In this talk, we will discuss the results of the CAST experiment, which uses a LHC prototype magnet to search for dark matter particles, specifically axions. The magnet can store helium gas, which is essential for the experiment's sensitivity in detecting axions. The CAST collaboration, consisting of researchers from several institutions, is led by Tillmann Guthörl, Julia Vogel, and Horst Fischer. The main goal of the CAST experiment is to search for solar axions, which are predicted by axion models. The experiment has already set an upper limit on the axion-photon coupling constant, with the potential to improve this limit further.

The sensitivity of the experiment is improved by using the LHC prototype magnet, which allows for a higher mass range to be probed. The CAST experiment has set a benchmark for future dark matter searches, pushing the boundaries of our understanding of the universe.