Flat-Space Holography and Stress Tensor of Kerr Black Hole\textsuperscript{1}
Yousef Izadi, Kansas State Univ, Reza Fareghbal, Omid Baghchi-Esaraei, Shahid Beheshti University Tehran Iran — According to the AdS/CFT correspondence, gravity in an asymptotically AdS spacetimes has a conformal field theory dual. One of the perplexing concepts in theoretical physics is obtaining a comprehensive understanding of holography. To this end, it is of interest to explore whether holography exists beyond the known example of the AdS/CFT correspondence and for spacetimes other than the AdS. A correspondence has recently been proposed between asymptotically flat spacetimes and a contracted conformal field theory and it is known as Flat/CCFT. This correspondence will be reviewed. Then using Flat/CCFT dictionary by taking the flat limit from quasi-local stress tensor of four-dimensional Kerr-AdS black hole, a stress tensor for Kerr black hole in Boyer-Lindquist coordinate can be calculated. The proposed stress tensor yields the correct values for the mass and angular momentum of the Kerr black hole in spatial infinity and it is another confirmation for Flat/CCFT proposal.

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