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e+ e- data: no anomaly in the muon g-2?

Friday, 30 October 2026 10:00 (15)

Using an up-to-date compilation of $\sigma_{\rm tot}(e^+e^- \to hadrons)$ data we estimated the LO hadronic contribution $a_\mu^{LO\,HVP}$ to the muon anomalous magnetic moment a_μ. Incompatibilities between $\sigma_{\rm tot}(e^+e^- \to hadrons)$ measurements by independent experiments are mitigated by extra systematic uncertainties estimated using as a guideline a requirement of uniformity of χ^2 distribution over degrees of freedom in joint fits of $\sigma_{\rm tot}$. Tensions in the e^+e^- input data translate into an expanded uncertainty of the $a_\mu^{LO\,HVP} = (697.7 \pm 9.8_{e^+e^-} \pm 3.6_{sys}) \times 10^{-10}$. Given this, we obtain $a_\mu^{\rm SM} = 11659185.5(10.6) \times 10^{-10}$, below the experimental world average $a_\mu^{\rm exp}$ at 2σ level.

Primary author(s) : ZENIN, Oleg (NRC KI – IHEP); Dr. BRYZGALOV, Valery (NRC KI – IHEP)

Co-author(s) : GOLUBKOV, Dmitry (NRC KI – IHEP)

Presenter(s) : ZENIN, Oleg (NRC KI – IHEP)

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