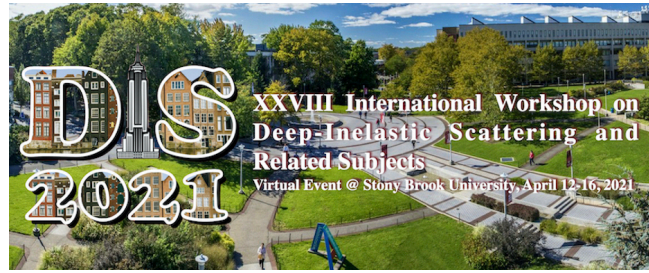


XXVIII International Workshop on Deep-Inelastic Scattering and Related Subjects



Contribution ID: 722

Type: **Contributed Talk**

Vector Boson Scattering to $\alpha_W^2 \alpha_s^{n+2} \log^n(s/t)$

Thursday, 15 April 2021 10:00 (15 minutes)

Vector boson scattering (VBS) represents a key test of the standard model. In order to reliably extract the electroweak contribution to this process, which probes the triple and quartic gauge couplings, a good understanding of the QCD background is necessary. We present a study of the QCD contribution to same-sign W production in association with at least two jets at the LHC within the High Energy Jets (HEJ) framework, which enables the resummation of leading logarithms in s/t to all orders. These high energy logarithms are especially important when the two leading jets have a large invariant mass, which is typical of the VBS cuts used by experiments to enhance the signal over background ratio. Therefore HEJ provides a way to significantly improve the accuracy of the predictions in this critical region.

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