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タイトル TITLE	Applications of algebraic \mathcal{D} -modules to projective varieties.		
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I will define the notion of an algebraic \mathcal{D} -module over a polynomial ring and give some examples. Then I will show how to use \mathcal{D} -modules in investigating varieties in projective space. If V in \mathbb{P}^n is a variety, with homogeneous ideal I in the coordinate ring $A = k[x_0, x_1, \dots, x_n]$, we can consider the local cohomology modules of A with supports in I . This is a holonomic algebraic \mathcal{D} -module, and I will discuss how to find the simple components of this module in its filtration as a holonomic \mathcal{D} -module.