1016-34-75 **Oleksiy Ignatyev*** (aignatye@kent.edu), Oleksiy Ignatyev, Department of Mathematical Sciences, Kent State University, Kent, OH 44242. *Partial Asymptotic Stability in Nonautonomous Differential Equations.*

A system of ordinary differential equations $dx/dt = X(t,x)$ which has a zero solution $x = 0$ is considered. It is assumed that there exists function $V(t,x)$, positive definite with respect to part of state variables such that its derivative dV/dt is nonpositive. It is proved that if function $\sum_{i=1}^{j} V_i^2$ is positive definite with respect to part of studying variables, then the zero solution is asymptotically stable with respect to these variables. Here $V_1 = dV/dt, V_i = dV_{i-1}/dt, \quad i = 2,\dots,j; \quad j$ is some positive integer. The instability criterion is also obtained. (Received February 01, 2006)