1078-03-257 **Nader Vakil*** (`N-Vakil@wiu.edu`). *On an externally defined class of uniform spaces.* Preliminary report.

Let (X, Λ) be a uniform space with its uniformity generated by a set of pseudo-metrics Λ, and let $(\,^*X,\,^*\Lambda)$ be a nonstandard extension of (X, Λ). Given $x, y \in\,^*X$, we write $x \simeq_\lambda y$ if and only if $\,^*\rho(x, y) \simeq 0$ for all $\rho \in \Lambda$, and we write $x \approx_w y$ if and only if $\,^*\rho(x, p) \simeq\,^*\rho(y, p)$ for each $\rho \in \Lambda$ and each $p \in X$. We call (X, Λ) an S-space if the relations $\simeq_\lambda$ and $\approx_w$ coincide on $\mathrm{fin}(^*X)$. We give a standard characterization of S-spaces, and discuss their basic properties. This discussion will include their hereditary properties and their projective and inductive limits. Applications to locally convex spaces will also be discussed.

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