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Reanalysis of the of β-$\bar{\nu}_e$ angular correlation measurement aSPECT with new constraints on Fierz interference

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Ulrich Schmidt on behalf of the aSPECT collaboration

The aSPECT collaboration published in 2020 the most precise value on the electron-antineutrino correlation coefficient $a = -0.10407(82)$ of neutron β-decay. The value of this correlation coefficient a is directly linked to the λ parameter of the Weak Interaction of the Standard Model. The value for λ obtained in this way is in tension with the most precise determination of λ via the measurement of the neutron spin verus electron momentum correlation A, measured by Perkeo III. Meanwhile we revised some systematic errors and reanalysed our data including parameters from physics beyond the Standard Model like the Fierz interference term b. We will present the status of our reanalysis and discuss out result in the context of today most precise result on b from neutron β-decay published by the Perkeo III collaboration.

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