RECOVERING DIV(X) FROM GALOIS THEORETICAL INFORMATION

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One of the main problems in anabelian geometry is to recover the divisor group $\mathrm{Div}(X)$ for models X of function fields $K|k$ from Galois theoretical information on K. In the case of curves, one can use the very explicit structure of the Galois group of K (in terms of the inertia groups above the closed points of the unique projective smooth model X of K). The case of interest is nevertheless that of the higher dimensional varieties X, which is much more involved. In my talk I will discuss the problem in detail, in particular: (i) that recovering $\mathrm{Div}(X)$ is equivalent to recovering the "systems of canonical inertia generators" at divisorial valuations, and (ii) present the new progress on the problem.