

Physics Colloquium Mainz

May 7, 2024 at 16 c.t.

Lecture room KPH,
Johann-Joachim-Becher-Weg 45, JGU

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 latest results and an outlook into the future.

**The Hum of Space-Time - A New
Window on Einstein's Universe
Prof. Dr. Michael Kramer**

**Max-Planck-Institute for Radio Astronomy,
Bonn**

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