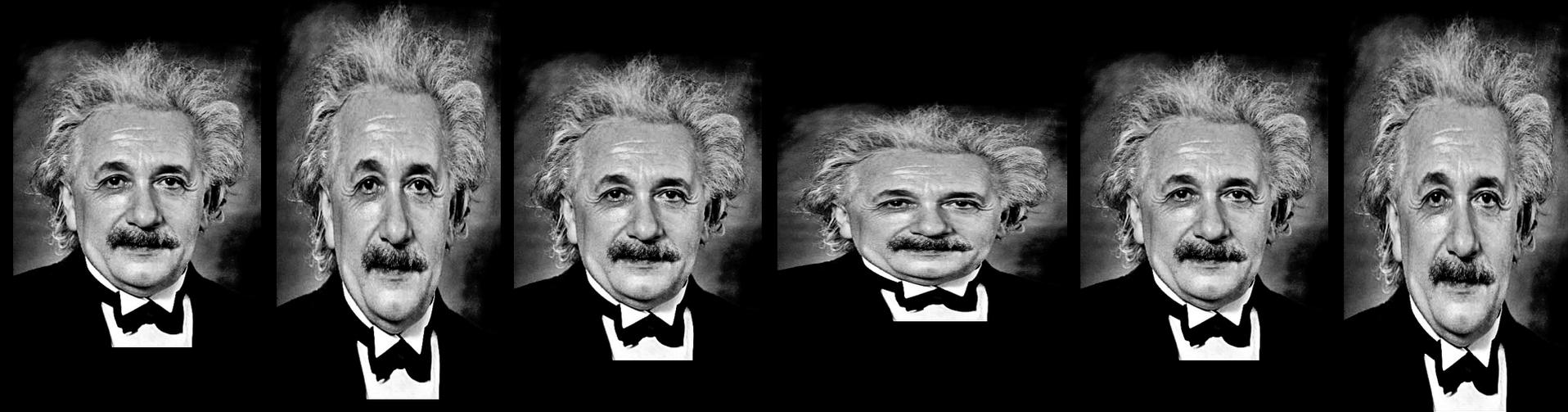
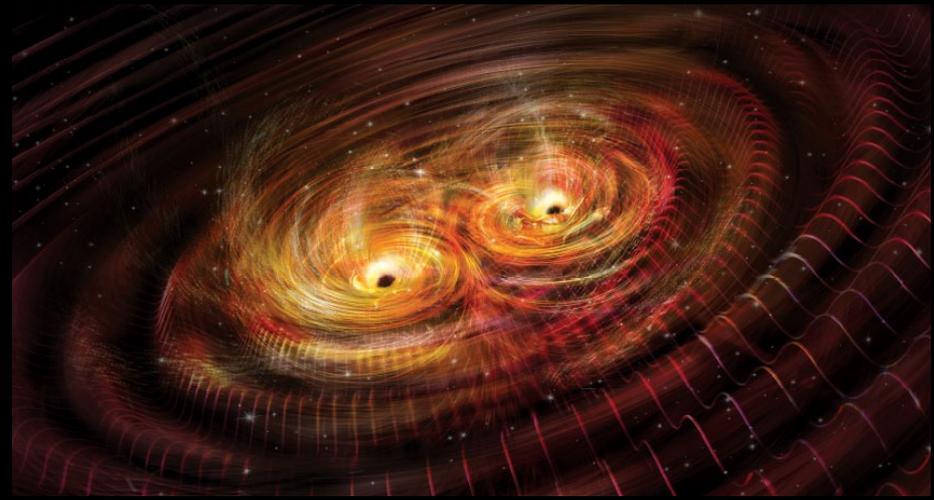


Gravitational Waves

Created by accelerating masses, e.g., orbiting stars or black holes.

