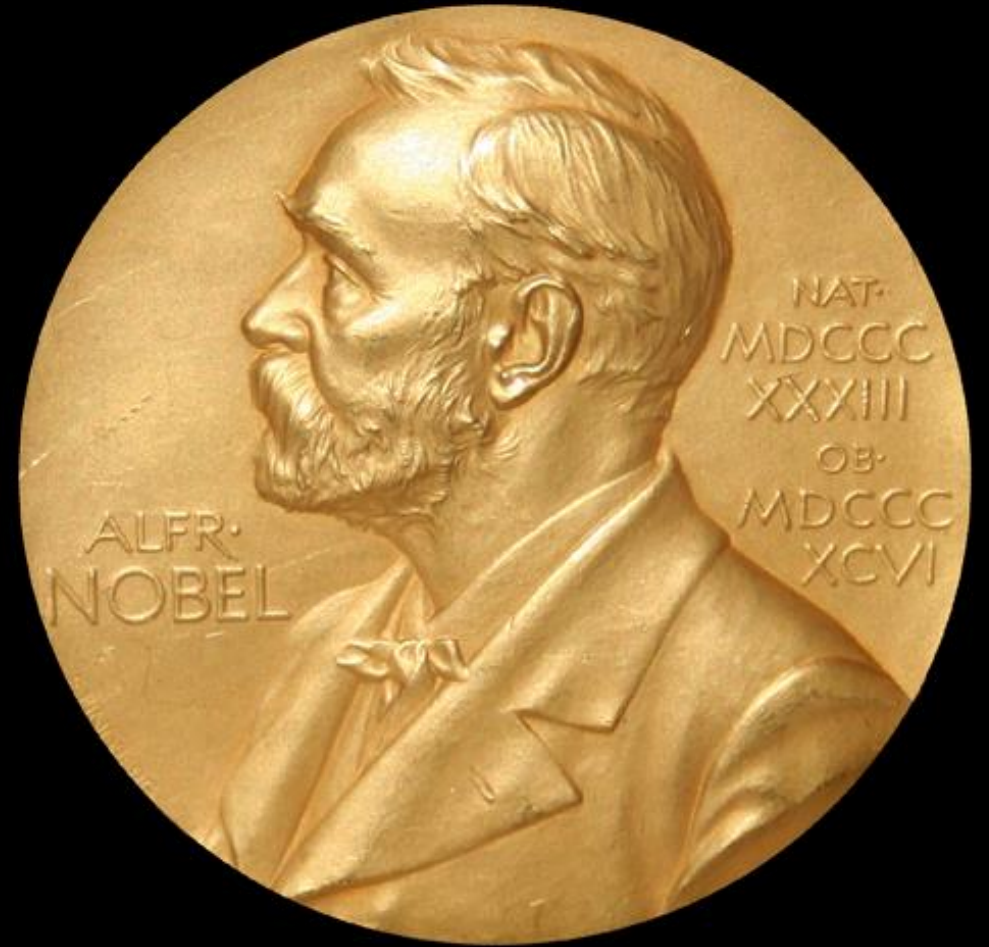


The 2017 Nobel Prize

Physics

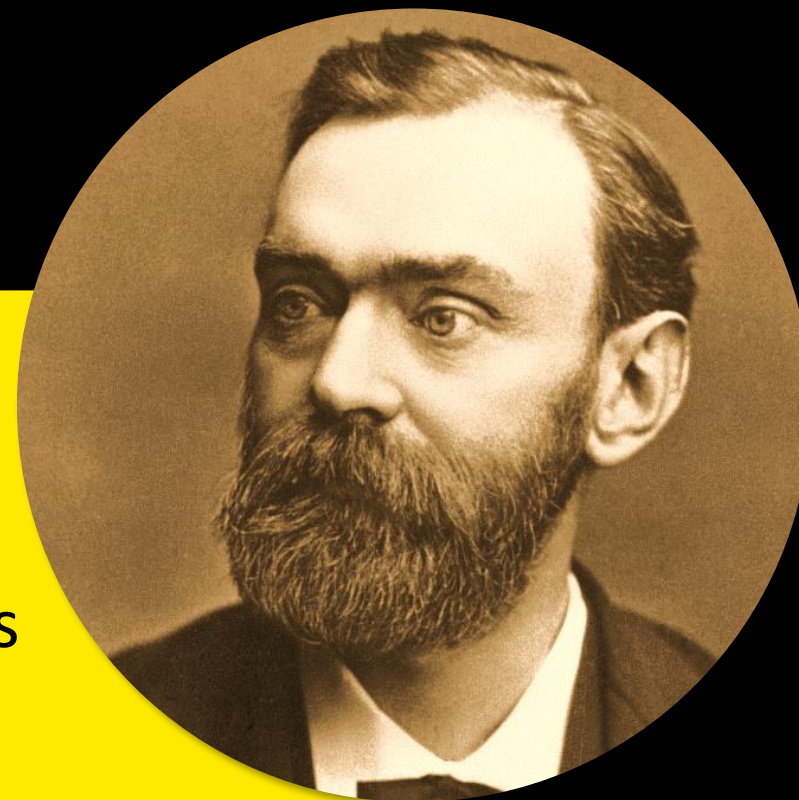


Alfred Nobel

(1833–1896)



As a child, Alfred dreamed of becoming a writer, but his father had other expectations of him and his brothers.



Dynamite

1867



Alfred Nobel invented dynamite, and during his life he managed to earn a lot of money from this invention.

