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Study of finite size effect on hadron masses and decay constants with (5.4fm)⁴ and (10.8 fm)⁴ lattices at the physical point in 2+1 flavor QCD

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We investigate finite size effect on hadron masses and decay constants using a subset of the PACS10 configurations which are generated keeping the space-time volumes over (10 fm)⁴ at the physical point in 2+1 flavor QCD with the Wilson-type quarks. We have tried two kinds of analyses fixing the κ values or the measured axial Ward identity quark masses. The finite size effect is discussed by comparing the results on (5.4 fm)⁴ and (10.8 fm)⁴ lattices at the cutoff scale of 1/a=2.333 GeV with emphasis on the pseudoscalar meson sector and the Omega baryon.

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