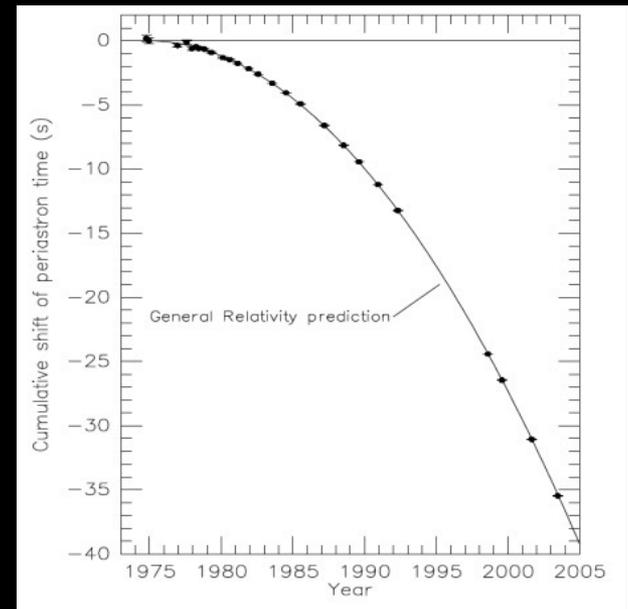
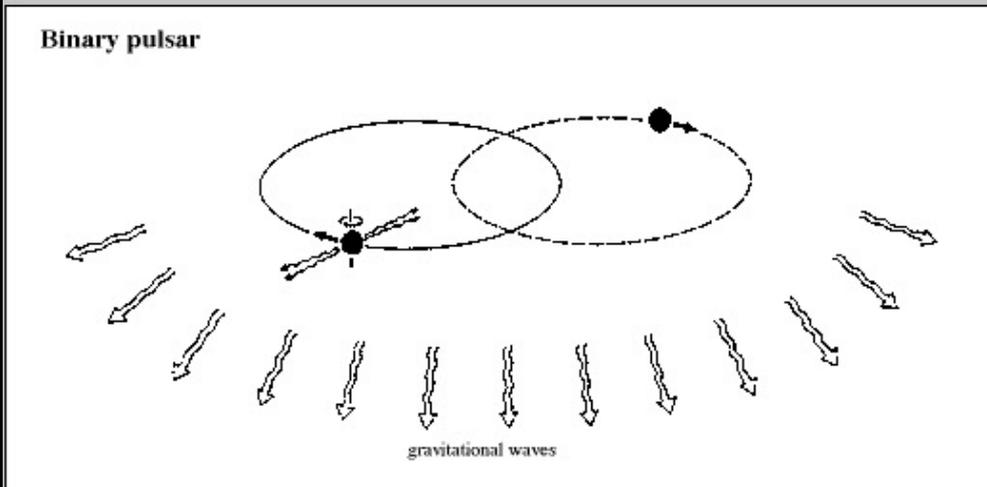
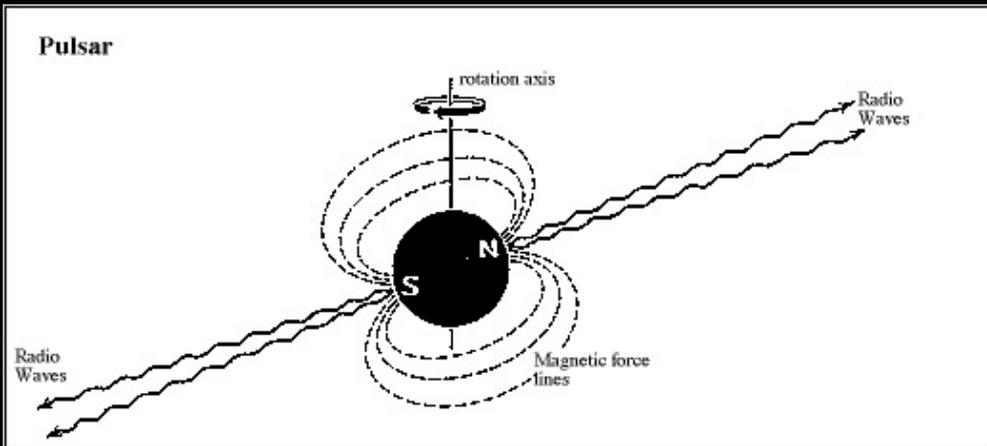


