

## Quantum field theory meets gravity



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## Leptogenesis in the model with modular symmetry

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We discuss the model with the modular  $A_4$  invariance. It has been shown that this model can explain neutrino masses and mixing angles observed by oscillation experiments. We investigate the leptogenesis in this model. It is found that the leptogenesis by decay of right-handed neutrinos works well. Especially, we show that the Dirac and Majorana CP-phases in the PMNS matrix and right-handed neutrino masses are predicted in a restricted region in order to explain the baryon asymmetry of the universe.

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