Light hadron spectrum with 2+1 flavor QCD with O(a)-improved Wilson quarks

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We present preliminary results for the light hadron spectrum in 2+1 flavor lattice QCD using the non-perturbatively O(a)-improved Wilson quark action and the Iwasaki gauge action. Simulations are carried out at $\beta = 1.90$ on a $32^3 \times 64$ lattice using the PACS-CS machine in University of Tsukuba. We employ Lüscher's domain-decomposed HMC algorithm to reduce the up-down quark mass toward the physical value, for which the pseudoscalar masses range from 180 MeV to 530 MeV. We compare the light hadron spectrum extrapolated at the physical point with the experimental values. The results for the light quark masses are also presented.