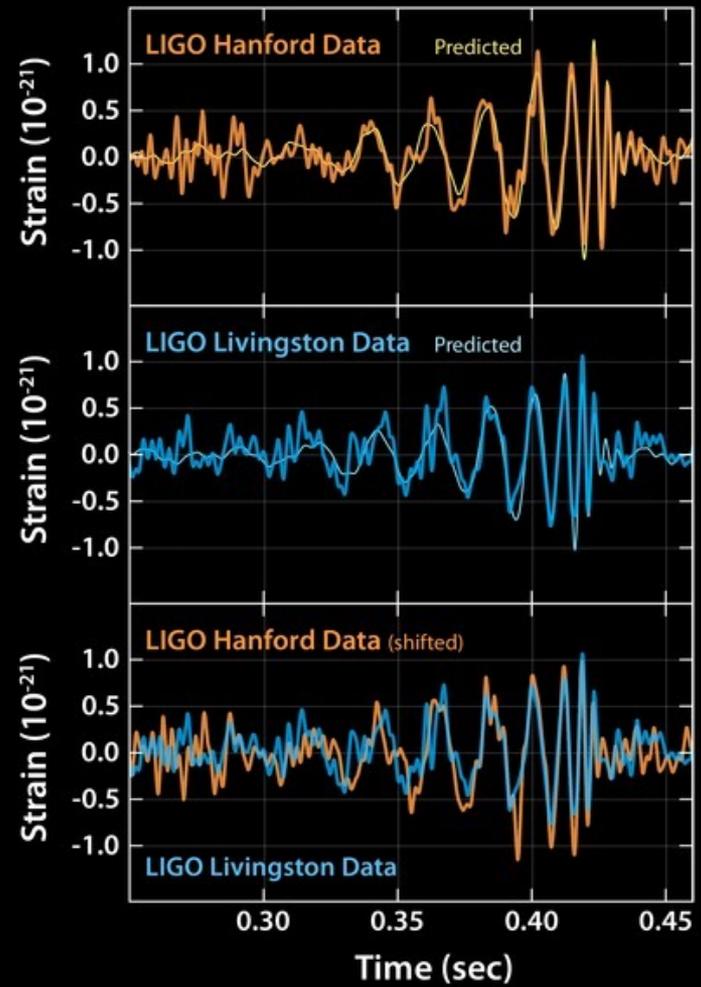
Stretch and squeeze distances in an oscillating pattern as they pass.

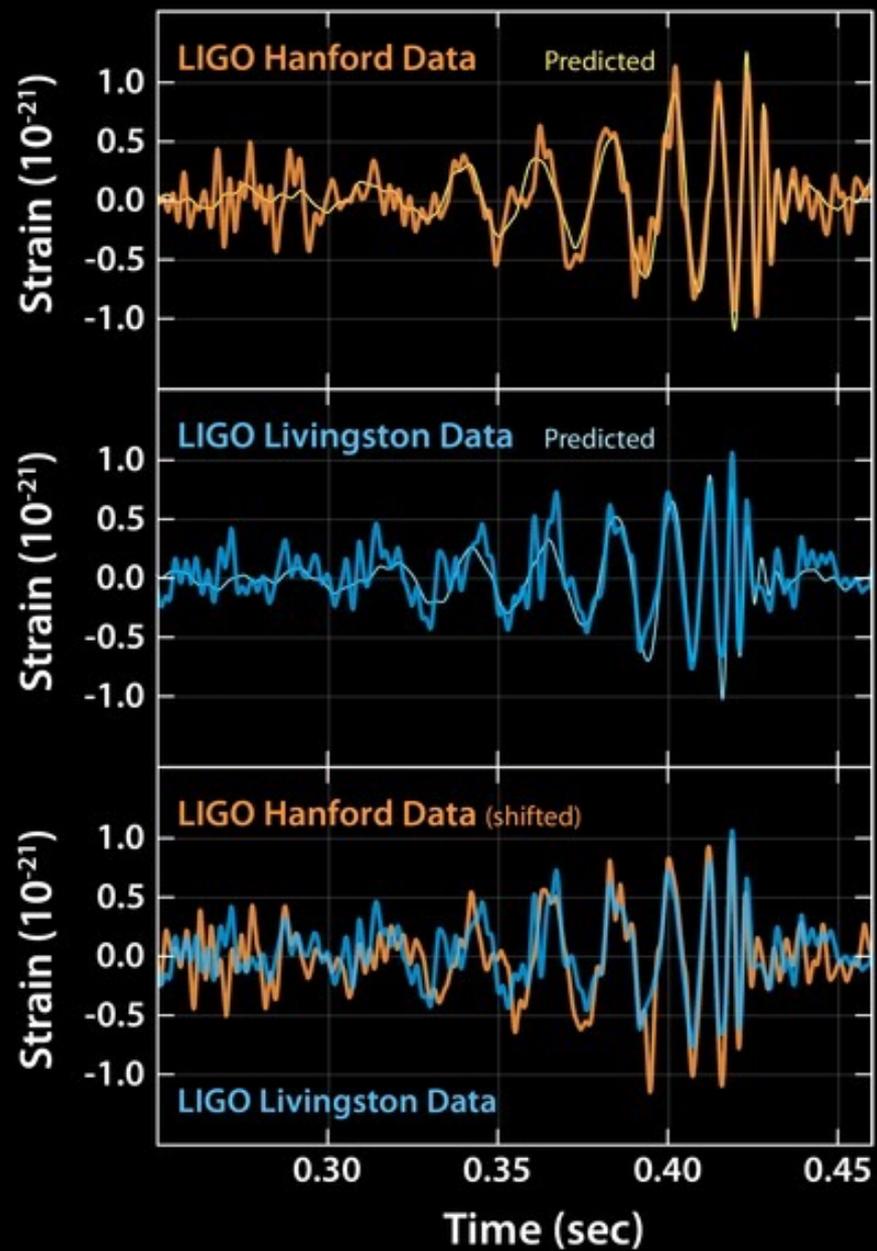
Inspiral of merging black holes
Videos available at ligo.caltech.edu

