

Abstract – We discuss several points in the approaches of Faltings and Scholze to p -adic Hodge theory and Grothendieck duality in this context. Let K be an algebraically closed complete rank 1 valued field with valuation ring O_K of mixed characteristic $(0, p)$, X a proper smooth connected rigid analytic space over K of dimension d with normal formal model \mathcal{X} over $\mathrm{Spf} O_K$. To show Poincaré duality for $H^*(X_{\mathrm{et}}, \mathbb{Z}/p)$ one considers the “nearby cycle” complex $R\psi_*(O^+/p)$ on \mathcal{X}/p ; it has bounded almost coherent cohomology and one observes that $\mathcal{H}^d R\psi_*(d)$ has a canonical almost map to the dualizing sheaf; we show that this induces an almost autoduality by means of local uniformization by quotients of nice formal models by finite groups.