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Analytic solutions of multi-parton ʻt-Hooft equations

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After explaining the role of generalized, i.e. multi-parton, ʻt Hooft equations in QCD, their numeric and analytic solutions will be discussed. The intriguing localization property, together with stringy interpretation will be demonstrated. Finally, we will derive analytically the complete basis of localized solutions satisfying appropriate, infrared safe, boundary conditions in all parton sectors. Their linear spectrum, together with calculable degeneracies provide rather transparent interpretation of, otherwise complicated, multi parton spectra. The entropy of above solutions is readily available and reveals the Hagedorn behaviour.

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