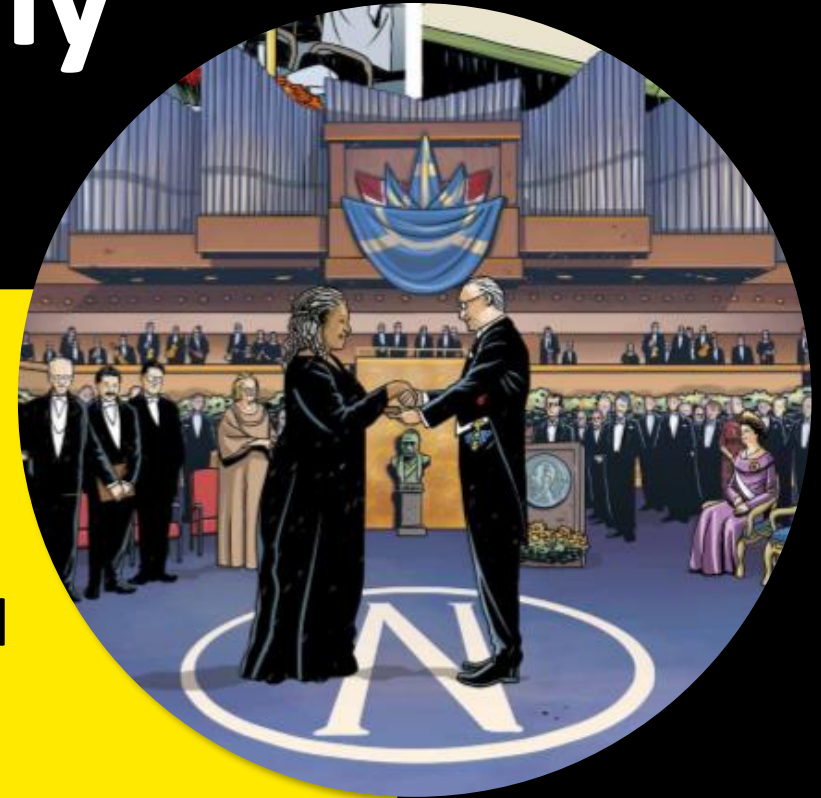


Prize Award Ceremony

Nobel Day, December 10 each year



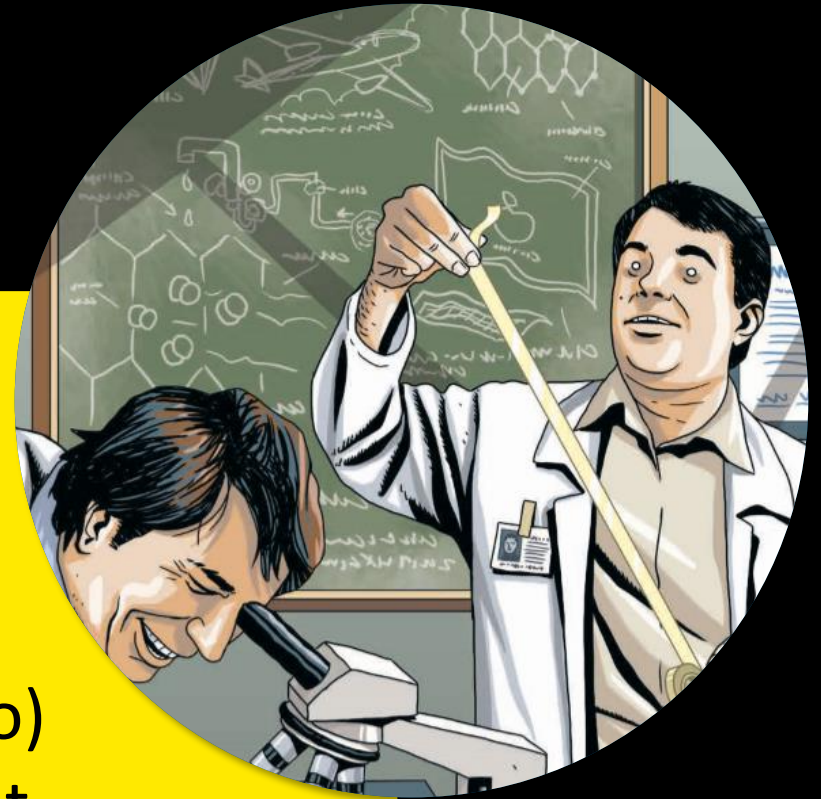
The Prize consists of a medal, a diploma and a sum of money. Sweden's King Carl XVI Gustaf presents the medal and diploma to each Laureate at Stockholm Concert Hall.



The Nobel Prize in Physics



This Prize rewards important discoveries or inventions in the field of physics. The development of “wireless telegraphy” (radio) is one example. Another is discoveries about how stars behave.



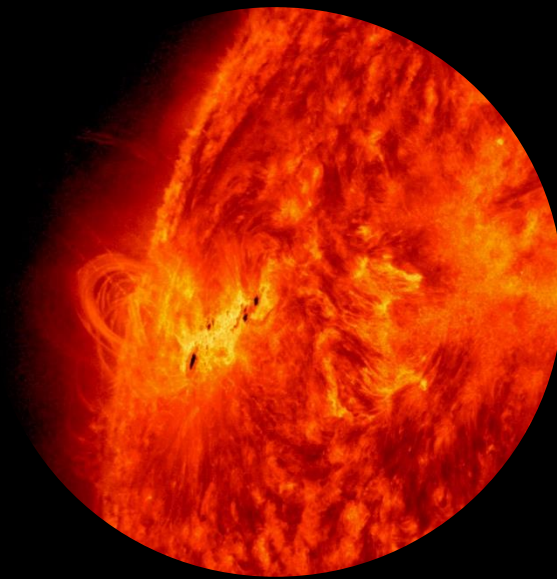
Examples of previous Laureates

The Nobel Prize in Physics



Development of radio, 1909

Guglielmo Marconi (pictured)
and Karl Ferdinand Braun



**For studies of processes of importance to the
structure and evolution of the stars, 1983**

Subramanyan Chandrasekhar

Rainer Weiss, Barry C. Barish and Kip S. Thorne

The 2017 Nobel Prize in Physics

For decisive contributions to the LIGO detector and the observation of gravitational waves



The people

At first the Laureates worked in different places, but since the mid-1980s they have been part of a research project in which many researchers are collaborating.

In 1994 Professor Barish was the one who expanded the project from about 40 researchers to more than 1,000.

