962-35-718 **Hermano Frid*** (hermano@impa.br), Estrada Dona Castorina, 110, 22460-320 Rio de Janeiro, RJ, Brasil, Brazil. *Decay of Almost Periodic Solutions of Conservation Laws.*

We consider the asymptotic behavior of solutions of systems of inviscid or viscous conservation laws in one or several space variables, which are almost periodic in the space variables in a generalized sense introduced by W. Stepanoff and Wiener, which extends the original one of H. Bohr. We prove that if $u(x,t)$ is such a solution whose inclusion intervals at time t, with respect to $\varepsilon > 0$, satisfy $l_\varepsilon(t)/t \to 0$ as $t \to \infty$, and so that the scaling sequence $u^T(x,t) = u(Tx,Tt)$ is pre-compact as $T \to \infty$ in $L^1_{\rm loc}(\mathbf{R}^{d+1}_+)$ then $u(x,t)$ decays to its mean value $\bar{u}$, which is independent of t, as $t \to \infty$. The decay considered here is in $L^1_{\rm loc}$ of the variable $\xi = x/t$, which implies, as we show, that $M_x(|u(x,t) - \bar{u}|) \to 0$, as $t \to \infty$, where M_x denotes taking the mean value with respect to x. The applications given here include inviscid and viscous scalar conservation laws in several space variables and the $n \times n$ chromatography system, as well as many viscous 2×2 systems such as those of nonlinear elasticity and Eulerian isentropic gas dynamics, with artificial viscosity, among others. (Received September 22, 2000)