This bachelor thesis studies the resolution of the Belle II detector using muons from cosmic ray tracks penetrating the detector. The first part describes the Belle II experiment. The next part explains the method used to find the resolution and applies it to data from Monte Carlo simulation. Then the same method is applied on data from Spring 2020 and compared with the results acquired from analyzing the Monte Carlo simulation. The last part examines more recent data taken from 29.10.2021 to 30.3.2022. Additionally as a part of this thesis a Python script capable of providing all the results shown in this paper was developed.