Here we describe a how the files on translation planes are constructed and what they represent.

A translation plane of order $n = p^m$ is represented by *spread* $\mathcal{S}$ in $V = V(2m, p)$, i.e. a set of m-dimensional subspaces it's *components* such that

$$\bigcup_{X \in \mathcal{S}} X = V \quad \text{and} \quad X \cap Y = 0$$

for every pair X, Y in $\mathcal{S}$. Using coordinates one associates with $\mathcal{S}$ a *spread set* $0 \in S \subseteq \mathrm{GL}(m, p) \cup \{0\}$ such that

$$\det(A - B) \neq 0 \quad \text{for} \quad A, B \in S,\ A \neq B.$$

The spread is then represented by $\mathcal{S} = \{V(\infty)\} \cup \{V(A) \,|\, A \in S\}$ where $V(\infty) = \{0\} \times V(m, p)$ and $V(A) = \{(v, vA) \,|\, v \in V(m, p)\}$ for $A \in S$. We also call a matrix $(C, D) \in \mathrm{GF}(p)^{m \times 2m}$, $B, C \in \mathrm{GL}(m, p) \cup \{0\}$, *homogeneous coordinates* for the component $V(A)$, $A \in S$, if $A = C^{-1}D$ or for the component $V(\infty)$ in case that $C = 0 \neq D$.
The *automorphism group* of $\mathcal{S}$ is the group G of matrices $X \in \mathrm{GL}(2m, p)$ with $\mathcal{S}X = \mathcal{S}$. Using the representation with a spread set this means that the component of $\mathcal{S}$ with homogeneous coordinates (C, D) is moved by X to the component with homogeneous coordinates $(C, D)X$. For instance $V(A) \mapsto V(B)$ if $(C, D) = (1, A)X = (X_{11} + AX_{21}, X_{12} + AX_{22})$ and $B = C^{-1}D$. The permutation group H which the group G induces on $\mathcal{S}$ is also the group which G induces on the line at infinity.