Strangeness physics with the WASA detector at COSY

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Strangeness is an important degree of freedom to be explored in hadron physics, as it is related to fundamental questions such as SU(3) flavour symmetry, the strangeness content of the nucleon, the strange antiquark quark condensate, or astrophysically important questions like the strangeness content in cold dense matter.

The opportunities to study various issues in strangeness production, given by the relocation of the WASA detector to COSY will be discussed. The talk will focus on topics which have not yet (or not yet fully) been studied at the existing COSY experiments, like the determination of the spin-dependent ΛN interaction, the properties of the hyperon resonances $\Lambda(1405)$ and $\Sigma(1385)$ in vacuum and in nuclear matter, and the search for nuclear K^- states.

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