

$$\mathrm{Gal}(L/K) \left(\begin{array}{c} L \\ \left| \mathrm{Gal}(L/F) \cong \theta_{L/K}(S) \right. \\ F \\ \left| \mathrm{Gal}(L/K)/\mathrm{Gal}(L/F) \right. \\ K \end{array} \right) \rightsquigarrow$$

$$\begin{array}{ccc} K^* & \xrightarrow{\theta_{L/K}} & \mathrm{Gal}(L/K) \\ \parallel & & \downarrow \mathrm{res} \\ K^* & \xrightarrow{\theta_{F/K}} & \mathrm{Gal}(F/K) \end{array}$$