Blocks of group algebras over local rings

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Abstract: For many questions in the modular representation theory of finite groups it is important to work over a local ring $\mathcal{O}$ (some extension of the p-adic integers), rather than just a field of characteristic p. This has become particularly apparent in recent work on Donovan's conjecture. In this talk I will give an overview of the structure of block algebras as orders over $\mathcal{O}$, and properties that set them apart from other $\mathcal{O}$-algebras and $\mathcal{O}$-orders.