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 ${\bf Zhanqiang \ Bai \ and \ Markus \ Hunziker* \ (\tt markus_hunziker@baylor.edu)}. \ On \ the$

Gelfand-Kirillov dimension of a unitary highest weight module. Preliminary report.

Using earlier work by A. Joseph, we prove a simple formula for the Gelfand-Kirillov dimension of a unitary highest weight module in terms of its highest weight. Our formula generalizes a result of Enright and Willenbring and is inspired by Wang's formula for the dimension of a minimal nilpotent orbit. (Received February 10, 2014)