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BMS flux algebra and loop corrections to soft graviton theorems

Friday 13 January 2023 17:20 (30 minutes)

I will discuss recent developments in the characterisation of asymptotic states in asymptotically flat gravity, and the central role played by BMS fluxes in connection to soft graviton theorems. As a result of these new ideas, I will show that the subleading soft graviton theorem including loop effects is the Ward identity associated with superrotations symmetries. We will conclude that BMS symmetries are genuine symmetries of the gravitational S-matrix beyond the classical regime. Based on arXiv:2205.11477.

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