

Bootstrap of the defect 1/2 BPS Wilson lines in N=4 Chern-Simons-matter theories

We compute correlation functions of local operator insertions on the 1/2 BPS Wilson lines of N=4 Chern-Simons-matter theories in 3 dimensions. We study the algebra preserved by the defect CFT supported on the line, identify the superdisplacement multiplet and discuss some of its weak-coupling realizations. By employing a superspace description, we present the 4-point functions of the superdisplacement and show how they are determined by functions of cross-ratios. Within an analytic bootstrap approach, we derive these functions at leading and next-to-leading order at strong coupling, obtaining a result in agreement with appropriate orbifolds of the ABJM case.

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