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Ramin Takloo-Bighash* (rtakloo@uic.edu), Dept of Mathematics, Statistics, and Computer Science, Univ of IL at Chicago, 851 S Morgan St (M/C 249), Chicago, IL 60607. *Distribution of rational points on one sided compactifications of $\mathrm{PGL}(2)$* . Preliminary report.

In this talk I will report on some recent and ongoing works joint with Sho Tanimoto where we study the distribution of rational points of bounded height on some one sided equivariant compactifications of the group $\mathrm{PGL}(2)$ using methods of automorphic forms. An interesting feature of our results is that the main contribution to the pole of the counting zeta function function is not from the trivial representation. This is in sharp contrast with many of the previous works in this subject. (Received August 11, 2015)