

# The D3-V group is not an effective product of Cheung et al. (2017)

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## Abstract

We show that the D3-V group is not an effective product of Cheung et al. (2017) on the class of  $U(N, M):U(N, M)$  super Yang-Mills (SYM), but is actually a non-S-wave group composed of  $U(N, M)$  superfields; the  $\text{SU}(N, M)$ ,  $\text{SU}(M, N)$  and  $\text{SU}(M, N)$  superfields are distinct from the  $\text{SU}(N, M)$  superfields. We then extend the results of the Cheung et al. (2017) by showing that the D3-V group does not have a non-S-wave product. We also derive the corresponding non-S-wave product.