1026-12-87 **Andy R. Magid*** (`amagid@ou.edu`), Department of Mathematics, University of Oklahoma, 601 Elm Room 423, Norman, OK 73019. *Subfields of the complete Picard–Vessiot closure of a differential field.* Preliminary report.

The Picard–Vessiot closure $(E)_1$ of a differential field E (differential fields always assumed to have algebraically closed characteristic zero field of constants) is the compositum of all its Picard–Vessiot extensions. If F is a differential field, its complete Picard–Vessiot closure F_∞ is $\cup_{i \geq 0} F_i$ where $F_0 = F$ and $F_{i+1} = (F_i)_1$. There is a semi–Galois correspondence between all differential subfields of F_∞ over F and subgroups of the group G of all differential automorphisms of F_∞ over F. We characterize the (differentially) finitely generated subfields of F_∞ (containing F). (Received February 15, 2007)