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Monodromy of hyperelliptic and trielliptic curves. Preliminary report.

We consider the moduli space of cyclic degree- d covers of the projective line. When d is 2 or 3, we calculate the irreducible components of the moduli space of such covers equipped with full Jacobi level- ℓ structure. We use this to compute the frequency with which a given abelian ℓ -group occurs as the ℓ -Sylow part of the class group of a hyper- or trielliptic curve. (Received February 20, 2006)