N-Spike Strings in conformal gauge with mixed flux

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Abstract: The $AdS_3 \times S^3$ string sigma model supported both by NS-NS and R-R fluxes has become a well known integrable model, however a putative dual field theory description remains incomplete. We study the anomalous dimensions of twist operators in this theory via semiclassical string methods. In this talk I will describe the construction of a multi-cusp closed string in conformal gauge moving in AdS_3 with fluxes, which is dual to a general higher twist operator. After analyzing the string profiles and conserved charges for the string, I will show the exact dispersion relation between the charges in the `long' string limit. This dispersion relation in leading order turns out to be similar to the case of pure RR flux, with the coupling being scaled by a factor that depends on the amount of NS-NS flux turned on.

References

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