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## **Instanton-dyons induce both the chiral symmetry breaking and confinement**

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QCD topology – mostly instantons – had been used in the past to explain near-zero Dirac states and chiral symmetry breaking. At  $T \sim T_c$  instantons are known to get decomposed into  $N_c$  instanton-dyons. Several lattice observations were naturally explained by instanton-dyons.

Their partition function is now numerically generated: the statistical ensemble is then used to get the spectrum of Dirac eigenstates: that is found

to produce both chiral broken and restored (gapped) spectra, as a function of  $T$  and  $N_f$ . Another development is to account for the back reaction, from dyons to holonomy potential. Somewhat unexpectedly, that was recently shown to induce a (quasi) confining phase transition, in which the Polyakov line jumps to zero value.

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