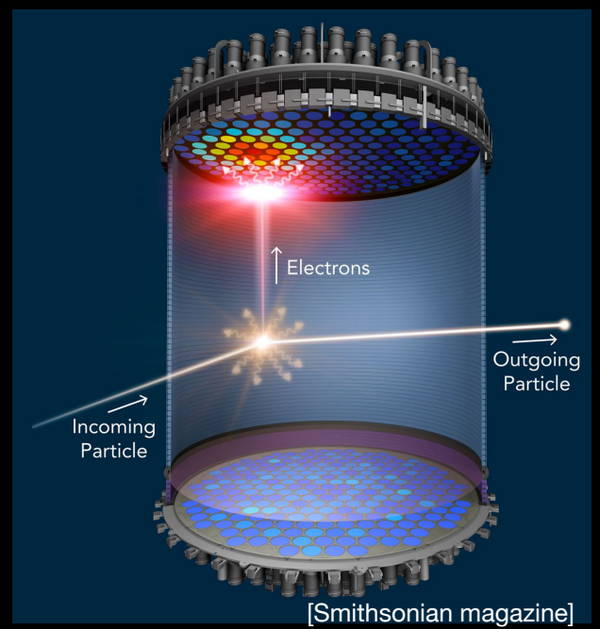
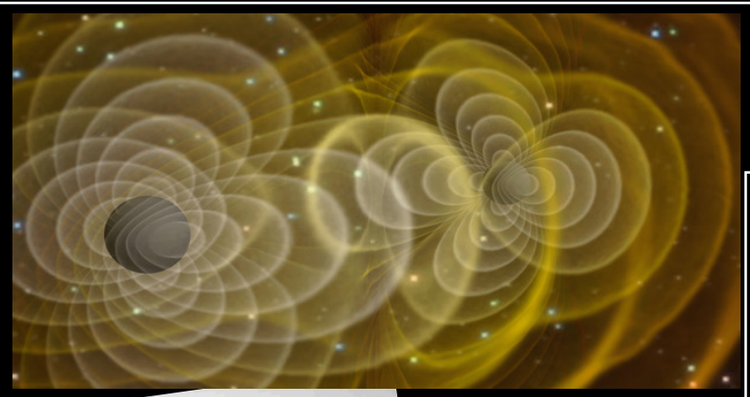
# The year's biggest physics events

**Mads Frandsen:**
Helt nye spor af mørkt stof fra verdens største XENON tank.

I juni rapporterede XENON1T mørkt stof eksperimentet i Gran Sasso i Italien at de har målt nogle forstyrrelser i XENON tanken.  Enten er der tale om uventede radiokative processer i XENON væsken eller også er der tale om kollisioner med nye elementarpartikler.
Eksperimentet leder efter mørkt stof, men det mest sandsynlige er måske snarere nye 'Axion Like Particles'.
Jeg vil fortælle om resultatet og om en model udviklet her på Center for kosmologi og partikelfysik hvor mørkt stof og Axion Like Particles er to sider af samme sag og som måske kan forklare resultaterne.

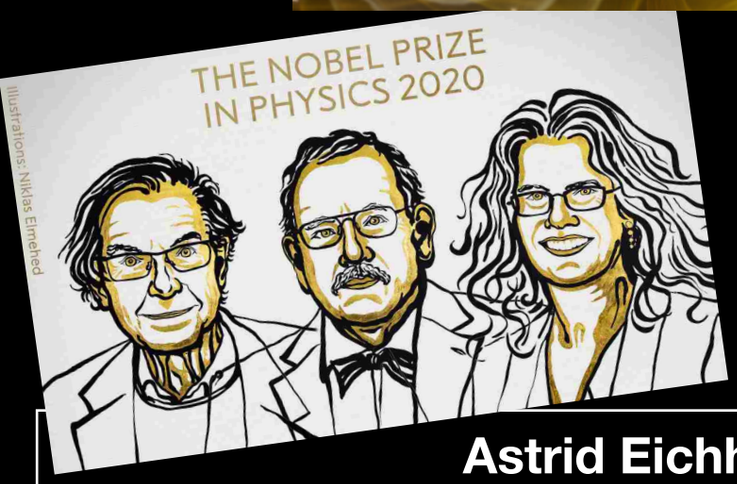


[Smithsonian magazine]



**Roman Gold:**
Incoming message: From: two big black holes. Subject: Gravitational Waves

Current Gravitational Wave detectors, LIGO (USA) and VIRGO (Italy) are searching for the tiniest ripples in spacetime imaginable and have discovered yet another exciting signal GW190521! This time the gravitational waves originated from a merger of the two largest black holes ever detected in this channel. I will explain what gravitational waves and black holes are, why they are so important and how such measurements are even possible. Next I will discuss what information these gravitational waves contain and how they challenge our understanding of how massive stars explode.




**Astrid Eichhorn:**
The Nobel prize, black holes and their secret interiors

The Nobel prize in physics in 2020 was given to three researchers who have advanced our understanding of black holes.
But what are these objects, what makes them black, and most importantly: what are they hiding from us on their inside?

When: 6.11. 2020, 16.00-17.30
Where: Online (zoom)
How to register: send an email to eichhorn@cp3.sdu.dk

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