

On spectra of abelian integral group rings

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We study integral group rings R of finite abelian groups from the viewpoint of the affine scheme $X = \text{Spec}(R)$ associated to it. We describe the irreducible components of X , their intersection and prove that the singular points are exactly the points of intersection of these components. The sheaf of differentials of X and of its fibers over the integers \mathbb{Z} are also calculated. The results are obtained in collaboration with M. Dokuchaev.