1053-14-234 **Andrew Obus*** (obus@math.columbia.edu), Columbia University Dept. of Mathematics, MC4403, 2990 Broadway, New York, NY 10027. *Vanishing Cycles and Wild Monodromy.*

Let K be a complete discrete valuation field of mixed characteristic $(0, p)$ with algebraically closed residue field, and let $f : Y \to \mathbb{P}^1$ be a three-point G-cover defined over K, where G has a cyclic p-Sylow subgroup P. We examine the stable model of f, in particular, the minimal extension K^{st}/K such that the stable model is defined over K^{st}. Our main result is that, if $g(Y) \geq 2$, the inertia groups of f are prime to p, and $|P| = p^n$, then the p-Sylow subgroup of $\mathrm{Gal}(K^{st}/K)$ has exponent dividing p^{n-1}. This extends work of Raynaud in the case that $|P| = p$. (Received September 06, 2009)