## Light Cone 2021: Physics of Hadrons on the Light Front



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## Rotational symmetry in a light-front effective potential

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An effective potential between two fixed sources is computed in light-front quantization for a quenched scalar Yukawa theory. The quenching removes pair-production processes that would result in a spectrum unbounded from below. The sources are fixed with respect to ordinary time, but move in the light-front longitudinal direction. The neutral scalar field is represented by a coherent state, which is obtained nonperturbatively as an eigenstate of the model energy, with the eigenenergy determining the effective potential. Although explicit rotational symmetry is broken by the use of light-front coordinates, the effective potential is rotationally symmetric and matches the standard Yukawa potential for scalar exchange.

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