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Let Γ be a Kleinian group such that $M = \mathbb{H}^3/Gamma$ is a hyperbolic 3-manifold with invariant quaternion algebra $A\Gamma$. A theorem of Chinburg and Reid states that if M has a non simple geodesic then $A\Gamma \cong \left(\frac{\alpha,\beta}{K\Gamma}\right)$ where $\beta \in K\Gamma \cap \mathbb{R}$. In this talk we will prove the converse when Γ is arithmetic. (Received September 24, 2018)