Meeting: 1003, Atlanta, Georgia, SS 20A, AMS Special Session on Commutative Algebra, I

1003-13-1564 **Neil M Epstein*** (epstein@math.ku.edu), Univ. of Kansas Department of Mathematics, 405 Snow Hall, 1460 Jayhawk Blvd, Lawrence, KS 66045. *A tight closure analogue of analytic spread and a "special" tight closure Briançon-Skoda theorem.*

We develop tight closure analogues of Northcott and Rees' classical notions of analytic spread, analytically independent elements, and minimal reductions, and we show that analogous results hold. To do so we use Adela Vraciu's tool: the special part of tight closure. Then we analogize this tool to the case of integral closure and relate the two special parts of closures via an analogue of Hochster and Huneke's tight closure Briançon-Skoda theorem in positive prime characteristic. (Received October 05, 2004)