1009-05-80 **Richard Anstee** and **Peter Keevash*** (`keevash@its.caltech.edu`), Department of Mathematics, Caltech, Pasadena, CA 91125. *Pairwise intersections and forbidden configurations.*

Let $f_m(a,b,c,d)$ denote the maximum size family of a family $\mathcal{F}$ of subsets of an m-element set so that there is no pair $A, B \in \mathcal{F}$ with

$$|A \cap B| \geq a, \quad |\bar{A} \cap B| \geq b, \quad |A \cap \bar{B}| \geq c, \quad |\bar{A} \cap \bar{B}| \geq d.$$

By symmetry we can assume $a \geq d$ and $b \geq c$. We show that $f_m(a,b,c,d)$ is $\Theta(m^{a+b-1})$ if either $b > c$ or $a, b \geq 1$. We also show $f_m(0,b,b,0)$ is $\Theta(m^b)$ and $f_m(a,0,0,d)$ is $\Theta(m^a)$. This can be viewed as a result concerning forbidden configurations, and provides further evidence for a conjecture of Anstee and Sali.

Our key tool is a strong stability version of the Ahlswede-Khachatrian Complete Intersection Theorem, which is of independent interest. (Received August 07, 2005)