

Weyl Law for Laplacian with constant magnetic field on noncompact hyperbolic surfaces with finite area

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We consider a magnetic Laplacian $H(A)$ on a noncompact hyperbolic surface M with finite area. A is a real one-form and the magnetic field dA is constant in each cusp. When the harmonic component of A satisfies some quantified condition, it turns out that the spectrum of $H(A)$ is discrete and that the eigenvalue counting function satisfies the classical Weyl formula, even when $dA = 0$. Moreover the order of the remainder term is the same as in the sharp asymptotic formula recently established by W. Müller in the context of automorphic forms.