▶ GIANLUCA PAOLINI, *First-order model theory of free projective planes.*

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We prove that the theory of open projective planes is complete and strictly stable, and infer from this that Marshall Hall's free projective planes ($\pi^n : 4 \leq n \leq \omega$) are all elementary equivalent and that their common theory is strictly stable and decidable, being in fact the theory of open projective planes. We further characterize the elementary substructure relation in the class of open projective planes, and show that ($\pi^n : 4 \leq n \leq \omega$) is an elementary chain. We then prove that for every infinite cardinality κ there are 2^κ non-isomorphic open projective planes of power κ, improving known results on the number of open projective planes. Finally, we characterize the forking independence relation in models of the theory and prove that π^ω is strongly type-homogeneous.

[1] Gianluca Paolini and Tapani Hyttinen. *First-Order Model Theory of Free Projective Planes: Part I*. Submitted.