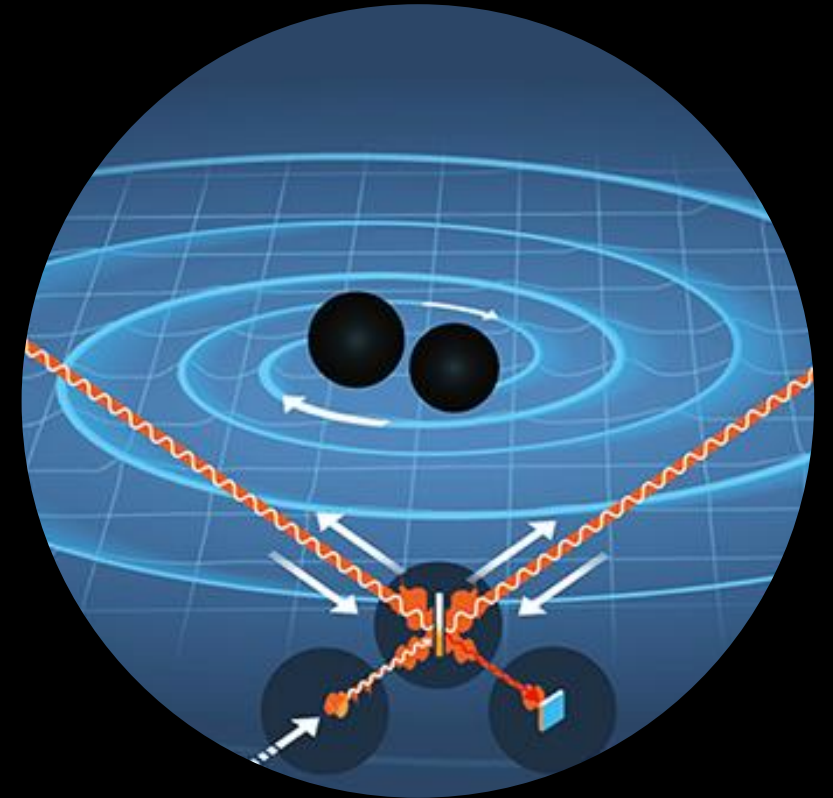


**Over 1,000
researchers.**

Gravitational waves

Gravitational waves resemble light or sound waves, but are far weaker. It requires enormous movements to generate a measurable gravitational wave.

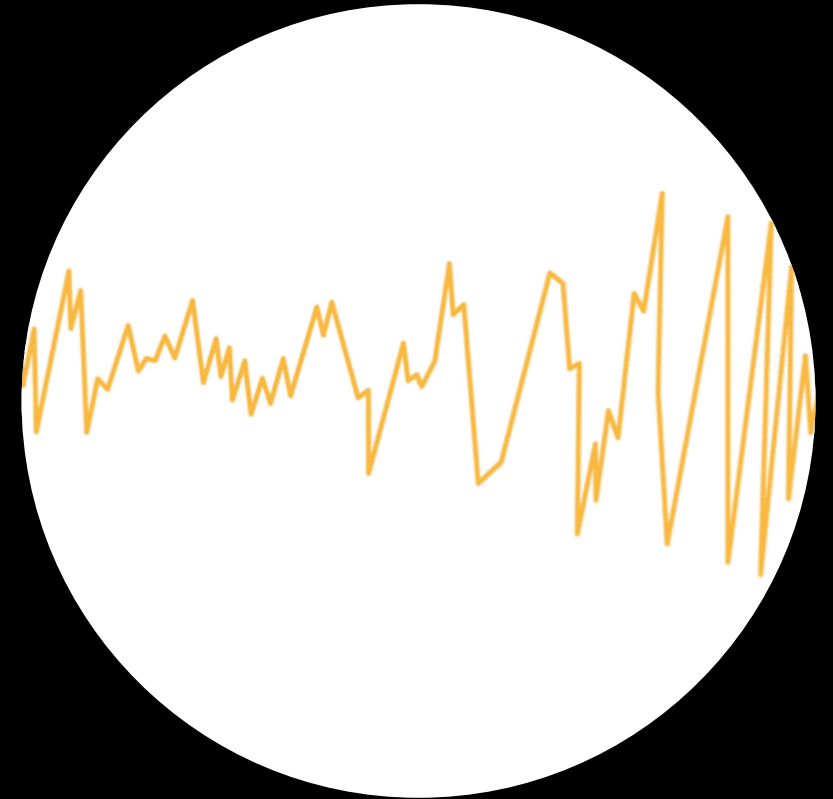
On September 14, 2015, gravitational waves that were 1.3 billion years old reached us on Earth.



The measurements

To distinguish gravitational waves from other vibrations, scientists can compare the measurement results from instruments at more than one location. A gravitational wave is the same regardless of where on the Earth it is measured.

Other, local vibrations are only noticed by one of the instruments.



The benefits

The Laureates' discoveries will give us new opportunities to learn about black holes. By making the measuring instruments even more sensitive, we will also learn more about other astronomical objects – such as pulsars and neutron stars.

**Knowledge
leads to new
advances.**