Measurement of the spin correlation coefficients $A_{x,x}$ and $A_{y,y}$ in the $pn \to \{pp\}_s\pi^-$ reaction near the threshold at ANKE-COSY.

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A kinematically complete double polarization measurement of the $pn \to \{pp\}_s\pi^-$ process near the threshold has been performed recently at the ANKE-COSY spectrometer (Jülich). The experiment aimed to determine the spin correlation coefficients $A_{x,x}$ and $A_{y,y}$ in this process. These results will facilitate further development of χPT in this sector.

The transversely vector polarized deuteron beam and the hydrogen internal polarized ANKE target were used in the experiment. The $pd \to d\pi^0$ process data were recorded concurrently and used for beam and target polarimetry. Independently, the product of the beam and target polarizations can be estimated using the properties of $A_{x,x}$ and $A_{y,y}$ coefficients. The polarized target was equipped with a storage cell that was the main source of background events. Dedicated expositions with no gas in the cell and with the cell filled with N_2 gas, were taken to study the backgrounds. The data analysis procedure and the first results of the experiment will be presented.

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