Gravitational wave background in modified-gravity dark energy models

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Summary

- The $f(R)$-modified gravity is one of possible models explaining the apparent acceleration of cosmic expansion
- GW background, which will be observed by LISA, DECIGO, etc, will give stringent constraints on dark energy models
- Cosmological GW background is considered in $f(R)$-modified gravity in the context of dark energy cosmology
- In the tensor-mode perturbations, the effect of gravity modification appears in the friction term, which may enhance the spectrum of GW background
- Scalar-type GWs emerge as the effect of gravity modification at late time of structure formation when matter density of the background becomes small enough