

A tail of a quark in N=4 SYM

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Abstract content

Summary

We study a composite 'ordressed' quark in strongly-coupled N=4 super-Yang-Mills at zero temperature. We show that the standard string dynamics nicely captures the physics of the quark and its surrounding non-Abelian field configuration, making it possible to derive a relativistic equation of motion that incorporates the effects of radiation damping. From this equation one can read off a non-standard dispersion relation for the composite quark, as well as a Lorentz covariant formula for its rate of radiation. References: arXiv:0906.1592, 0903.2047

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