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Eyal Z Goren* (eyal.goren@mcgill.ca) and **Ehud De Shalit**. *p-adic properties of Picard modular surfaces and forms*. Preliminary report.

We consider geometric questions concerning Picard modular surfaces in positive characteristic p and special relations between their automorphic vector bundles. We apply this to the study of p -adic modular forms and the construction of a theta operator. Along the way we provide an interesting model for the universal abelian threefold in characteristic zero that allows us to perform calculations that are relevant to our p -adic constructions. (Received August 11, 2014)