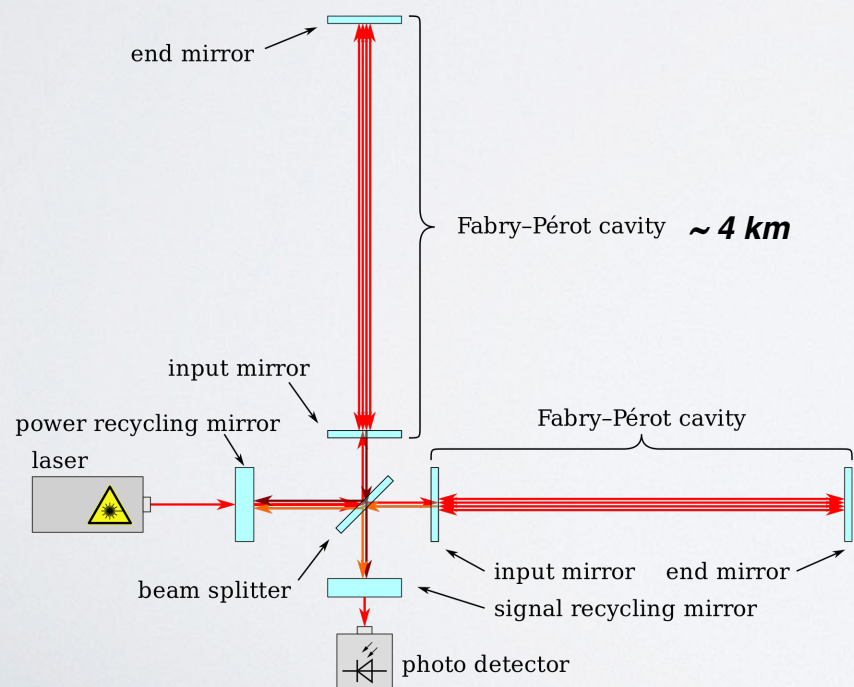


Fig.: Menner

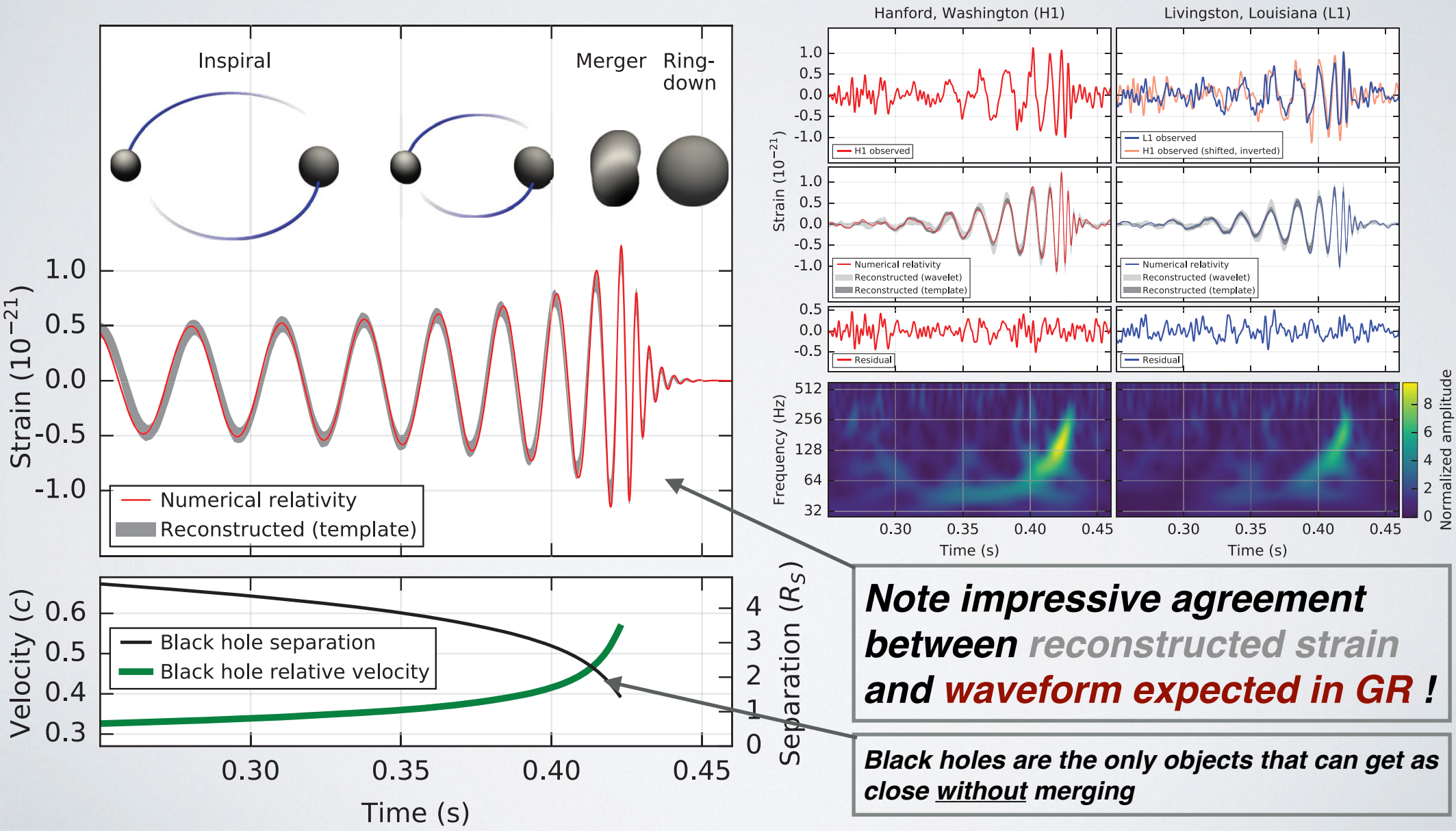


Observation of Gravitational Waves from a Binary Black Hole Merger

B. P. Abbott *et al.**

(LIGO Scientific Collaboration and Virgo Collaboration)

(Received 21 January 2016; published 11 February 2016)



Note impressive agreement between reconstructed strain and waveform expected in GR!

Black holes are the only objects that can get as close without merging

SOUNDS OF SPACETIME

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LISTENING TO THE DARK SIDE OF THE UNIVERSE

AN AUDIO GUIDE TO UNDERSTANDING
GRAVITATIONAL-WAVE SIGNALS



MAX PLANCK INSTITUTE
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(ALBERT EINSTEIN INSTITUTE)

