

Theorem on sufficient conditions (continuation)

b) there exists a sequence of functions

$$\omega_k(\cdot) : G(t, \varepsilon_0) \rightarrow [0, \infty], \quad k \in \mathbf{N},$$

which are v -stable on the set $G(t, \varepsilon_0) \setminus D(t)$, and vanishing and continuous at the points of the set $D(t) \cap G(t, \varepsilon_0)$, and

$$\lim_{k \rightarrow \infty} \omega_k(x) = \omega(x), \quad x \in G(t, \varepsilon_0).$$

2) For any $t \in (0, \Theta) \setminus \mathcal{T}$ such that $F(t) \setminus S(t) \neq \emptyset$ and any arbitrarily small $\varepsilon > 0$, there is a value $\delta > 0$ such that, for the set

$$G^F(t, \varepsilon, \delta) = F(t) \setminus G(t, \varepsilon) + O_\delta,$$

the inclusion $G^F(t, \varepsilon, \delta) \subset \Omega$ holds and the function $\varphi(\cdot)$ is finite and u - and v -stable on the set $G^F(t, \varepsilon, \delta)$.