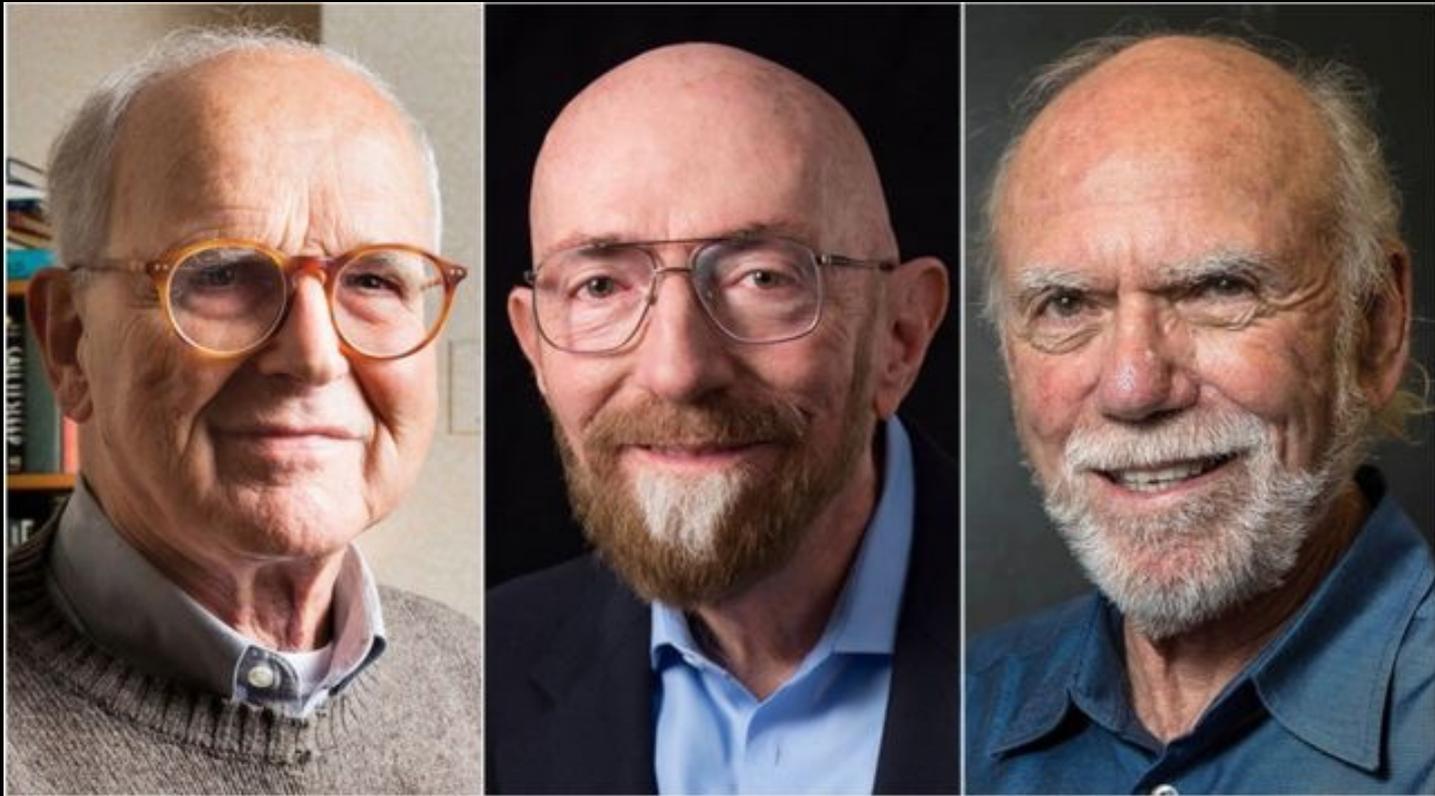


Orbit of binary pulsar (pair of neutron stars) shrinks as they emit gravitational waves that carry off energy.









