On the K-type distribution of the covering groups of the special linear group

Let \widetilde{G} be the *n*-fold covering group of the special linear group of degree two, over a non-Archimedean local field. We determine the decomposition into irreducibles of the restriction of the principal series representations of \widetilde{G} to a maximal compact subgroup, and investigate the K-type distribution among the \widetilde{G} irreducible components.