1038-46-98 **Benoit Collins** and **Kenneth J Dykema***, Department of Mathematics, Texas A&M University, mailstop 3368, College Station, TX 77843-3368. *Connes' embedding problem and Horn's inequalities.*

Connes' embedding problem asks whether every separable II_1–factor can be embedded in the ultrapower of the hyperfinite II_1–factor; this is equivalent to asking whether every finite set in every II_1–factor has microstates. Bercovici and Li have related this to a question concerning the possible spectral distributions of $a + b$, where a and b are self-adjoint elements in a II_1–factor having given spectral distributions. We show that Connes' embedding problem is equivalent to a version of this spectral distribution question with matrix coefficients. (Received January 31, 2008)