1006-12-264 **B. Heinrich Matzat*** (matzat@iwr.uni-heidelberg.de), University of Heidelberg, IWR, Im Neuenheimer Feld 368, D-69120 Heidelberg, Germany. *Integral and Iterative Differential Modules.* Preliminary report.

Differential modules over integral p-adic differential rings which are solvable over the generic disc are called here integral p-adic differential modules. They appear as lifts of iterative differential modules in characteristic p and can be characterized by related projective systems of congruence solution modules. Similar to the characteristic p case the connecting matrices contain information on the differential Galois group and can be used to solve the inverse problem (for integral p-adic D-modules). This result can be viewed as a differential analogue of Harbater's solution of the regular inverse problem over $\mathbb{Q}_p(t)$. Towards the end of the talk we discuss some questions on integral global differential modules. (Received February 16, 2005)