## A Double Kaonic Nuclear System, Kbar Kbar NN, to be formed in pp colisions

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We have presented the idea that the simplest double-K nuclear cluster,  $K^{-}K^{-}pp$ , can be produced in the p+p  $->K^{+}+K^{+}+\Lambda+A->K^{+}+K^{-}K^{-}pp$  reaction, where  $\Lambda^{*}$  is a quasi-bound  $K^{-}p$  state corresponding to  $\Lambda(1405)$ . We have calculated the differential cross section for this process and found out that helped by a very large momentum transfer Q~ 1.8 GeV/c, a peak of  $K^{-}K^{-}pp$  cluster dominates in the mass spectrum when the cluster is a deeply bound and dense system. The incident proton energy for this process is around 7 GeV and increasing this energy enhances the cross section. We also found that the more bound system forms a more compact structure, and has a larger population. The  $K^{-}-K^{-}$  repulsion inside  $K^{-}K^{-}pp$  gives only a small change on the bound structure and the cross section.

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