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TITLE: Demazure flags for A_2^2 and partial theta functions

ABSTRACT: In this talk we discuss Demazure modules in highest weight representations of the twisted affine Lie algebra A_2^2 . These modules are indexed by a pair consisting of a dominant integral weight for the underlying simple Lie algebra \mathfrak{sl}_2 and a non-negative integer called the level. It is known that a Demazure module of a fixed level ℓ admits a flag whose successive quotients are isomorphic to Demazure modules of level m for all $m \geq \ell$. We shall see that the generating series of the numerical multiplicities in the flag are given by a rational function and the generating series of the graded multiplicities (a q -variant of the numerical multiplicities) are related to partial theta series in some special cases.