2017 Nobel Prize in Physics
Rai Weiss, Kip Thorne, Barry Barish



Nergis Mavalvala



Gabriela Gonzales

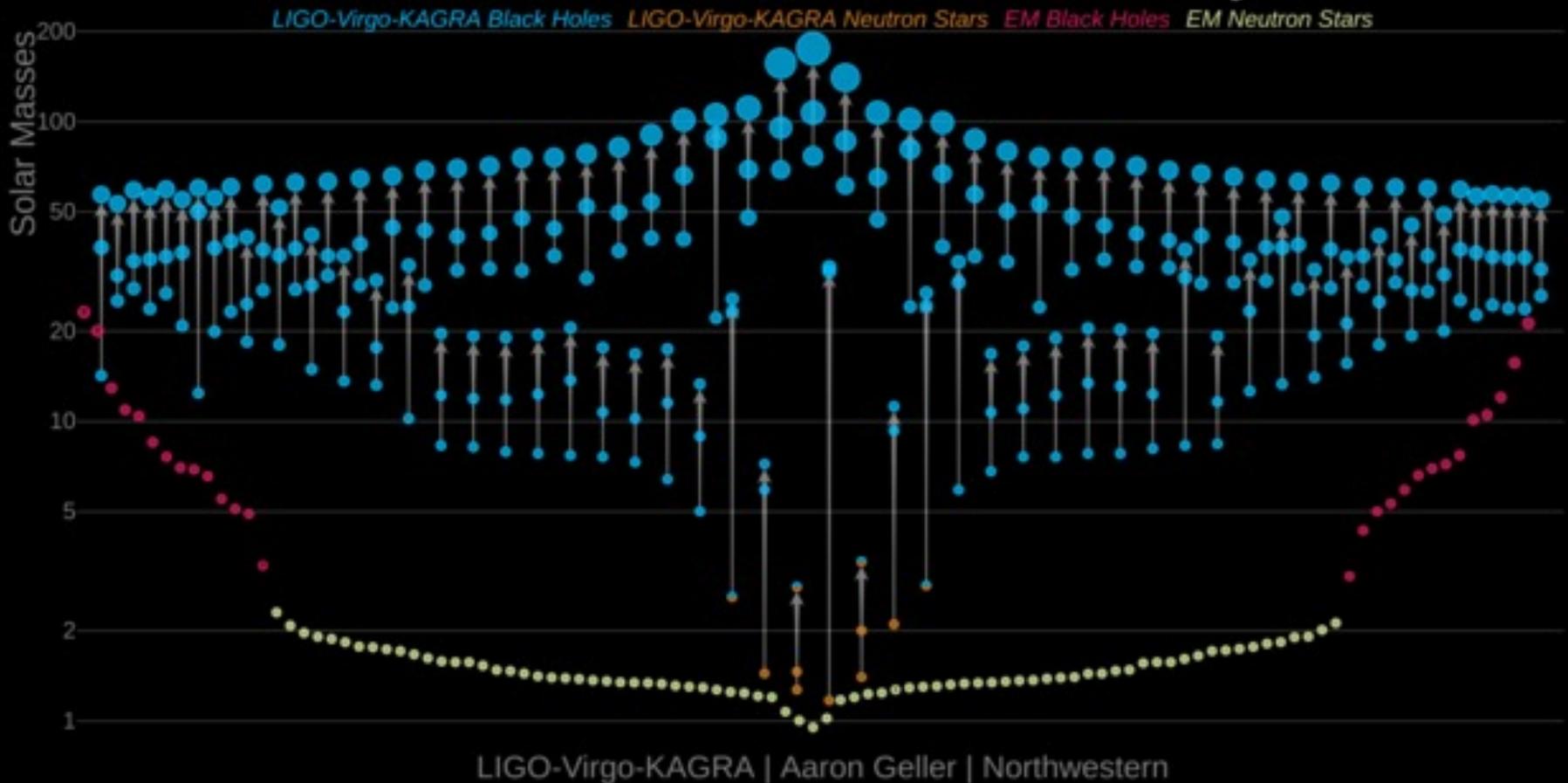


Laura Cadonati



Vicky Kalogera

Masses in the Stellar Graveyard



Mergers discovered to date (11/21) by gravitational waves, compared to neutron stars and black holes with known masses found with EM waves.

Laser Interferometer Space Antenna (LISA): Currently scheduled for 2027 launch