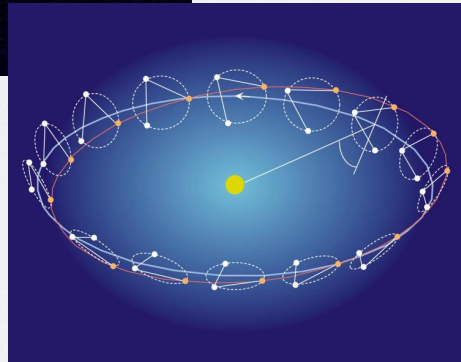
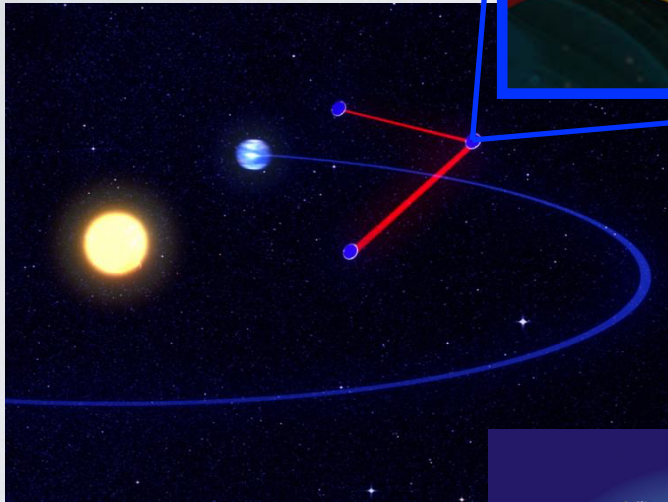
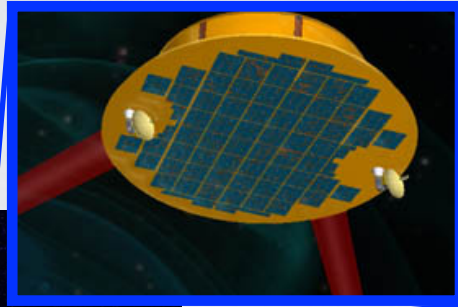
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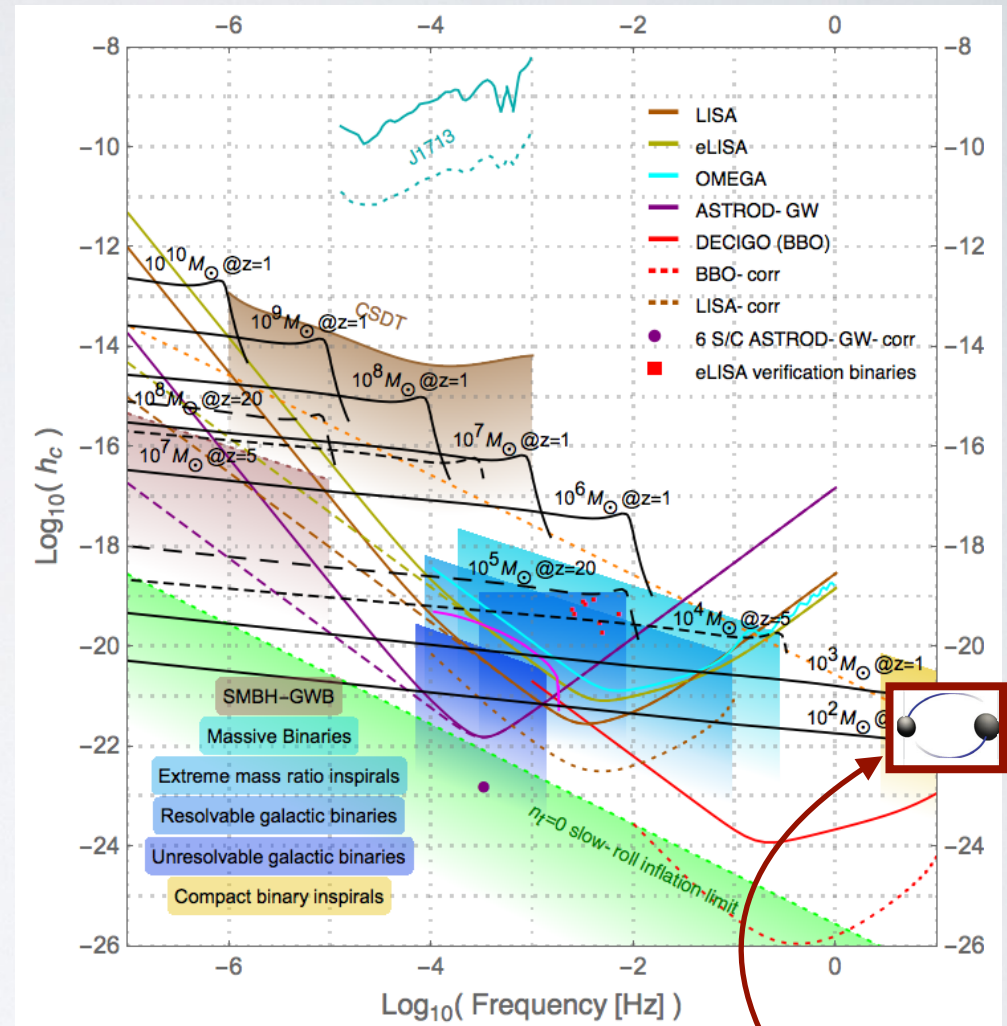


Next Steps? Going to Space!

