1039-47-178   **Roger A. Roybal*** (`roger.roybal@csuci.edu`), Department of Mathematics, CSUCI, One University Drive, Camarillo, CA 93012. *Joint defect indices of tuples of symmetric operators in the multidimensional moment problem.* Preliminary report.

In the one variable Hamburger moment problem, the solution is determinate, or unique, exactly when the associated multiplication operator is essentially self-adjoint. It follows that a reproducing kernel exists if and only if there are multiple solutions to the moment problem. Less is known in the multivariate case, however, in which the variables give rise to a tuple of symmetric operators. In particular, the relationship between determinacy and the existence of a reproducing kernel is not yet fully explored. We will show that in a sense a measure cannot be "too determinate" if a reproducing kernel exists. (Received March 11, 2008)