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## Hawking fluxes and Anomalies in the Rotating Regular Black Holes with the Time-Delay

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We are going to calculate the flow of the angular momentum and flux of the Hawking radiation in the rotating regular black hole with the time-delay proposed in arXiv:1510.08828, based on the anomaly cancellation. We first try to reduce the field theories to the infinite two-dimensional massless free models in which the anomaly cancellation method is possible, in the three metrics in arXiv:1510.08828. We demonstrate that the two of them can be reduced. We perform the calculation in these two metrics, and obtain the flow of the angular momentum and flux of the Hawking radiation in these two metrics. Our result involves the three effects: the quantum gravity effect regularizing the gravity sources of the black holes, the black hole rotation, and the time-delay. Hence our result could be considered to correspond to a more realistic Hawking radiations. (This study has been submitted to arXiv on 15 March, where the given arXiv number is arXiv:1603.04159. This study is now under review in an international journal, Classical and Quantum Gravity.)

### Summary

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