LISA



- arm length of **1.000.000 km**
- center of triangle at 20° behind earth



review, Ni, 1610.01148

First LIGO event



Sub-Femto-g Free Fall for Space-Based Gravitational Wave Observatories: LISA Pathfinder Results

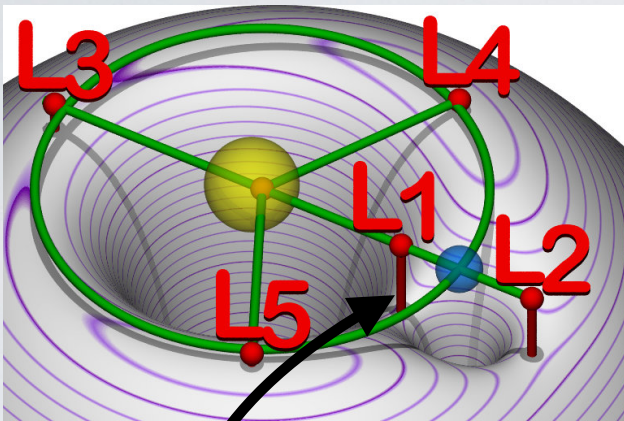
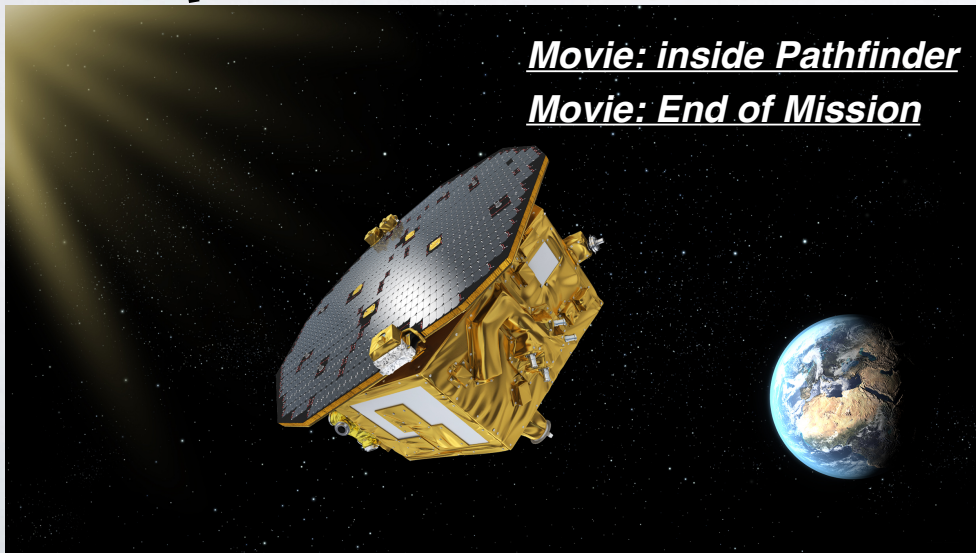
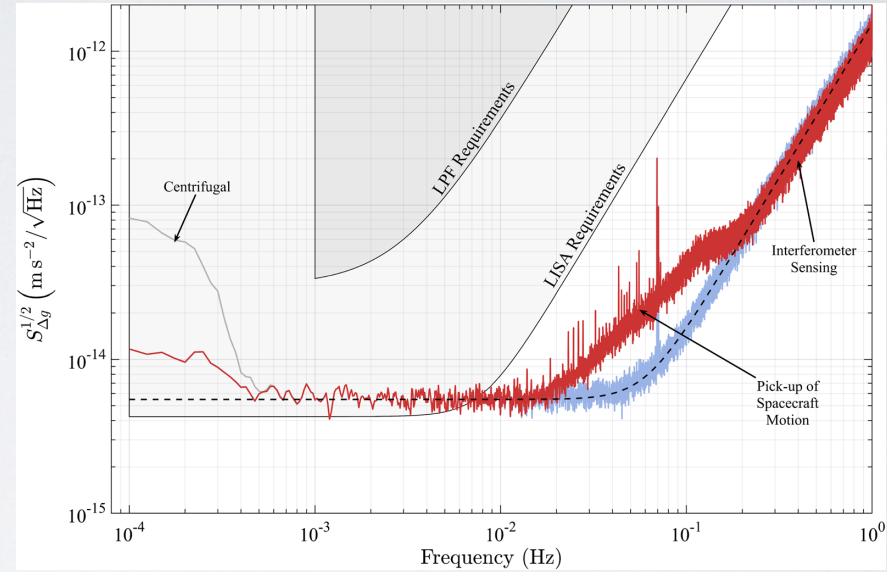


Fig.: Wikipedia



Movie: inside Pathfinder

Movie: End of Mission

LISA – The trailer...