

Charmed baryon spectroscopy from lattice QCD near the physical point

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The low-lying spectrum of charmed baryons is calculated in lattice QCD on the $32^3 \times 64$, $N_f = 2+1$ PACS-CS gauge configurations at the almost physical pion mass of $156 \text{ MeV}/c^2$. By employing a set of interpolating operators with different Dirac structures and quark-field smearings for the variational analysis, we extract the ground and first few excited states of the spin-1/2 and spin-3/2, singly-, doubly-, and triply-charmed baryons.

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