Department of Theoretical Physics

THE QUANTUM SPACETIME SEMINAR SERIES

Hilbert Series and Black Hole Microstate Counting

(Part – II)

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Date: December 02, 2015
Time: 11.30 am
Venue: A-304, TIFR

(Duration and Location are subject to irreducible jitter)

Exact results for the BPS index are known for a class of BPS dyons in type II string theory compactified on a six dimensional torus. In a previous paper we had set up the problem of counting the same BPS states in a duality frame in which the states carry only Ramond-Ramond charges. We explicitly counted the number of states carrying the lowest possible charges and find agreement with the result obtained in other duality frames. Furthermore, we found that after factoring out the supermultiplet structure, each of these states carry zero angular momentum. In the recent paper we have extended it to other small charges but with non-abelian gauge fields. It all boils down to solving multivariate polynomial equations and Hilbert series provides a way to classify the building blocks (the Monomials).