962-13-1059 **Marco Fontana*** (`fontana@mat.uniroma3.it`), Dipartimento di Matematica, Largo San Leonardo Murialdo, 1, 00146 Roma, Italy, and **Nicolae Popescu** (`Nicolae.Popescu@imar.ro`), Institut de Mathematiques, 7070 Bucarest, Romania. *Universal property of the Kaplansky ideal transform and affineness of the open subsets of an affine scheme.* Preliminary report.

Let R be an integral domain with quotient field K, and let I be an ideal of R. In 1974, I. Kaplansky introduced a general notion of ideal transform as follows $\Omega(I) = \Omega_R(I) := \{z \in K \mid \mathrm{rad}(R :_R zR) \supseteq I\}$. When considering the non-Noetherian case, the Kaplansky ideal transform seems preferable to the notion of ideal transform previously introduced by M. Nagata. In this work, we pursue the study of the Kaplansky ideal transform by investigating a universal property of the canonical embedding $\omega : R \to \Omega(I)$. More precisely, let $\alpha : R \to A$ be any ring homomorphism, we say that α is a I-*morphism* if $\alpha^{-1}(Q) \not\supseteq I$, for each prime ideal Q of A and we set:

$$K_R(I, A) := \{\alpha : R \to A \mid \alpha \text{ is a } I\text{−morphism}\}.$$

We show, among other facts, that the following statements are equivalent: (i) the functor $K_R(I, -) : \mathbf{Ring} \to \mathbf{Set}$ is representable; (ii) $\omega : R \to \Omega(I)$ is a I-morphism; (iii) $D(I) := \{P \in \mathrm{Spec}(R) \mid P \not\supseteq I\}$ is an affine open set of $\mathrm{Spec}(R)$. (Received October 02, 2000)