

# H-dibaryon properties from a QCD sum rule approach with explicit diquark fields

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We investigate the properties of H-dibaryon using a QCD sum approach with explicit diquark fields. In our previous study, the phenomenological ud-diquark mass was obtained from the sum rule analysis for the  $\Lambda$  assuming that its structure is composed by a diquark and a spectator quark. In same way, we obtain the properties of qs-diquark from  $\Xi_{c,b}$  which are expected to have a good qs-diquark structure. Using the previously determined properties of diquarks, the mass of H-dibaryon is calculated when it is composed of three diquarks. We calculate the mass of H-dibaryon in both SU(3)<sub>f</sub> symmetric and non-symmetric cases and attempt to compare with the results from lattice calculation and other models.

## Keywords

H-dibaryon, QCD sum rule, di-quark

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