1106-11-1877 **William Y Chen*** (chen_w@math.psu.edu), 445 Waupelani Dr., Apt D17, State College, PA 16801. *Moduli Interpretations for Noncongruence Modular Curves.*

Let Γ be a subgroup of $\mathrm{SL}_2(\mathbb{Z})$, and let $\mathcal{H}$ be the upper half plane. If Γ is a congruence subgroup, then it's well known that the quotient $\Gamma \setminus \mathcal{H}$ is a coarse moduli space for isomorphism classes of elliptic curves equipped with some level structure. We will generalize the standard level structures and show that for most noncongruence subgroups Γ, the quotient $\Gamma \setminus \mathcal{H}$ has a natural interpretation as the coarse moduli space classifying isomorphism classes of elliptic curves together with a generalized level structure. In this generalization the standard level structures associated to congruence subgroups should be considered "abelian", while those corresponding to noncongruence subgroups should be considered "nonabelian". We will also discuss applications to the arithmetic of noncongruence modular forms. (Received September 15, 2014)