In this article the authors investigate singularity properties of tree-level scattering amplitudes in $\mathcal{N} = 4$ super Yang-Mills theory. The cancellation of the so-called spurious poles in the theory has originally been raised and considered in [1]. Motivated by the novel understanding of scattering amplitudes by use of Grassmannian geometry [2], the authors study the cancellation in terms of the positive Grassmannians, utilizing recently obtained results; see, $e.g.$, [3]. Note that the readers are required to be familiar with these recent formal results so as to read through the article. However, the goal of the paper is rather simple; to show the cancellation of the spurious poles in $\mathcal{N} = 4$ super Yang-Mills theory at classical level.

References

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