962-52-514 **Jacob E. Goodman*** (jegcc@cunyvm.cuny.edu), Dept. of Mathematics, City College, CUNY, New York, NY 10023. *Helly-type theorems for higher-dimensional transversals to large collections.*

We discuss two theorems of Helly type for k-dimensional transversals to collections of compact convex sets in $\mathbb{R}^d$, one for finite collections of sufficient size, the other for infinite collections. In the first case, where our results apply only to the case $k = d - 1$, we show that the Helly number for suitably separated sets is bounded above by $2d + 2$. In the second case, which applies to transversals of all dimensions from 1 to $d - 1$ and generalizes a theorem of H. Hadwiger, we show that the Helly number is exactly $d + 1$. These results have been obtained jointly with B. Aronov, R. Pollack, and R. Wenger. (Received September 15, 2000)