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Holonomic 𝒟-modules and positive characteristic⋆

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Abstract. We discuss a hypothetical correspondence between holonomic 𝒟-modules on an algebraic variety X defined over a field of zero characteristic, and certain families of Lagrangian subvarieties in the cotangent bundle to X. The correspondence is based on the reduction to positive characteristic.

⋆ This article is based on the 5th Takagi Lectures that the author delivered at the University of Tokyo on October 4 and 5, 2008.

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