1062-32-110 **Alexander J. Izzo*** (aizzo@math.bgsu.edu), Department of Mathematics and Statistics, Bowling Green State University, Bowling Green, OH 43403. *Function Algebras Invariant under Group Actions.*

We will answer a question raised by Ronald Douglas in connection with his work on a conjecture in operator theory due to William Arveson. Let S denote the unit sphere in $\mathbf{C}^n$. If A is a function algebra on S that contains the ball algebra $A(S)$ and whose maximal ideal space is S, and if A is invariant under the action of the n-torus on S, does it follow that $A = C(S)$? When $n = 1$, Wermer's maximality theorem gives immediately that the answer is yes. Surprisingly, in higher dimensions the answer depends on the dimension. The proof is related to a peak point theorem of John Anderson and the speaker and counterexamples to the peak point conjecture due to Richard Basener and the speaker.

We will also present related results of a more general nature concerning function algebras that are invariant under group actions. (Received August 01, 2010)