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## First experiments with CBM

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The first experiments with CBM are focused on the exploration of strongly interacting matter at neutron star core densities as it will be produced in collisions between very heavy nuclei at SIS100 energies. In particular, we will study the equation-of-state of nuclear matter up to the highest baryon densities, and search for transitions to quarkyonic or quark matter. Very promising diagnostic probes are particles with (multiple) strangeness and lepton pairs. Most of these particles will be studied for the first time at SIS100 energies. To perform these measurements, the start version of the CBM experiment will be equipped with detectors to identify both hadrons and leptons over the full SIS100 energy range .

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