AS A DEGENERATE FIELD THEORY

1. THE P_0 STRUCTURE

In this section we will describe the P_0 structure on the higher dimensional Kac-Moody factorization algebra at level zero.

2. EXAMPLE: THE BOUNDARY OF A 7D GAUGE THEORY

In this section we will see how the six-dimensional Kac-Moody degenerate field theory arises as the boundary of a supersymmetric gauge theory in seven dimensions.

2.1. The gauge theory we consider arises as a deformation of a partial twist of maximally supersymmetric Yang-Mills gauge theory in seven dimensions.

2.2.

Theorem 2.1. *Suppose we put $\widetilde{\mathcal{Y}}_\theta$, the deformation of the twisted $N = 2$ gauge theory we considered above, on a seven manifold of the form $X \times \mathbb{R}_{\geq 0}$ where X is a Calabi-Yau six-fold. Then, there is a boundary condition on $X \times \{0\} \subset X \times \mathbb{R}_{\geq 0}$ whose associated boundary theory is equivalent to the degenerate field theory $\mathcal{K}_\theta$ on X.*