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1002-58-149 **Teresa Monteiro Fernandes*** (tmf@ptmat.fc.ul.pt), Departamento de Matematica da FCUL, bloco C6, piso 2, Campo Grande, 1699 Lisboa, Portugal. *Micro-support of solution sheaves of D-Modules.*

Given X a complex manifold, a coherent module over the sheaf D of differential operators is nothing but the data of a system of linear partial differential operators on X. Let O denote the sheaf of holomorphic functions on X, and F denote an R-constructible sheaf. Let M be a coherent D-Module.The complex RHom(F,O) describes the "generalized functions" on X and the complex RHom(M,RHom(F,O)) describes the solutions of M in the generalized functions. Sato's hyperfunctions as well as holomorphic functions with singularities on a given hypersurface are particular cases of RHom(F, O). Many questions concerning RHom(M,RHom(F,O)), as propagation and Cauchy problem, are solved by the knowledge of the characteristic variety of the system M (char(M)) and the micro-support of F(SS(F)). But if we are concerned with growth conditions, as it is the case of distributions or the meromorphic functions, we have to deal with a new family of complexes, denoted tHom(F,O), introduced by M.Kashiwara and largely studied by M.Kashiwara and P.Schapira, and char(M) together with SS(F) are no longer sufficient. In this talk, we give estimates for the micro-support of RHom(M,RHom(F,O)) assuming some regularity conditions either on M or on F. Part of the results were obtaind with the above named authors. (Received September 13, 2004)