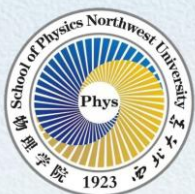


No.202541



## Academic Presentations in Physics 物理学系列学术报告

报告题目: **Notes on flat-space limit of holographic defect correlators in position space**

报告人: 陈启博士 中国科学院大学

报告时间: 2025年12月16日(星期二) 上午10:00

报告地点: 长安校区物理楼856教室

报告摘要: Using a rigorous position space analysis, we systematically derived the flat-space limit of holographic defect two-point functions. Our approach involved a specific Lorentzian scaling limit where operators are effectively null-separated from the defect. This method results in a precise formula relating the scaling limit of correlators to flat-space scattering form factors via a Bessel kernel. We demonstrated that our position space prescription is equivalent to the recent Mellin space conjecture, effectively proving it. It shows that the formalism is robust for defect dimensions  $0 \leq p \leq d-1$ , covering cases where Mellin representations fail. Additionally, the required analytic continuation was detailed. Additionally, the validity of the formula was successfully tested against non-trivial examples, including Wilson loops in 4d  $\mathcal{N}=4$  SYM and surface defects in 6d (2,0) theories.

报告人简介: 陈启博士, 2025年于清华大学物理系获得博士学位, 现在为中国科学院大学卡弗里理论科学研究所博士后研究员, 研究方向为全息缺陷关联函数, 解析自举等。

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