A key reaction in both Big-Bang nucleosynthesis (BBN) and p-p-chain hydrogen burning is the $^3\text{He} (\alpha, \gamma)^7\text{Be}$ reaction. The aim of the present study is a comprehensive data set covering the entire BBN range. In a first campaign, $\gamma$-ray angular distributions have been measured at the 3 MV Tandetron accelerator of Helmholtz-Zentrum Dresden-Rossendorf (HZDR) with implanted $^3\text{He}$ targets. Activated samples of $^7\text{Be}$ ($\approx 53$ d half-life) have been counted at the shallow-underground laboratory Dresden Felsenkeller using a new 150% HPGe detector shielded from cosmic rays by ultra-low background copper and lead, active plastic scintillation veto detectors and 140 m water equivalent of rock. A second campaign is planned underground at the new 5 MV Pelletron accelerator Dresden Felsenkeller with a currently designed gas target that can be operated as an extended gas chamber or as a gas jet. Preliminary results of the angular distribution and activation data from the first campaign will be presented as well as the latest status of the Felsenkeller gas-target setup.