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Gravitational waves and matter

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Gravitational waves (GWs) passing through matter induce shear into the matter flow, and this shear flow acts as a source of GWs. The consequences include GW echoes and damping of the GW signal together with heating of the matter. These effects have astrophysical applications: core collapse supernova, neutron star mergers, black hole mergers, and primordial GWs.

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