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Calculation of meson charge radii using model-independent method in the PACS10 configuration

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We report our preliminary results for the charge radii of π^+ and K^+ mesons with the PACS10 configuration generated at the physical point using the Iwasaki gauge action and $N_f = 2 + 1$ stout-smearred nonperturbatively $\mathcal{O}(a)$ improved Wilson quark action, especially at $a = 0.085$ fm corresponding lattice size 128^4 . The charge radii are obtained from a model-independent method that directly calculates the first-order differential coefficient of the electromagnetic form factor and also from a traditional method that analyzes the form factor using a fit ansatz. We compare our preliminary results obtained by these various methods with previous lattice calculations and experiments.

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