
ARNAUD LEPAGE-JUTIER, McGill

Smoothed Transitions in Higher Spin AdS Gravity

We consider CFTs conjectured to be dual to higher spin theories of gravity in AdS_3 and AdS_4 . Two dimensional CFTs with W_N symmetry are considered in the $\lambda = 0$ ($k \rightarrow \infty$) limit where they are described by continuous orbifolds. The torus partition function is computed, making reasonable assumptions, and equals that of a free field theory. We find no phase transition at temperatures of order one; the usual Hawking-Page phase transition is removed by the highly degenerate light states associated with conical defect states in the bulk. Three dimensional Chern-Simons Matter CFTs with vector-like matter are considered on T^3 , where the dynamics is described by an effective theory for the eigenvalues of the holonomies. Likewise, we find no evidence for a Hawking-Page phase transition at large level k .