Twists of Shimura Curves
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Abstract. Consider a Shimura curve $X_0^D(N)$ over the rational numbers. We determine criteria for the twist by an Atkin-Lehner involution to have points over a local field. As a corollary we give a new proof of the theorem of Jordan-Livné on $\mathbb{Q}_p$ points when $p \mid D$ and for the first time give criteria for $\mathbb{Q}_p$ points when $p \mid N$. We also give congruence conditions for roots modulo $p$ of Hilbert class polynomials.