International Workshop on Partial Wave Analyses and Advanced Tools for Hadron Spectroscopy



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Decay angular distributions of K^{*} and D^{*} vector mesons in pion-nucleon interaction

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We discuss production of vector K^* and D^* mesons in $\pi^- p$ interaction with their subsequent decay into pseudoscalar $K + \pi$ and $D + \pi$ mesons, respectively. Our consideration is based on modified quark-gluon string model which includes spin variables and allows to determine decay distributions of the outgoing pseudoscalars. These distributions are sensitive to the vector meson production mechanism and can be used for its determination. We find the relative importance of vector-meson Reggeon exchange to others for the cross sections. Result of present study may be used in projects of future experimental programs with the pion beams (for instance, at J-PARC facility).

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