

Meeting: 1001, Evanston, Illinois, SS 7A, Special Session on Geometric Partial Differential Equations

1001-35-318 **Gabor Francsics*** (francsic@math.msu.edu), Department of Mathematics, Michigan State University, East Lansing, MI 48824. *Picard modular groups in complex hyperbolic spaces*. Preliminary report.

Our main goal is (1) to construct an explicit fundamental domain for the Picard modular group acting on the complex hyperbolic space; (2) to study the spectrum of the associated Laplace operator. Our interest in the problem originates in the spectral theory of the Laplace operator on quotients of complex hyperbolic space. The complex hyperbolic space is a Hermitian symmetric space. The Picard modular group is the higher complex dimensional analogue of the modular group. This is joint work with P. Lax. (Received August 30, 2004)