

The Polarized Target at the CBELSA/TAPS Experiment

Tuesday, 11 September 2018 15:10 (20 minutes)

In 2017, the polarized target system from Mainz/Dubna and Bonn were combined for data taking in Bonn. After testing the combined system, the experiment with the new polarized frozen-spin target and the upgraded Crystal Barrel detector started in winter 2017. First data with a transversal proton target were already taken. In the meantime, the polarized target group at Bonn is building a continuous 4π polarized target. To get high target polarizations and long relaxation times, low temperatures are indispensable. This system will be able to reach temperatures below 30 mK and allows the use of an internal polarisation magnet. As an optimizing tool for the construction of dilution refrigerators and to gain detailed informations about the different incoming and outgoing fluid streams, several CFD-simulations were done. Thus, it was possible to calculate the performance of the precooling stages. First tests showed, that these simulations can be used to calculate the performance of the different heat exchangers. Nevertheless, some improvements of the model are ongoing.

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Session Classification: Polarized Ion and Lepton Sources and Targets

Track Classification: Polarized Ion and Lepton Sources and Targets