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Rotating strings and anomalous dimensions in TTbar deformation

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We consider certain rigidly rotating closed string configurations in an asymptotically non-AdS string background. The string background is a deformation of AdS_3 × M_7 with NSNS two-from B field. It interpolates between AdS_3 and asymptotically linear dilaton IR × Sˆ1 × IR spacetime (times the internal compact manifold M_7). In the long string sector the deformation is dual to a single trace TTbar deformed symmetric product theory. We compute the quantity E –J for certain rotating folded and cusped closed strings where E is the energy and J is the angular momentum of the strings. In the two dimensional CFT dual to string theory on AdS_3 (times M_7) it gives the anomalous dimensions of certain twist two and higher operators. We discuss the structure of (large angular momentum J expansion) of E – J and comment on what it measures away from the CFT along the deformation in the coupling space. We also discuss the closely related cusp anomalous dimension of a light-like Wilson loop. We also give semiclassical results for the energy of certain non-spinning pulsating strings. The talk is based on my recent paper: arXiv:2404.16601[hep-th].

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