

This thesis proposes an improved method for calibration of the Belle II detector by introducing an algorithm that determines the optimal length of the calibration intervals. The calibrated quantity is the centre-of-mass energy of the e^+e^- collisions and is determined from the invariant mass of $e^+e^- \rightarrow \mu^+\mu^-$ events. For a given number of the calibration intervals, a method to find optimal positions of the interval boundaries is developed. Furthermore, a cross-validation technique is applied to choose the total number of intervals such that the data are not overfitted or underfitted. The performance of the algorithm is tested on the data from the Belle II experiment and the results together with further possible improvements are discussed.