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Production of hyperon resonances induced by kaon on deuteron target JUNKO YAMAGATA-SEKIHARA, Yukawa Institute for Theoretical Physics, Kyoto University, TAKAYASU SEKIHARA, Department of Physics, Kyoto University, DAISUKE JIDO, Yukawa Institute for Theoretical Physics, Kyoto University — The kaon induced production of hyperon resonances is investigated in $K^- d \to Y^* N$ reactions based on coupled channels chiral dynamics. The notable feature of this reaction is that the hyperon resonances located below the $\bar{K}N$ threshold, such as the $\Lambda(1405)$ and $\Sigma(1385)$ resonance, can be produced by the $\bar{K}N$ channel. Also for the hyperon resonances appearing above the $\bar{K}N$ threshold, owing to this unique kinematics, this reaction gives us complementary information of the production properties to those in the direct reaction. It has been already known that this model successfully describes the $\Lambda(1405)$ production in this reaction. For the systematical study, we apply this model to other hyperon resonances, for example $\Sigma(1385)$, $\Lambda(1520)$ and $\Lambda(1670)$. We show the cross section of this reaction and discuss the properties of the hyperon resonances.

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