

$$\bar{Q}_p^\times \xrightarrow{p^\gamma} \mathbb{C}$$

$$\bar{Q}^\times = \prod_p \bar{Q}_p^\times$$

$$d_{\bar{Q}^\times} a^\times = \prod_p d_{\bar{Q}_p^\times} a_p$$

$$\zeta|\gamma = \int_{\bar{Q}^\times} \prod_p^{da_p} a_p^\gamma \prod_p \bar{a}_p^s = \prod_p \int_{\bar{Q}_p^\times}^{da_p} a_p^\gamma \bar{a}_p^s$$

$${}^x\chi_p = \begin{cases} 1 & \bar{x}_p \leq 1 \\ 0 & \bar{a}_p > 1 \end{cases}$$

$${}^x\chi_\infty = -\pi x^2 \mathbf{e}$$

$$\zeta(\chi: \bar{x}^s)$$