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An antiproton trap system using a drift tube accelerator and energy degrader

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The ASACUSA CUSP experiment upgraded the MUSASHI antiproton trap with a drift tube accelerator to receive antiproton beams from ELENA, which replaced the Radio-Frequency Quadrupole decelerator. ELENA provides antiprotons at a fixed energy of 100 keV. The drift tube adjusted the injection energy of antiproton beams for the thin energy degrader at the entrance of the trap by 19 keV. The number of cooled antiprotons in the MUSASHI trap reached 2 million per ELENA spil. We will discuss the trapping efficiency and the effect of the degrader materials.

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