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## Two dimensional thick center vortex model

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The potential between static color sources is calculated in the  $SU(3)$  gauge group by introducing a two dimensional vortex flux. To generalize the model, the length of the Wilson loop is equal to  $R$  oriented along the  $x$  axis, and the vortex flux is considered as a function of  $x$  and  $y$ . The comparison between the generalized model and the original one shows that the intermediate linear regime is increased significantly and better agreement with Casimir scaling is achieved. Furthermore, the model is applied to calculate the potential between baryons.

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