Let $\text{Sym}(n)$ be the group of all permutations of $n$ elements. If $p_1, p_2$ are two permutations such that $p_1$ and $p_2$ coincide in $\lambda$ positions, the Hamming distance between $p_1$ and $p_2$ is the integer $d_{n}(p_1, p_2) = n - \lambda$.

A permutation array (PA) $\Gamma_{(n,d)}$ of size $s$ and minimum distance $d$ is a set of $s$ permutations of $n$ elements such that the distance between any two permutations is at least $d$.

Some data-transmission codes use PA’s of maximum size $s$ with respect to $n$ and $d$. We use the group $\text{Iso}(\text{Sym}(n))$ of isometries of $\text{Sym}(n)$ to study and construct PA’s.