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Generalized stress-tensor form factors in $N = 4$ SYM and dual conformal symmetry

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We compute the NMHV form factors of two stress-tensor operators in $N=4$ SYM at tree and one-loop level using unitarity methods. At tree level, we analyze the general case using the BCFW recursion and identify dual conformal symmetry properties of such form factors. In addition, we calculate the three-point form factors by the CSW recursion and perform a numerical cross-check in Mathematica, finding agreement up to machine precision. At one-loop level, the three-point form factor is expressed in terms of triangle and box integrals. Our results expose dual conformal symmetry properties of such generalized form factors in planar $N=4$ SYM, which opens up the possibility for all loop analysis using integrability methods.

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