1077-12-596   **Dmitry Trushin*** (`trushindima@yandex.ru`), The Hebrew University of Jerusalem, Einstein Institute of Mathematics, Manchester, Edmond J. Safra Campus, Givat Ram, 91904 Jerusalem, Israel. *The ring of global sections of a differential scheme.*

If we study differential equations by methods of algebraic geometry, the notion of a differential scheme appears. However, there are some anomalies, which do not occur in the non-differential case. For example, the ring of global sections does not necessarily coincide with the initial ring. Jerald Kovacic developed theory of differential schemes and posed the problem: whether the differential spectrum of the ring of global sections coincides with the differential spectrum of the initial ring? I am going to present a solution to the question in some important cases and discuss related problems. (Received September 08, 2011)