1044-47-107 **Georg Hetzer*** (hetzege@auburn.edu), Department of Mathematics and Statistics, 304 Parker Hall, Auburn University, AL. *Positive Solutions for a Class of Set-Valued Functional Evolution Equations.* Preliminary report.

Let X be a reflexive ordered Banach space with uniform convex dual, M be a complete metric space, and $C(M) \hookrightarrow X$ (compactly). The existence of positive global bounded solutions will be discussed for the initial value problem

$$\begin{cases} \dot{u} + Au \in F(t, u_t, V(u|_{[0,\infty)})) & t > 0, \\ u(s) = u_0(s) \geq 0 & -T \leq s \leq 0, \end{cases}$$

where $A : \mathfrak{D}(A) \subset C(M) \to X$ is m-accretive, $-A$ generates a compact semigroup in X, and the resolvent of A maps the positive cone of X into itself. $F : \mathbb{R}_+ \times C([-T, 0], C(M, \mathbb{R}_+)) \times Z^+ \to 2^X \setminus \{\emptyset\}$ is, loosely stated, an upper semi-continuous set-valued map, which is "positive" near $u = 0$ and is "negative" near $u = \infty$. Z denotes a Banach space with positive cone Z^+ which is densely embedded in $C(M, \mathbb{R}^m_+)$ ($m \in \mathbb{N}$), and $V : C_b([0, \infty), C(M, \mathbb{R}_+)) \to C_b([0, \infty), Z^+)$ is in particular continuous and has the Volterra property. (Received August 25, 2008)