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Response of Charged Particles in a Storage Ring to Gravitational Waves

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Abstract: The influence of gravitational waves on the charged particles in a storage ring is studied. It shows that the gravitational waves might be directly detected by monitoring the motion of charged particles in a storage ring. The angular velocity of the charged particles is continually adjustable by changing the initial energy of particles and the strength of the magnetic field. This feature is very useful for finding the gravitational waves with different frequencies.

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