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## The hum of space-time - A new window on Einstein's universe

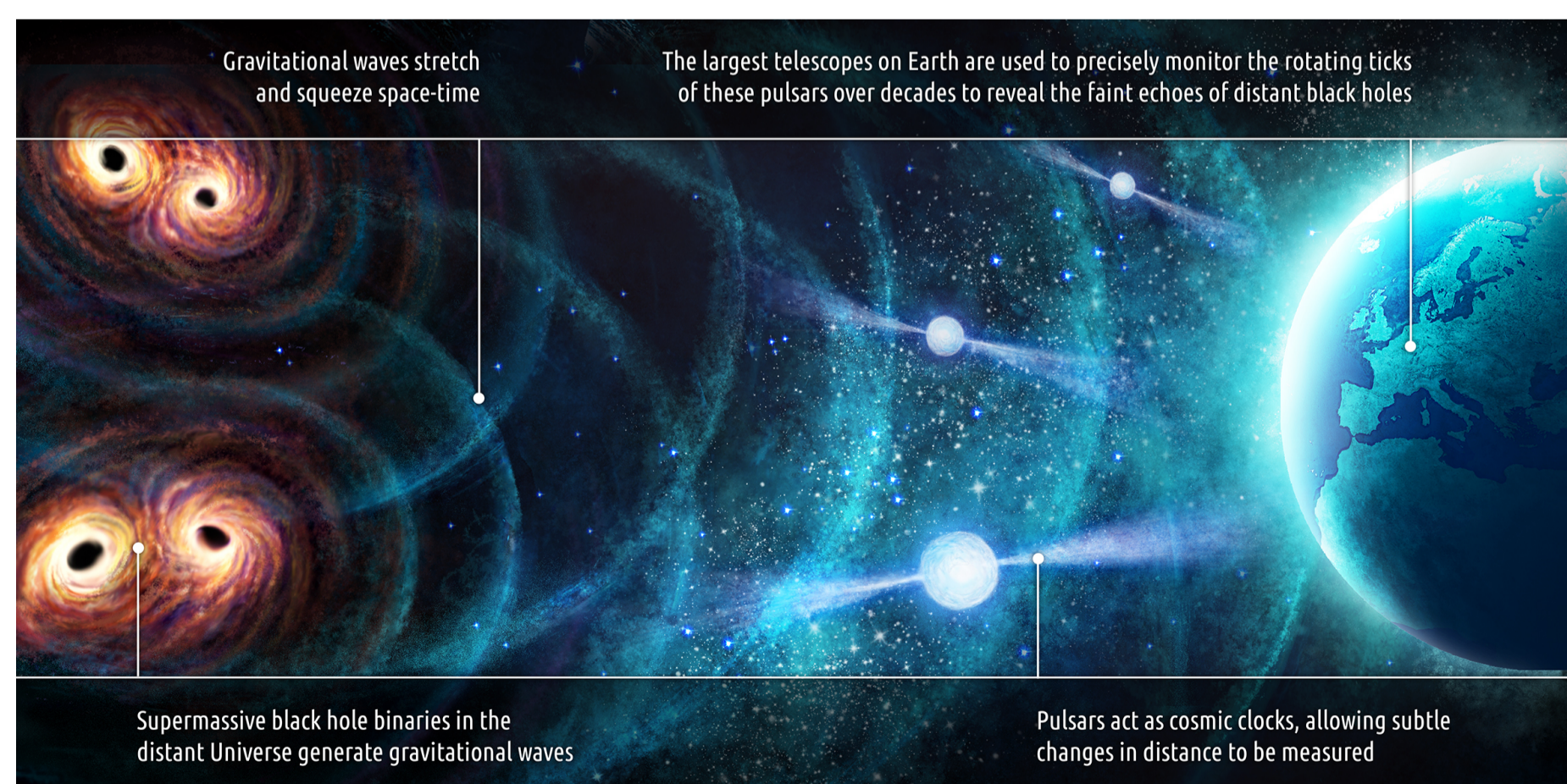
# physikalisches

Mo. 13.5.24  
16:00 Uhr  
Ort: H34

Pulsars, the natural beacons of the universe, put physics to extreme test. As neutron stars, they are not only the densest objects in the observable universe, but they also serve as high-precision laboratories for testing the general theory of relativity.

Pulsars not only allow the observation of predicted effects that cannot be observed by other methods, but they provide also extremely precise tests of the properties of gravitational waves. The latest results even use pulsars as galactic gravitational wave detectors, which detect a continuous "hum" of space-time. This buzz is, most likely, caused by the merging of supermassive black holes in the early universe.

The talk gives an overview of the fascination of Einstein's universe and how it can be explored with the help of pulsars.



Artistic impression of Pulsar Timing Array experiment to detect nHz gravitational waves.